Examining how human-centred design and information design could help reduce language barriers between Syrian immigrant parents and Turkish primary teachers through school management guidelines

A Thesis Submitted for the Degree of Doctor of Philosophy

By

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Declaration

I declare that the work presented in this thesis is my own and has been carried out in accordance with the regulations of Brunel University of London.

Except where explicit reference is made to the work of others, this thesis contains no material previously published or written by another person, nor has it been submitted, either in whole or in part, for the award of any other degree or qualification at this or any other institution.

Sena Berktas,

Sep. 2025

Abstract

This research develops an information design guideline for Turkish primary school management teams, grounded in Human-Centred Design (HCD) principles, to address language barriers experienced between immigrant parents and teachers. Background research highlights that Syrian student, the largest immigrant group in Türkiye, face low educational attainment, which undermines their academic success, future prospects, social cohesion, and the host country's human capital. Recognising the critical role of parental involvement in children's education, this study identifies language barriers as the primary obstacle to effective engagement. Secondary findings revealed that these barriers are context-dependent and interconnected with emotional, cultural, and knowledge-related challenges, which were further investigated through primary research. A case study was conducted in Istanbul with 38 participants identified through stakeholder analysis. Data were collected using semi-structured interviews and card-sorting activities, and analysed through thematic analysis and conceptual mapping.

The research broadened the understanding of language barriers. Emotional barriers were characterised by high expectations from both parties and limited empathy, although positive teacher attitudes and support from local parents were also identified as facilitating factors. Cultural barriers stemmed from differences in lifestyles and mindsets, while similarities, such as shared religious beliefs, provided common ground. Knowledge-related barriers were reflected in immigrant parents' limited familiarity with the host country's education system; however, these challenges could be mitigated by the approachability of Turkish teachers. To address these issues, expert insights informed the development of a guideline for school managers, organised into six recommendations with differentiated priority levels: language support and clear meeting protocols as essential measures; orientation courses and social activities as recommended measures; and shared spaces, together with visual and physical modifications, as additional supportive measures.

The prototype guideline was evaluated with five schools (12 participants) and ten experts through semi-structured questionnaires and interviews, with iterative refinements applied. The findings highlighted the need to extend the guideline beyond school management to all school personnel, with certain revisions, as well as to provide a tailored, concise version for parents. In addition, policy-level guidelines were developed, emphasising the dual need for policies that outline expectations for immigrant communities while fostering a welcoming environment within the host society. Future research will focus on advancing these recommendations at the policy level to support systemic change.

Key words: Human Centred Design; Information Design, Language barriers; Immigrant parent-teacher communication; Guideline for school staff; Guideline for parents; Guideline for policy makers

Dedication

I dedicate this thesis to my mother, Meryem Berktas, with heartfelt gratitude for her unwavering love, encouragement, and support.

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Publications originated from this research

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Additional papers are currently in progress and will be available later.

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Chapter 1. INTRODUCTION

This introductory chapter begins by outlining the researcher's personal motivations and background, illustrating how these experiences informed the development of the study (see Section 1.1). It then provides contextual background, beginning with the challenges of integrating immigrants into host countries (A), followed by a discussion on the importance of education from the host country's perspective (B). The focus then narrows to the specific scope of this research, with a brief overview of the importance of communication between primary school teachers and immigrant parents (C), and the context of primary education in Türkiye and immigrant students in Turkish schools (D). Subsequently, the Problem Definition, Research Aim, Questions, and Objectives are presented in Section 1.3. The chapter concludes with a summary of the key points discussed in the introduction (see Section 1.4).

1.1 PERSONAL MOTIVATIONS

The researcher's interest in this study emerged from direct experiences with the Syrian refugee community in Türkiye following the onset of the Syrian civil war in 2013. During this period, a significant influx of refugees arrived in Türkiye under urgent and unplanned circumstances, often facing severe hardships, including food insecurity, lack of medical care, and inadequate living conditions. Motivated by these challenges, the researcher became actively involved in charitable efforts, assisting with the distribution of food, medicine, and emergency supplies, as well as facilitating access to healthcare. Two years later, in addition to humanitarian support, the researcher began volunteering as a Turkish language instructor for Syrian women (relevant images are available in Appendix A). While public language courses existed, many women were unable to attend due to logistical and personal barriers, such as long distances, health issues, and childcare responsibilities. In response, the researcher initiated weekly language classes within the home of one participant, converting a room into a functional classroom by providing basic teaching materials.

Through this year-long educational engagement, the researcher developed close relationships with participants, gaining deeper insight into their personal and socio-cultural challenges. Among the recurring concerns expressed by the women were unresolved issues related to their children's education, particularly the inability to communicate with schools. Language barriers emerged as a central obstacle not only in education but across various dimensions of daily life. These insights inspired the researcher to focus on education as a domain where meaningful support could be provided, particularly in addressing language-related barriers between immigrant parents and schools. This focus was driven by the belief that improving educational outcomes for immigrant students could contribute to both individual well-being and broader societal integration.

1.2 BACKGROUND RESEARCH

This section provides foundational information to establish a comprehensive understanding of the current situation and context, which is essential for the subsequent stages of the research.

A) Challenges of Integrating Immigrants into Host Countries

Immigration is the act of someone moving to live in a different country, while an immigrant could be understood as a person or a community who leave their own country and migrate to another nation (Volkan, 2018; Amthor, 2019). People migrate to other countries for various reasons, and, in many cases, they have the opportunity to prepare themselves financially and psychologically beforehand. However, there are also cases of people who are forced to move from their home countries, usually without time for preparation. In this type of immigration, some of the needs of immigrants may not be met properly at the host country. One of the key challenges is the integration of these people into local communities and their adjustment to local customs and cultural differences. According to Amthor (2019), among the many problems faced by immigrants, those related to education tend to have the longest-term consequences, indicating that efforts to facilitate the adaptation of immigrant families to the host country’s education system could be most beneficial for the future of local communities. Hence, this study focused on education context.

B) The Importance of Education from Host Countries’ Perspectives

Education is defined as the process of teaching or learning, especially in a school or college, or the knowledge that you get from this. It was reported that immigrant students often encounter several problems in local schools which negatively affected their scholarly success (Rong and Preissle, 2008, p. 205). Apart from the individual effects of exist problems, the challenges could also indirectly affect the people around; given that the welfare levels of a region are seen to be related to the levels of education in a community. It was reported that educated communities have less crime rates. In this sense, education usually helps communities to have more peaceful livings. Moreover, educated communities reach better economic conditions in time (Barro, 2001; Duman 2019). Qualified workers create value in work areas which helps nations to reach higher economic levels, and these countries become less dependent on other nations. Finally, evidence shows that better education levels are essential to achieve better living standards for individuals and communities (Zgaga, 2005; Seetanah, 2009; Bhardwaj, 2016).

C) The Importance of Communication Between Primary Teachers and Immigrant Parents

It was reported that parental involvement plays crucial roles in children's education period (Đurišić and Bunijevac, 2017). In the case of children of immigrant families, this could be even more important as, often, these children face more challenges than home students due to language barriers, differences in education system, cultural differences, etc (García, Pujol-Ferran and Reddy, 2013). Parental involvement has significant importance on children's performance at primary school level (Driessen, Smit and Sleegers, 2005a), which requires teachers and parents to support children's educational journey together. Considering the knock-on effect, the participation of immigrant parents potentially does not influence only immigrant children's future, but also welfare of the community (see Section 2.1.1). Hence, this research focused on education in primary school level - enhancing communication between primary school teachers and immigrant parents.

D) Primary Education in Türkiye and Immigrant Students in Turkish Schools

In Türkiye, primary school education is compulsory and lasts for four years, irrespective of a child's background. Local and immigrant students are largely educated together in the same classrooms. According to the Ministry of the Interior of

Türkiye (2022), approximately 5.5 million immigrants from 196 countries resided within Türkiye's borders. Of these, 3.76 million were originally from Syria (ibid), which indicates a considerable number of Syrian students are educated in local Turkish schools. This makes the challenges faced by Syrian students much more visible compared to other foreign groups (Kiremit, Akpınar and Akcan, 2018; Ergen and Şahin, 2019). As a result, this research concentrated primarily on Syrian immigrants.

The Turkish educational context demonstrates that Syrian students enrolled in local primary schools often require significantly more external support compared to their native peers, making parental involvement particularly critical for their academic and social development. These students tend to exhibit lower academic performance—such as delayed literacy development, lower grades, and behavioural challenges—which often remain unresolved through teacher support alone. Existing literature underscores the vital role of parental involvement in addressing these challenges, particularly through sustained communication and collaboration with teachers via regular parent-teacher meetings (Aykırı, 2017; Bulut, Soysal and Gülçiçek, 2018; Kiremit, Akpınar and Akcan, 2018; Ergen and Şahin, 2019). However, Syrian parents frequently face difficulties in engaging with their children's education and communicating with their teachers, primarily due to language barriers (Tümkaya and Çopur, 2020). This communication gap underscores the urgent need for targeted interventions aimed at reducing language-related obstacles between parents and educators, thereby enhancing parental involvement and, ultimately, student outcomes.

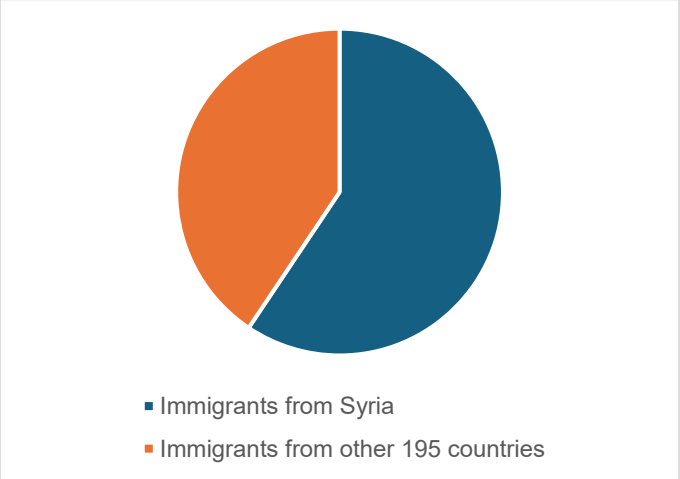


Figure 1. 1 Syrian and Other Immigrant Populations in Türkiye (Ministry Interior of Türkiye, 2022)

1.3 PROBLEM DEFINITION, RESEARCH AIM, QUESTIONS AND OBJECTIVES

This section outlines the research problem and presents the aim, main research questions, and specific objectives that guide the study.

A) Problem Definition

Background research revealed that communication between Turkish primary school teachers and immigrant parents is often ineffective, with language barriers identified as one of the primary contributing factors. While this problem is widely acknowledged, a critical gap in the literature was identified: no prior studies within the Turkish context have conducted an in-depth investigation into the multifaceted nature of these barriers from a multi-stakeholder perspective. In response to this gap, the researcher aimed to explore the problem of language barriers in depth and develop practical solutions aligned with stakeholder needs. Following a review of various design methodologies, the researcher selected a methodological framework grounded in Human-Centred Design (HCD), which was identified as the most suitable approach due to its capacity to investigate problems from diverse viewpoints. Within the school environment, school managers are positioned as key actors in implementing institutional-level solutions; they are well placed to coordinate efforts, implement strategies, and guide both staff and parents. Therefore, the information and recommendations derived from this research are specifically intended for this group. Recognizing their typically demanding schedules and limited time, the project further integrated Information Design (ID) principles to ensure that the derived information was presented clearly, with an optimum level of detail, and in a format that is directly applicable and meaningful for implementation in schools, thereby maximizing its potential for effective application.

B) Aim

This research project aims to develop an Information Design guideline for Turkish primary school management teams, based on Human-Centred Design principles, to address language barriers between Syrian immigrant parents and Turkish primary school teachers.

C) Objectives

1. To develop an in-depth understanding of the context experienced by Syrian immigrant parents in Turkish schools.

2. To gain an in-depth understanding of the language barriers that prevent effective communication between Syrian immigrant parents and Turkish primary school teachers.

3. To explore elements that could help reduce experienced problems by Syrian immigrant parents, such as commonalities between Syrians and Turks and policies suggested by the Turkish Government for immigrants.

4. To evaluate existing solutions and review case studies regarding language barriers in other contexts that could provide potential solutions/good practices.

5. To critically review relevant Human-Centred Design principles and explore how they could be used to gain better understanding of language barriers and come up with solutions.

6. To explore how Information Design principles could be applied to reduce language barriers between Turkish primary teachers and Syrian immigrant parents.

7. To propose an Information Design guideline that could assist Turkish school managers to foster better communication between primary school teachers and Syrian immigrant parents with the assessment with relevant stakeholders before finalising it.

D) Research Questions

1. What are the main reasons that caused language barriers between Syrian immigrant parents and Turkish primary teachers?

2. To what extend existing solutions, research, and/or current practices address these language barriers?

3. How could Human-centred Design principles and Information Design applications be used to address language barriers between Syrian immigrant parents and Turkish primary school teachers?

1.4 SUMMARY OF INTRODUCTION

The background research indicates that parental involvement and effective parent-teacher communication are crucial for the educational success of immigrant children and, by extension, the long-term welfare of society. This study addresses a significant gap in the existing literature by investigating the multidimensional language barriers that impede this communication within the Turkish context. Given that Syrians constitute the largest immigrant group in Türkiye, the research is strategically focused on their experiences to enable a more targeted and effective

analysis (the overview of the research is demonstrated in Table 1.1). The subsequent chapter will explore the context of Syrian immigrants, including their prevailing challenges, interactions with the host community, and the Turkish government's immigration policies, and this analysis will be conducted in conjunction with an examination of the school-level context. This human-centred contextual understanding will serve as the foundation for developing actionable and effective solutions, which will be compiled into a guideline format for school managers.

Table 1. 1: Overview of Chapters in this Research Project

Chapters	Explanation
Chapter 1 – Introduction	The first chapter serves as the entry point to the thesis, establishing the background and contextual foundation for the research project.
Chapter 2 – Secondary Research (Literature Review & Case Studies)	The second chapter is dedicated to a comprehensive review of desk-based research.
Chapter 3 – Methodology	This chapter outlines the research methodology employed in the study, detailing the approaches, procedures, and techniques used to address the research objectives.
Chapter 4 – Findings	This chapter presents the outcomes of the primary research undertaken for the study.
Chapter 5 – Guideline Development	This chapter is dedicated to the development of the guideline, which represents the principal practical outcome of this research project.
Chapter 6 – Guideline Evaluation	This chapter is dedicated to the evaluation of the guideline, presenting participant feedback and the corresponding revisions undertaken.
Chapter 7 – Conclusion	This chapter provides a comprehensive summary of the research, synthesizing the key findings, outcomes, and contributions of the study.
References	This chapter presents a complete list of all references cited throughout the thesis.
Appendix	This chapter includes all supplementary documents that are not presented within the main body of the thesis.

Chapter 2. SECONDARY RESEARCH (LITERATURE REVIEW & CASE STUDIES)

This chapter aimed to gather essential contextual information that could help reduce language barriers between local Turkish teachers and immigrant parents. The secondary research section covered three main headings: education, language barriers, and design principles, all of which were relevant to this research project. Thematic analysis was used to analyse findings in the relevant literature. Finally, the secondary findings were summarized at the end, which was then complemented by the primary research.

2.1 EDUCATION: IMMIGRANT PARENT-LOCAL TEACHER COMMUNICATION IN TURKISH SCHOOLS

This section provided a comprehensive review of pertinent literature and review of case studies within the educational domain. The review was initially conducted using databases with the following keywords: “immigrant parents–teachers,” “immigrant parent experiences,” “immigrant parent–teacher communication,” and “language barriers between parents and teachers,” in order to examine global trends and challenges. Subsequently, the focus was narrowed to Türkiye, using the same keywords with the addition of “Türkiye” alongside to identify research specifically addressing immigrant parent–teacher communication within the Turkish educational context. The overview of educational context is provided within Table 2.1 below.

Table 2. 1. Overview of the Educational Context

Sections		Explanation
2.1.1 Introduction		This section underscored the critical importance of education and parental involvement.
2.1.2 Prevalent problems experienced by immigrant parents in local schools		This section examined the global challenges encountered by Syrian parents within local educational institutions. The presentation adopted a case study format to elucidate the diverse methodological approaches employed by various studies and projects, alongside their corresponding outcomes.
2.1.3 Communication Dynamics Between Immigrant Parents and Host-Country Educators in Turkish Educational Settings	A) The local education system and Parental meetings in Turkish schools B) Challenges Faced by Immigrant Parents and Local Teachers in Turkish Schools C) Summary of the Issues Pertaining to Immigrant parents in Turkish Schools and the Existing Support Mechanism	This section offered a comprehensive elucidation of communication dynamics between Syrian parents and local teachers within the context of Turkish schools.
2.1.4 Potential Indirect Factors Influencing Immigrant Parent-Teacher Dynamic	A) Background of Immigrants Before Settling in Türkiye B) Comparative Lifestyles of Syrians and Turks C) Prevalent Challenges Faced by Syrian Immigrants in Türkiye D) Turkish Government Policies Pertaining to Immigrants E) Summary of the Overall Situation of Syrian Immigrants in Türkiye and the Existing Support Mechanism	This section critically examined the exogenous factors influencing the modalities of Syrian parent-teacher communication within Turkish educational contexts.
2.1.5 Summary of the education context		This section synthesised the key factors influencing parent-teacher communication, drawing upon insights from the extant literature.

2.1.1 Introduction

Education is defined as the systematic transmission and acquisition of knowledge, skills, values, and dispositions, often within formal institutional contexts (Rong and

Preissle, 2008; Bhardwaj, 2016). Education is widely recognized as a cornerstone of societal well-being. Developed societies often give great importance to education, and the welfare level of a region is related to the quantity of educated people in the community. For example, Hjalmarsson and Lochner (2012) reported that educated communities usually have lower crime rates, so education contributes to fostering more tranquil societal environments. Furthermore, evidence showed that educated communities reach better economic conditions over time; qualified workers create value in work areas, which helps nations reach higher economic levels and helps countries become less dependent on other nations (Barro, 2013, pp. 326–327). Therefore, it was incumbent upon governments to place significant focus on education, and within this framework, bolstering parental involvement in their children's schooling could constitute a key strategic imperative.

Empirical evidence suggested that the family's role is critically important for children's achievement, particularly during early developmental stages (Kök, 2004, pp. 45–48). Scholarly discourse identified the following significant contributions of parental involvement to their children's educational success (Driessen, Smit and Sleegers, 2005b; Turney and Kao, 2009; Bæck, 2010; Đurišić and Bunijevac, 2017):

- Involvement of parents socializes children; parents who are involved send a message to their children that education is crucial, and these kids are more likely to value education themselves.
- Parental involvement provides mothers and fathers with a means of social control; involved parents get to know teachers, other parents, and administrators who may then discuss their children's performance with them.
- Involved parents are privy to knowledge about their kids; if teachers tell parents their children are struggling, mothers and fathers are in a much better position to intervene.
- Children whose parents have strong relationships with educators usually have higher grades on exams.

Finally, a recurring recommendation in the literature emphasized the critical importance of regular parent-teacher communication for promoting optimal academic outcomes for children.

2.1.2 Prevalent Problems Experienced by Immigrant Parents in Local Schools

A review of existing literature highlights that immigrant parents and local school staff often face significant challenges in establishing effective communication (Antony-Newman, 2019), and a review of case studies has helped to develop a better understanding of the relevant problems, as sought by this research project. These case-focused studies were selected based on specific criteria (see Table 2.2), and are particularly valuable for their depth of analysis, as they allow for close examination of a single group within a defined context.

The case studies presented below were deliberately selected as they offer a holistic examination of language barriers by addressing multiple interconnected factors aligned with the scope of this research. Two case studies were deemed sufficient to develop an overarching understanding of the phenomenon, given the consistency of findings across similar studies in this field. By analysing recurring challenges experienced by immigrant populations in diverse regional contexts, this section establishes a conceptual foundation that contextualises the examination of other groups, such as Syrian parents in Turkish schools.

Table 2. 2. Inclusion and Exclusion Criteria for Research Based on Problems Experienced by Immigrant Parents.

Inclusion criteria	Exclusion criteria
The examples specifically investigating linguistic impediments to communication between immigrant parents and local teachers.	The examples primarily addressing immigrant challenges in unrelated contexts.
The examples incorporating primary data sourced from local teachers and/or immigrant parents.	The examples incorporating secondary findings only.

- **Case study 1:** Immigrant Parents' Involvement in American Schools: Perspectives from Korean Mothers (Sohn and Wang, 2006)

This case study was selected primarily for its utility in elucidating the intertwined factors contributing to linguistic barriers. Parental responses revealed how additional aspects, such as unfamiliarity with specific educational terminology prevalent in the USA, exacerbated these communication challenges. Furthermore, parents articulated the rationales underpinning their limited engagement, citing, for instance, certain teacher attitudes. Overall, this research offers valuable insights for future investigations into other potential areas when addressing language barriers between immigrant parents and Turkish educators.

- Overview: This case study offered an overview of the challenges faced by Korean immigrant parents in the USA, specifically reflecting their perspectives.

  Aim: The goal was to investigate the challenges encountered by Korean immigrant parents in the United States.

  Method: This study employed in-depth interviews for primary data collection. Qualitative analysis was subsequently utilized to interpret the gathered data.

  Result: The researchers found out that parents dealt with several problems alongside language barriers. These parental difficulties were categorized into four groups: linguistic impediments, cultural differences, experiences of discrimination, and insufficient support from schools and teachers as elaborated in Table 2.3 below.

Table 2. 3. Challenges Encountered by Immigrant Korean Parents within U.S. Educational Institutions (Sohn & Wang, 2006)

Problems	Explanation
Language barriers	Linguistic impediments constituted the most frequently reported challenge encountered by parents, as exemplified by the following illustrative quotes: “Although I really want to communicate with my child’s teacher, I felt frustrated when the teacher often did not understand my English” (p.128). “I don’t know educational terms in English. For example, I did not know these English words like curriculum, substitute teacher, time-out, and so on. So, when I have to use these kinds of educational terms, I feel stuck” (p.128).
Cultural issues	Cultural differences were identified as a contributing factor to the constrained involvement of Korean parents, as evidenced by the illustrative quotes provided below: “In Korean schools, parents usually respect teachers’ opinions, and they seldom insist on their own opinions especially when they are different from the teachers’. However, American teachers listen to parents’ voices and consider me as an equal partner. So, I am confused about my role and attitude toward teachers in American schools and sometimes it makes me uncomfortable” (p.129).
Discrimination	Discrimination emerged as a significant impediment to the engagement of Korean immigrant parents within U.S. educational contexts, as evidenced by the illustrative quote provided below: “One Korean girl who had just immigrated to the U.S. came to my second-grade son’s class. She did not speak English well and felt uncomfortable in the new place. Some American boys in that class started teasing her and imitating her accent and pronunciation. My son told me he could not help her out and felt very angry and frustrated. Even

	though the Korean girl complained to her teacher, the teacher did not take any action until her father sent letters to the teacher and the principal. After this, Korean parents as well as I in that school became sensitive to the teachers' racial discrimination toward Korean students." (p.129).
Limited school support	Parental accounts indicated that school administration and educators provided inadequate support to both immigrant students and their parents, as evidenced by the illustrative quote below: "My son's teacher doesn't seem to be able to understand students from different cultural backgrounds. She is a new teacher, and she does not have any experience with international students. So, I feel difficulties when I communicate with the teacher. As a result, I now have negative feelings toward the teacher and even the school." (p.128)

- **Case study 2:** Chinese Immigrant Parent's Involvement in Their Children's School Education / High Interest but Low Action (Zhong and Zhou, 2011)

This case study was selected primarily for its utility in elucidating the intertwined factors contributing to linguistic barriers. The potential for congruence between certain findings from Case Studies 1 and 2 was anticipated to facilitate the identification of prevalent challenges. Given that immigrant parents across diverse national contexts often encountered similar difficulties, the insights gleaned from these findings could significantly inform this research project. Specifically, issues faced by immigrant parents in Türkiye might parallel those observed internationally. Consequently, this case study could also enhance understanding of other pertinent aspects when examining language barriers between teachers and immigrant parents within Turkish primary schools.

- Overview: This case study focused on the challenges faced by Chinese immigrant parents in Canada. The research included 12 Chinese families, varying in their duration of residency in Canada and occupational backgrounds.

  Aim: To investigate the challenges encountered by Chinese immigrant parents in Canada.

  Method: Interviews were conducted with Chinese immigrant parents residing in Canada, and the resultant primary data were subjected to qualitative analysis.

  Results: The findings indicate that Chinese immigrant parents articulated multiple contributing factors impacting their engagement, including linguistic impediments, limited temporal and energetic resources, a lack of familiarity with the Canadian educational system, and divergent cultural values (see Table 2.4).

Table 2. 4. Barriers to Parental Engagement Among Chinese Parents in Canadian Schools (Zhong & Zhou, 2011)

Problems	Explanation
Language barrier	The linguistic barrier emerged as a primary impediment, with several parents reporting reluctance to engage with school personnel. This is exemplified by the following excerpt from a parent who had resided in Canada for three years: "My English is not good. I do not completely understand what the teacher talks about during the parent-teacher conference. So, I just listen to my husband talking with the teacher. If my husband cannot go for the parent-teacher conference, I do not think I would like to go" (p.15).
Lack of time and energy	Limited temporal and energetic resources were identified as a contributing factor to the constrained involvement of Chinese immigrant parents, as evidenced by the following illustrative quote: "I do labour work for 10 hours each day. When I return home, I am exhausted but unfortunately have to do housework. I really have no energy to attend my daughter's school events. If I ask for a leave from my work, I will lose money. As a new immigrant family, seven or eight dollars are important to my family. I need the time to earn a living" (p.14).
Unfamiliarity with the Canadian school culture	Unfamiliarity with the local education system was reported as a contributing factor to the limited involvement of immigrant parents. The following quote indicates this point: "…In Canada, the school system is different. I don't go to school that often. I am not sure what I should say and do, and what I shouldn't. I am afraid that I might get into trouble by saying or doing some things incorrectly" (p.15).
Different cultural values	Immigrant parents reported a lack of familiarity with the established modalities of parent-teacher communication within the Canadian educational context as elaborated: "I do not see other Chinese immigrant parents attending parent council meeting. They are not aware of their rights. This may be influenced by Chinese culture. China is a highly hierarchical country. In China, someone above you makes the decision. At work, you obey the boss. In school, you obey the teacher. Growing up in such a culture, Chinese parents become used to following the rules but not providing suggestions or expressing opinions" (p.15).

Summary of the problems for immigrant parents: The findings showed that the language barrier was the main challenge for immigrant parents, however, there were also other problems alongside language problems as mentioned earlier, and the problems could be experienced differently by different groups (for example, frictions and similarities in lifestyles could affect interactions between two groups, including parent-teacher communication). The results from case studies confirmed that language barriers were not exclusive to Türkiye, since immigrant parents in other

countries also encountered these issues. Thus, there are possibilities to learn and apply good practices from previous studies as well as provide solutions that could be applied beyond the context of Turkish primary schools. Furthermore, this broader perspective is important for evaluating the potential wider applicability of the research findings, including their adaptability and transferability to other educational settings. Considerations of adaptability and transferability are discussed in detail in Chapter 7.

2.1.3 Communication Dynamics Between Immigrant Parents and Local teachers in Turkish Schools

This section concentrated on communication between immigrant parents and Turkish teachers, and the topic was expanded within three parts (part A, B and C) as follows:

A) This section provides an overview of the Turkish and Syrian education systems, examining typical patterns of parent–teacher communication and the role of school managers within these diverse educational contexts.
B) This section examines the challenges faced by immigrant parents and local teachers in Turkish schools, based on case studies from the Turkish education context.
C) Finally, the overall issues associated with Syrian immigrants in Turkish schools are summarised at the final stage.

A) Overview of the Education Systems in Türkiye and Syria

In Türkiye, the compulsory schooling period spans 12 years, encompassing primary, secondary, and high school levels as delineated in Table 2.5 (Gün and Baskan, 2014). Early childhood education, specifically kindergarten, is available for young children prior to commencing primary schooling. Moreover, progression to higher education upon completion of high school is optional. Turkish schools can be broadly categorised into two groups: public (state) schools (predominantly free of charge) and private schools (typically levy tuition fees) (Dag, 2015). Nevertheless, all the school are officially affiliated with the Turkish Ministry of National Education. Therefore, both public and private schools are mandated to adhere to its regulations, involving fundamental guidelines concerning parent-teacher communication (Gün and Baskan, 2014).

Table 2. 5. Overview of the Turkish Educational System (Gün & Başkan, 2014) highlighting primary education relevant to this research.

Level of schools	Education years
Higher education	2+ years
High school *(4 years)*	12th year
	11th year
	10th year
	9th year
Middle school *(4 years)*	8th year
	7th year
	6th year
	5th year
Primary school *(4 years)*	4th year
	3rd year
	2nd year
	1st year
Kindergarten	*differs*

In Syria, education is compulsory from grades 1 to 9 and is organised within a centralized system, with limited private provision. Children typically attend state-run kindergartens before completing six years of primary education followed by three years of middle school under a standardized curriculum. At the conclusion of compulsory schooling, students sit for a national examination that determines their eligibility for general or technical (vocational) secondary education. Performance in the national examinations at the end of grade 12 subsequently determines admission to universities or colleges and the field of specialization (Scholaro, n.d.).

Following the overview of the Turkish and Syrian education systems, attention is drawn to parent–teacher interaction dynamics and the role of school managers. In Turkish schools, group meetings are held at the start of each term to convey essential information to parents (Nazlı, Özer & Şad, 2022). Teachers seeking managerial positions must pass a written exam and once appointed, are responsible ensuring the effective implementation of all student-related, educational, administrative, personnel, financial, and operational duties, as well as responsibilities assigned by the Ministry of National Education and provincial and district education authorities (Aslanargun, 2011). Literature on parent–teacher interactions and school management in Syrian schools remains limited and outdated, and could be addressed through future primary research.

B) Challenges Encountered by Syrian Parents and Local Teachers within Turkish Educational Institutions

In Turkish schools, Syrian parents and local teachers often share similar educational backgrounds. Effective communication between Turkish teachers and immigrant parents is crucial for children's academic success, particularly at the primary level, but is often hindered by language barriers and other factors. Although translations are provided in schools with large Syrian student populations, funded by UNICEF (Tüzün, I., 2017), parental language challenges persist. These case studies were selected due to their comprehensive nature: one examines the experiences and perspectives of Syrian parents, while the other focuses on teachers' viewpoints. Together, they provide a balanced and multifaceted understanding of the issues under investigation.

Table 2. 6. Inclusion and Exclusion Criteria for Research on Challenges Faced by Immigrant Parents and Turkish Teachers

Inclusion criteria	Exclusion criteria
The examples primarily investigate the linguistic barriers encountered by immigrant parents and local teachers in Türkiye.	The examples primarily explore various challenges encountered by immigrants in Türkiye within alternative contextual frameworks.
The examples incorporate primary data acquired from local teachers and/or immigrant parents.	The examples do not incorporate primary data acquired from Turkish teachers and/or immigrant parents.

- **Case study 3:** Investigation of Syrian Parents' Views on Parental Involvement in Primary School (Tümkaya and Çopur, 2021)

This case study was selected mainly because it covered primary data from real-life context; based on problems for immigrant parents and Turkish teachers. This research provided comprehensive information from immigrant parents' perspectives, which could helped understand also other factors alongside language barriers. Finally, this research could help understand existing problems experienced by other parents, which can be further investigated within the scope of the case study planned for this research project.

- Overview: This case study investigated the challenges encountered by Syrian parents whose children are enrolled in Turkish schools, as perceived from the parents' perspectives. The research engaged with a cohort of 10 Syrian parents, comprising seven females and three males. Finally, common problems articulated by these parents were identified, and ascertained the prevalence of these issues within the context of this specific case study.
  Aim: This study aimed to explore common problems experienced by immigrant parents in Türkiye, specifically from the perspectives of Syrian parents.

Method: Participants were recruited using the snowball sampling method. Data were collected through qualitative interviews, and the resulting information was analysed using content analysis.
Outcomes: The findings indicated that the language barriers were the most prevalent challenge reported by immigrants, followed by cultural differences, financial constraints, and a perceived limited empathy from teachers and other parents. Other significant issues included discrepancies between the education systems in Türkiye and Syria, time and energy limitations due to the work commitments health problems, challenging behaviours exhibited by their children, and relatively lower educational attainment among parents. Illustrative quotes from participants further illuminate these findings (examples provided below):

> “When we first came to Türkiye, I had a child in the 6th grade who had several problems at school. I didn't want to visit the school, and I couldn't effectively take care of my child's education at that time” (p. 362).

> “I can list the factors affecting the involvement of children’s education: I cannot speak Turkish, the education systems in Türkiye and in Syria are different, my husband has a heavy work, hence, I am the only person looking after the children so I cannot afford enough time and energy for each child.” (p. 362).

> “In my opinion, factors affecting parental involvement are limited empathy between parents and teachers; limited awareness of parents regarding the importance of education; relatively low education levels of parents; inability to adapt to cultural differences; financial problems; limited time and energy because of work; and language problems.” (p. 362).

Overall, based on the perspectives of Syrian parents, the findings indicate that language barriers represent the most significant challenge, though they are not the sole impediment. These challenges are compounded by a range of interconnected factors, resulting in differing priorities shaped by parents’ individual circumstances. Addressing these complexities requires an in-depth understanding of their lived experiences in order to develop appropriate and effective strategies for integration

within Turkish schools and for mitigating language-related barriers. Consequently, it is essential to adopt a holistic approach that extends beyond a narrow focus on linguistic limitations alone.

- **Case study 4:** Teachers' Views on the Family Participation of Syrian Families in the Primary School (Tümkaya and Çopur, 2020)

This case study was chosen mainly because it covered primary data from a real-life context, focusing on problems experienced by immigrant parents and Turkish teachers from the teachers' perspectives. In this regard, the findings of Case Studies 3 and 4 could complement each other. In the Turkish education context, most of the research involved teachers' opinions regarding immigrant students, rather than mainly focusing on problems concerning parental involvement. Therefore, this case study was very rare in this context and was worthy of inclusion.

- Overview: This case study investigated the challenges in immigrant parent-teacher communication from the perspectives of Turkish teachers. The research involved 10 Turkish teachers from various public schools in Mersin, Türkiye. The study's findings primarily delineated the problems faced by immigrant parents, as perceived and articulated by these teachers.
  Aim: This study aimed to understand the level of immigrant parental involvement and to identify problems related to such parental involvement.
  Method: Semi-structured interviews were utilized for data collection, and the gathered information was subsequently analysed using a descriptive analysis method.
  Results: The findings indicate that Turkish teachers observed a general lack of engagement from immigrant parents in their children's education and limited interaction with school staff. Language barriers were identified as the most prevalent impediment to parental involvement, followed by a range of other contributing factors. The perceived reasons for this limited involvement included: linguistic difficulties, cultural disparities, insufficient awareness regarding the importance of educational engagement, financial constraints leading to limited time and energy, existing prejudices towards teachers and other parents, and relatively lower educational attainment among parents. Illustrative quotes from the interviews further elaborate on these points (examples provided below):

> "Parents do not pay attention to the students' arrival and departure times at school. The reason behind this could be their limited emphasis on education.

> Moreover, coming from a different culture prevents Syrian families from having a sense of belonging. As a result, they distance themselves from educational engagement" (p. 376).
>
> "Anxiety about not being included in the school environment and experiencing discrimination, difficult working conditions due to economic reasons, lack of time due to having too many children, language barriers, and cultural differences are factors that prevent Syrian parents from participating in their families' school lives" (p. 377).

Overall, the Turkish teachers demonstrated consistent opinions regarding the factors contributing to limited immigrant parental involvement, suggesting a shared understanding of the parents' circumstances. Although language barriers emerged as the most prominent issue, teachers also identified a range of additional contributing factors. Nevertheless, it is important to examine the extent to which teachers are able to empathise with parents and understand their circumstances, as this capacity may influence how effectively they engage with and support immigrant families. This aspect warrants further investigation through primary research, as undertaken in the present study.

C) Summary of the Issues Pertaining to Immigrant Parents in Turkish Schools

Based on the findings in the Turkish context, Syrian parents had limited involvement in their children's education, and the reasons behind it could be examined within specific groups:

- Factors associated with the school environment and the local education
  - Concerns about experiencing bias or unfair treatment in schools
  - Insufficient Comprehension of the Local Educational System
  - Limited awareness of interpersonal communication dynamics, such as hierarchy, between parents and teachers in the host country
  - Hesitation to meet with teachers due to the problematic behaviours of their children
- Factors linked to personal aspects:

- Time and energy constraints (due to work, typically for fathers, and extra responsibilities, mostly for mothers, due to having several children)
- Weakened sense of host country affiliation
- Comparatively Lower Educational Attainment
- Health-Related Issues

Nevertheless, language problem was pointed out as the most prominent issue among the whole problems reported, and several communication channels were utilised to help reduce language problem – see the quotes regarding use of different methods:

> “We communicate with Syrian parents through the interpreters of Syrian students in higher grades. However, we cannot communicate efficiently” - a Turkish teacher (Kubilay, 2019, p. 23)

> “I created a WhatsApp group chat, but they cannot see the group correspondence because they constantly change their numbers. When we want to reach them, the numbers are wrong, and their home addresses have changed” - a Turkish teacher (Çakı, 2023, p. 55).

> “I cannot explain my problem. There is no Arabic interpreter anywhere " - a Syrian parent (Çakı, 2023, p. 93).

> “I invited the family of a refugee child who was transferred from a different class to my class to talk about the child. However, only his mother, who did not know the language, came to school. She called her neighbour to translate. I had to communicate through the neighbour who spoke Turkish." - a Turkish teacher (Erden, 2024, p. 661).

> “When communicating with parents through the WhatsApp group, I would ask the parent who was acting as a translator. He would translate the Arabic version of what I wrote in Turkish. We would post it in the group like that, but they either did not see it on time or saw it too late and did not get back to me” (Erden, 2024, p. 661).

> ‘I reached out to their numbers, created a WhatsApp group, they left because they didn't understand what we wrote, but I added them back. I sent messages in Arabic

> through a translation program. Then I learned that they couldn't join because the internet didn't work' (Bozan, Anagün and Anılan, 2022, p. 38).

Overall, it can be concluded that the existing support mechanisms by the education ministry for fostering parent-teacher interactions are currently insufficient. Consequently, both parents and teachers are in need of additional, tailored support to enhance their engagement. Following this, school administrators should be guided to implement targeted interventions that address factors within the school environment and align with local educational policies, thereby improving communication and collaboration.

2.1.4 Potential Indirect Factors Influencing Immigrant Parent-Teacher Dynamic

This sub-section investigated indirect factors that could influence immigrant parent-teacher communication in Turkish schools, which were expanded withing these sub-headings (part A, B, C, D and E), as elaborated:

> A) This subsection explores the pre-existing factors and experiences that shaped the overall well-being of Syrian immigrants prior to their resettlement in the host country.
> B) This division compares the lifestyles of Syrians and Turks, exploring their potential impact on parent-teacher interactions.
> C) This subheading provides a concise overview of the widespread and commonly encountered problems experienced by Syrian immigrants in Türkiye.
> D) This part examines the policies enacted by the Turkish government concerning immigrants, with a particular focus on their implications for the Syrian population.
> E) Finally, this section provides a comprehensive synthesis of the overall situation of Syrian immigrants in Türkiye, drawing together the various factors and issues discussed in the preceding subsections.

A) Background of Syrian Immigrants Before settling in Türkiye

The movement of Syrian immigrants to Türkiye saw considerable growth in 2013 due to political issues in Syria (Çicek, 2022). People migrate in response to events that

might have social, economic, political, and natural causes (Robertson, 2019). The majority of immigrants living in Türkiye migrated for political reasons, specifically war, which constitutes a form of forced immigration. In such circumstances, immigrants typically have no opportunity to prepare themselves financially, physically, or emotionally (Tuzcu and Bademli, 2014; Volkan, 2018, pp. 3–12). These individuals often have traumatic experiences; for example, many witness their relatives and family members being harmed or killed during war, which can make their adaptation into a new area more challenging (Berman, 2001; Erdal and Oeppen, 2020).

B) Comparative Lifestyles of Syrians and Turks

Lifestyles can be broadly categorized into two groups: modern and traditional**.** In modern communities**,** gender roles tend to be less prominent; for instance, women often contribute financially to the family, and couples typically have a smaller number of children. Conversely, in traditional lifestyles**,** husbands commonly work outside the home, while mothers are primarily responsible for housework and childcare, and families generally have several children (Maktabi, 2010) . Based on existing literature, lifestyles in Türkiye encompass a spectrum between traditional and modern approaches. In contrast, Syrian immigrants in Türkiye predominantly originate from rural areas and largely adhere to traditional lifestyles**,** often accompanied by relatively lower education levels (CNNTurk.com, 2018; Şimşek, 2019) (further supplementary information, basic features of Türkiye and Syria, is available in Appendix B1). Nevertheless, a shared religious framework often provides points of commonality between these groups.

C) Prevalent Challenges Faced by Syrian Immigrants in Türkiye

The findings indicated that Syrian immigrants encountered a range of significant challenges, including but not limited to: language barriers, accommodation difficulties, health issues, educational impediments, employment struggles, citizenship concerns, and socio-cultural adaptation difficulties. These prevalent problems are further detailed in Table 2.7 below:

Table 2. 7. Summary of the Prevalent Challenges Faced by Syrian Immigrants in Türkiye (Assi et al., 2019; Çevik, 2016; Ceylan et al., 2017; Koç et al.,2015; Sevinç et al., 2016; Taskın & Erdemlı, 2018)

Prevalent problems	Explanation
Language problems	Syrian immigrants frequently faced significant communication challenges with the local population due to prevalent language barriers.
Accommodation problems	Syrian immigrants frequently encountered difficulties securing affordable housing and often struggled with rent payments due to financial instability.
Health problems	The war in Syria likely impacted their physical and mental well-being, and financial problems in the host country may further worsen their overall health.
Education problems	Immigrant students and their parents often struggled to adapt to Turkish education. This frequently results in students' low academic performance and parents' difficulty communicating with teachers.
Employment problems	Immigrants often struggled to find jobs commensurate with their qualifications in the host country. Consequently, they are frequently employed in basic, physically demanding, and low-paying occupations.
Citizenship problems	At the initial stage, immigrants often lacked citizenship in the host country, which presents significant daily life challenges, such as being deprioritised in job applications.
Socio-cultural adaptation problems	Immigrants often struggled to adapt to their new environment and interact with local populations, which significantly hindered their ability to feel like fully integrated members of society.

D) Turkish Government Policies Pertaining to Immigrants

The literature indicated that numerous initiatives have been implemented to facilitate the integration of diverse ethnic groups, including Syrians, within Türkiye. For instance, current projects detailed on the Directorate General of Migration Management's official website (see Appendix B2 for the projects) exemplified these efforts. Furthermore, promotional videos from their official YouTube channel (see Figure 2.1) underscored the commitment to fostering inclusion and diversity within the country. Beyond central government initiatives, several local authorities and non-governmental organizations (e.g., Refugees Association, Turkish Kizilay, IHH) actively contribute to enhancing the adaptation and overall well-being of Syrian immigrants. Their support included, but is not limited to, providing free Turkish language courses at various proficiency levels and offering financial assistance, such as monthly shopping cards.

a	b

Figure 2. 1. Visual Representation of Inter-ethnic Interactions in Turkish Society, Based on Videos Published by the Turkish Directorate of Migration Management. (General Directorate of Migration Management of Türkiye, 2020)

In school-based initiatives, students both local and immigrant are typically enrolled in schools within their residential areas (T.C. Milli Egitim Bakanligi [Ministry of National Education of Türkiye], 2022). Syrian students who migrated to Türkiye as a result of the Syrian conflict are generally educated alongside local students, often without prior preparatory education; however, their academic performance is assessed in the third year of primary school. Students identified as significantly behind their peers, particularly in Turkish literacy skills, are placed for one year in a dedicated classroom within the same school and provided with additional instructional support, with the collaboration of European Union, the project called as PIKTES (Promoting Inclusive Education for Kids in the Turkish National Education System) (PIKTES.gov.tr, 2021-2022). Furthermore, limited financial assistance is provided to families with school-aged children under 18 years old through initiatives implemented collaboratively by the Turkish Government and the European Union (Kızılaykart.org, 2024).

Ultimately, in light of the literature findings within the Turkish context, it could be suggested that the Turkish government's policies concerning immigrants, including Syrians, generally reflect an inclusive approach. The findings also indicate the presence of specific regulations addressing the needs of Syrian students. Nevertheless, direct input from stakeholders in this project proved invaluable in developing a more comprehensive understanding of the issue.

E) Summary of the Overall Situation of Syrian Immigrants in Türkiye and the Existing Support Mechanism

An examination of the overall situation of Syrian immigrants in Türkiye, informed by existing literature, suggests that a combination of factors, both potentially positive

and negative, contribute to the challenges experienced by this particular immigrant population.

Contributing Challenges (Exacerbating Factors):

- The enduring sequelae of armed conflict, impacting their holistic well-being (e.g., physical and psychological ramifications). Variations in lifestyles & mindsets
- Dealing with survival issues (e.g., problems regarding accommodation and employment) and not being able to concentrate on other aspects of life, such as their children's education.

Mitigating Factors (Ameliorative Influences):

- Shared socio-cultural and religious commonalities between the immigrant and host populations (e.g., analogous belief systems and religious observances)
- The implementation of inclusive policies by the Turkish government, complemented by substantive support from municipal entities.

Ultimately, linguistic barriers critically underpin the challenges faced by Syrian immigrants. Their mitigation is essential for fostering integration and holistic well-being in the host country, a dynamic illuminated by Maslow's Hierarchy of Needs. Maslow divided people's needs into five groups: 1) physiological needs; 2) safety needs; 3) belongingness and love needs; 4) esteem needs; and 5) self-actualization needs. According to his theory, people must meet basic needs to survive. The psychological needs category follows basic requirements, which covers intimate relationships and friends. The last one is self-fulfilment needs, which focuses on achieving a person's full potential (Trivedi and Mehta, 2019)

Syrian parents often struggled to afford their basic requirements due to limited work opportunities and financial problems, mostly because of language barriers. Moreover, they hardly interacted with local people, such as neighbours, as they could not speak Turkish. Hence, they potentially could not meet a significant part of their psychological needs either. Lastly, self-actualization of immigrants also may not be expected in the short-term period. However, resolving language barriers could help reduce most of their problems in the host country.

2.1.5 Summary of the Education Context

The presence of a substantial Syrian immigrant population within the Turkish community carries potential long-term implications for the welfare of the host society. Consequently, the successful integration of these individuals into the host country and the enhancement of their children's academic achievement are critical for yielding more valuable societal outcomes in the coming years (refer to Chapter 1, background research, for a detailed discussion on the importance of education for community welfare). Therefore, the dedicated attention of authorities and policymakers is valuable, and certain initiatives have already been implemented, as previously discussed. However, the processes for the integration of the immigrants, including education of immigrant children were fairly complicated because of the relatively insufficient plannings.

Most Syrians in Türkiye migrated to the country because of political reasons – the Syrian war – which means they migrated without prior planning. The Turkish Government was not able to deal with the resulting issues, including the education of a large number of immigrant children in a short time period (Ertan and Ertan, 2017) . The education for Syrian students was not strategically well-planned in a limited time period (Fidan and Taş, 2023) , so these children often struggled to adapt to the local education system. For example, immigrant students were usually placed in the same classrooms with local students mostly without orientations to prepare them for the local system, which resulted in several problems for Syrian students, such as language problems, and consequently, low academic success (Kardeş and Akman, 2018; Karaağaç and Güvenç, 2019; Ünsal and Baskan, 2021). Given these challenges, supplementary support is imperative to improve student success, and fostering enhanced cooperation between parents and teachers is potentially essential to support students.

Based on the Turkish education context, Syrian parents mostly were not involved in their children’s scholarly processes, and did not interact with Turkish teachers effectively, mainly because of the language barriers and other accompanying factors. The other elements could be simply summarised as emotional factors, different mindsets, limited knowledge and other external aspects, as follows:

- Emotional barriers could be explained as limited empathy between teachers and parents and limited interaction with local parents.

- Presence of different mindsets could be explained as limited awareness of parents regarding the local education, potentially because of their relatively low education levels.
- Limited information of Syrian parents could be expanded as not being sufficiently familiar with the local education, including parental expectations in Turkish schools.
- Other potential factors could be considered as negatively affecting their overall well-being, such as health problems, financial difficulties, and a limited sense of belonging in the host country.

Finally, it could be concluded that there is a need for practical solutions not only to reduce language barriers but also to decrease the effects of other factors in order to enhance the involvement of immigrant parents in their children's education and promote effective communication between parents and teachers. The next section, Section 2.3, concentrates on the language barriers context, and the practical solutions suggested should be approached from a holistic perspective.

2.2 LANGUAGE BARRIERS CONTEXT

This chapter provided a comprehensive examination of the language barriers context. The content of the sections within this chapter is structured as follows:

- Section 2.2.1 Introduction: This section elucidated the key factors influencing language problems, which formed the foundational basis for the practical solutions developed to reduce language barriers between parents and teachers.
- Section 2.2.2 Widely used tools to mitigate language impediments: This section discussed commonly employed practical solutions for mitigating language barriers within the specified context. The functionalities of interpreter services, video-remote interpreting (VRI), mobile applications, and pictorial booklets were elucidated with illustrative examples. Their applicability and usability for the current research cohort are subsequently evaluated in later sections.
- Section 2.2.3 In-depth analysis of the widely used practical solutions: This section presents case studies pertaining to the application of interpreter services, VRI, mobile applications, and pictorial booklets. These were

categorized into two groups: case studies derived from practical implementation (Section 2.3.3.1) and research-based case studies (Section 2.3.3.2). Case studies from practical implementation were utilised to discern potential requirements for developing analogous practical solutions across various contexts, including education. Research-based case studies elucidated the potential advantages and disadvantages of each practical solution. The findings from these studies were subsequently employed to identify the most appropriate tools for facilitating effective communication between immigrant parents and teachers.

- Section 2.2.4 Summary: This section provided a discussion of potential barriers to communication between immigrant parents and Turkish teachers, along with a critical assessment of potentially useful practical solutions for mitigating language barriers.

2.2.1 Introduction

Language serves as a fundamental medium through which individuals articulate thoughts, engage in social interactions, and establish, cultivate, and sustain relationships (Aichhorn and Puck, 2017). Conversely, the concept of a language barrier denoted the inherent communication challenges that emerge when interlocutors do not share a common linguistic system (Purtle, Siddiqui and Andrulis, 2011) . These linguistic impediments were recognised as a pervasive issue for immigrant populations across various contexts, including Syrian immigrants residing in Türkiye. The significant structural disparities between Turkish and Arabic, particularly their orthographic and phonetic systems, further exacerbated this challenge (Purtle, Siddiqui and Andrulis, 2011) . For instance, Turkish utilised the Latin alphabet, whereas Arabic employed its distinct script (see 2.2-a for the Turkish alphabet and 2.2-b for the phonetic Arabic alphabet), and a substantial portion of Arabic phonemes lacked direct equivalents in the Turkish language (Aubakirova *et al.*, 2016; Dayan, 2020).

Turkish alphabet (a)	Arab alphabet (b)
Aa Bb Cc Çç Dd Ee Ff Gg Ğğ Hh Iı İi Jj Kk Ll Mm Nn Oo Öö Pp Rr Ss Şş Tt Uu Üü Vv Yy Zz	أ ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك ل م ن هـ و لا ء ي

Figure 2. 2. A Visual Comparison of the Turkish and Arabic alphabets (Nomad Revelations, no date; Wikimedia Commons, 2020)

Intertwined elements of language barriers: The language barriers context suggested that in addition to limitations due to limited knowledge of the language, there were also other factors accompanying language barriers, which were cultural and emotional barriers between people and unfamiliarity with topics (Aichhorn and Puck, 2017), as explained below:

- Cultural barriers

Cultural barriers encompass diverse behaviours, beliefs, traditions, customs, and expressions characteristic of groups of people of a specific race, ethnicity, or national origin, which affect interactions between individuals (Moran et al., 2014: 11-15). Language, in turn, is a complex system of symbols and meanings embedded within a cultural framework (Purtle, Siddiqui and Andrulis, 2011). The following examples demonstrated how cultural and language barriers, when intertwined, could make communication more challenging in various contexts.

Purtle, Siddiqui and Andrulis, (2011) explored the link between cultural and language barriers among international relief workers in the U.S. The researchers reported that language challenges encountered by service providers were most effectively alleviated when they possessed a thorough understanding of the cultural and linguistic complexities of the affected population. As an illustration within the health context, consider the contributions of Yeo (2004) regarding interactions between physicians and patients, as demonstrated in the following paragraph:

> “Both physicians and patients raised the problem of compliance; however, the physicians questioned the patients’ compliance with prescribed medications, while the patients insisted, they complied until the point where they thought the treatment failed. The doctors felt that understanding the patients’ culture better would help achieve better diagnosis and more effective management. The patients did not understand the intent of the physicians’ questions about their culture and habits and

> sometimes found such inquiries intrusive or irrelevant. Thus, they did not disclose personal information about themselves. At the same time, patients sometimes expected physicians to inherently know their perspective with little or no explanation. These cultural differences can be viewed as barriers to care…" (p.65).

Furthermore, Lee (2003) also stated that cultural differences often led to cultural barriers that reduced access to healthcare services. Similarly, Sohn and Wang (2006) demonstrated that cultural barriers, in conjunction with linguistic barriers, engendered additional complexities within educational environments. For example, students encountered circumscribed opportunities for social interaction and restricted access to essential facilities. Consequently, in alignment with this empirical evidence, cultural barriers ought not to be conceptualized as discrete from linguistic barriers.

- Emotional barriers

Kapur (2018) defines emotional barriers as positive and negative emotions, including happiness, anger, frustration, stress, depression, anxiety, trauma, and pride. Aichhorn and Puck, p. (2017, p. 751) expanded the link between emotional and language barriers as "an individual's level of fear associated with either real or anticipated communication with another person or persons." The connection between emotional and language barriers has been explored from various perspectives; for example, see the two different research studies below based on work settings:

Tenzer and Pudelko (2015) found that emotional issues are closely intertwined with language barriers among employees. In an international company they studied, for example, Chinese colleagues often felt anxious when emails were sent to everyone in German; they were unsure of the content and worried about missing important information. In another research study from a professional environment, Aichhorn and Puck (2017) revealed that non-native staff members in multinational corporations (MNCs) faced emotional challenges. These included feelings of unease, discomfort, and self-consciousness when using a foreign language, as well as a diminished sense of professional competence. In addition, they experienced status loss, a limited sense of belonging, and fear of unemployment. The researchers deduced that such emotions could hinder efficient communication, impair team development, and harm relationships between headquarters and subsidiaries.

In conclusion, it can be argued that emotional barriers and language barriers are interconnected, with each influencing the other, as evidenced by research from various contexts - see Sohn and Wang (2006) as an example from the education field, and Zhao et al. (2021) from the healthcare services. As such, emotional and language barriers should be assessed as a unit in research concentrating on language obstacles.

- Unfamiliarity barriers

Unfamiliarity refers to a lack of knowledge or experience, and it often leads individuals to struggle with understanding issues, particularly when they are unfamiliar with the topic or terminology (Squires, 2009). This challenge is further compounded when language barriers are present (Lee, 2003), as illustrated by examples based on healthcare services:

de Veer, den Ouden and Francke (2004) found that language problems and a lack of familiarity with the Dutch healthcare system hindered immigrant health staff members' ability to secure employment. Similarly, (Lee, 2003) reported that unfamiliarity with the U.S. healthcare system resulted in diminished access to services for immigrants, asserting that ‘limited English proficiency and cultural unfamiliarity with the U.S. health care system can both be considered inhibitors or barriers in accessing medical care.’ (p.6).

Consequently, in light of this evidence, it is imperative to consider the level of knowledge as a critical factor alongside language barriers. This is further underscored by relevant examples from diverse fields, such as education (Cureton, 2020) and professional work environments (Cheng *et al.*, 2021).

- Barriers due to personal characteristics

Personal or individual characteristics are defined as impalpable aspects of personality, experience, talents, competences, and social status which could be used to describe a person (Subedi, 2020). Consequently, numerous studies have investigated the relationship between language barriers and personal features, addressing these issues from diverse perspectives, as exemplified by the research outlined below:

Muramalla (2019) declared that people are affected by language barriers differently; individuals faced hurdles because of semantic gaps, word choice, pidgins, slang, accent, unclear sound, linguistic ability, literacy, jargon, and dialects to varying degrees. Aichhorn and Puck (2017) suggested that demographic features also affected language barriers, stating: “Some of our employees, especially elderly employees, who spoke only a little English, were deeply personally affected by the introduction of English. Several employees told us that they can no longer sleep at night and that they are having nightmares because they do not speak English.” (p.755).

It is evident that the experience of language barriers is highly individualized, stemming from each person's unique circumstances. Consequently, while the influence of personal features should be considered when addressing language barriers, it may not always be practically feasible to account for this element on an individual basis for every person.

Overview of the introductory context: At the outset, without delving further into the specifics of language barriers, it is important to note that the existing literature demonstrates considerable variation in the terminology employed within this discourse. Notably, a distinction often emerges wherein ‘linguistic barriers’ are conceptualized as a singular construct, whereas the broader term ‘barriers’ tends to encompass more complex, multifaceted phenomena, including the intricate interplay of cultural and linguistic factors. However, it remains challenging to draw definitive conclusions regarding these terminological distinctions. A range of terms is observed in the literature, including ‘language limitations’, ‘linguistic barriers’, ‘language impediments’, ‘communication barriers’, and ‘communication impediments’, each reflecting subtly different nuances. For the purposes of this study, the term language barriers is used comprehensively to encompass both purely linguistic obstacles and the broader, intertwined factors.

Regarding the broader context of language barriers, findings indicate that such barriers constitute one of the most prevalent challenges faced by immigrants in diverse settings. Significant differences between an individual’s mother tongue and the language of the host country, as is potentially the case for the research population in this study, alongside additional factors such as cultural barriers,

emotional barriers, unfamiliarity with specific topics, and individual characteristics, can significantly impact the learning process. Consequently, there is a need to support immigrants through practical interventions that facilitate their interaction with local populations until they attain sufficient proficiency in the local language. When proposing effective solutions, it is also essential to consider the potential influence of these additional factors.

In light of these complexities, this section reviewed existing practical solutions aimed at mitigating language barriers and evaluated their applicability to the research population within the Turkish context. The review integrated insights from primary research, and solutions were developed based on the dynamics observed between the two groups, including cultural and emotional considerations (see Chapter 4 for details of the primary research).

2.2.2 Widely Used Practical Solutions to Reduce Language Barriers

This section covers the use of interpreter services, video remote interpretation (VRI), apps, and pictorial booklets, which could potentially help reduce language barriers between parents and teachers.

A) Interpreter Services and VRI

Interpreting services are those where a professional interpreter will convert spoken words from one language to another simultaneously (Wadensjo, 2014, pp. 4–12)while video remote interpreting (VRI) was defined as a video telecommunication service that utilizes devices such as web cameras or videophones to offer sign language or spoken language interpreting services. This was done through a remote interpreter to facilitate communication between people who speak different languages (Moser-Mercer, 2012) (see the examples in Figure 2.3 for the use of video remote interpreting systems in hospitals). These services (in-person and remote interpreters) were often used in several sectors in order to overcome language problems, such as in courts, international business meetings, hospitals, etc. - see (Wadensjo, 2014; Martin *et al.*, 2020; Schniedewind, Lindsay and Snow, 2020) as examples.

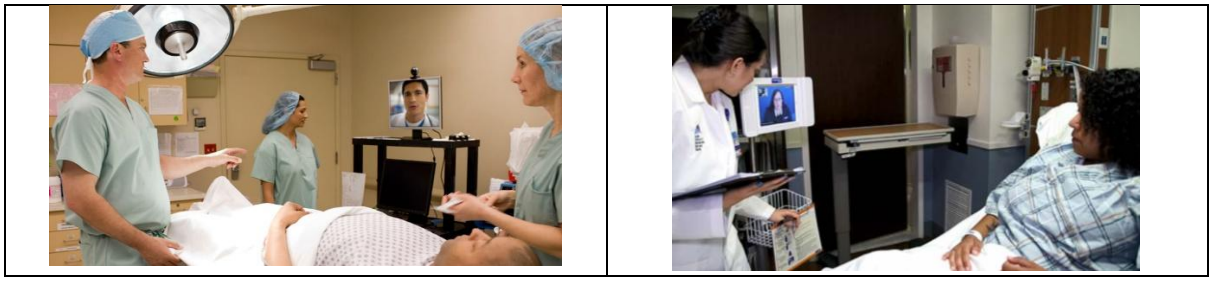


Figure 2. 3. Examples of Video Remote Interpreting (VRI) Systems in Healthcare Settings (Cisco Systems, no date; Mount Sinai Health System, no date)

B) Apps

A mobile application (app) refers to a software program specifically designed to operate on mobile devices such as smartphones and tablets (Liao and Ho, 2021). These applications play a significant role in facilitating communication between individuals who speak different languages. Some apps are used for general purposes—for instance, Speak & Translate and iTranslate (see Figure 2.4)—while others are designed for specialised contexts, such as enhancing communication between patients and healthcare professionals (relevant examples are provided in Section 2.2.3.1)

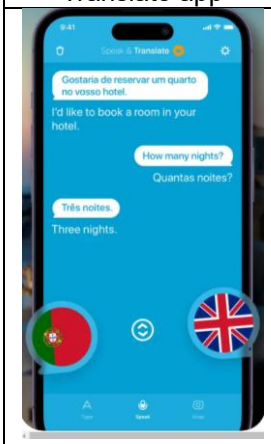
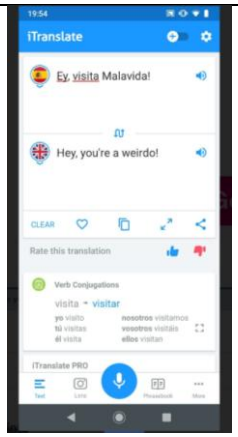
a- Speak & Translate app	b – I Translate app
	

Figure 2. 4. Screenshots of Translation Apps (Apple.Inc, no date; Malavida, no date)

Furthermore, Google Translate and Microsoft Translator are among the most widely used translation applications, supporting over 100 languages (Leite *et al.*, 2016; Lakshmanan, 2025). Google Translate, in particular, is recognised for its user-friendly interface and diverse functionalities, as illustrated in Figure 2.5 - a. For example, the app's voice feature converts spoken input into text in the target language. Its versatility is further demonstrated by its ability to function both online

and offline, as well as its broad compatibility across devices such as computers and mobile phones (Wade, 2011; Sheik-Ali, Dowlut and McConaghie, 2016). Microsoft Translator, though comparatively newer, offers a more advanced set of features; while it encompasses the core capabilities of Google Translate, it extends beyond them by enabling seamless, real-time multilingual conversations. Whether spoken or written, content is automatically translated into the desired language, allowing participants to communicate effectively – see Figure 2.5 - b (Sheik-Ali, Dowlut and McConaghie, 2016; Hudelson and Chappuis, 2024).

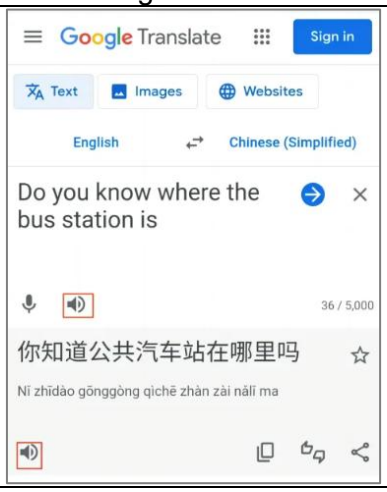
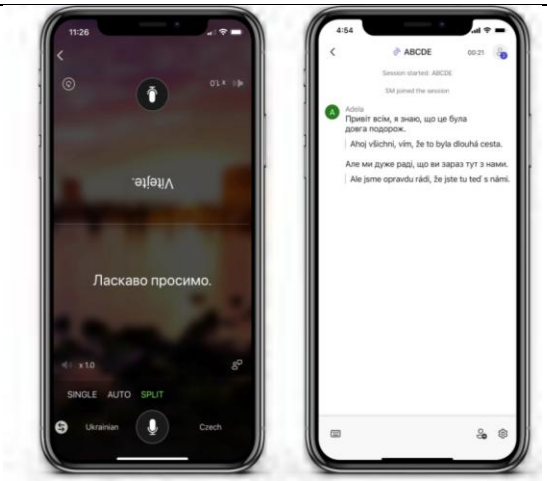
Google Translate	Microsoft Translate
	

Figure 2. 5. Representation of Various Functionalities of Google Translate and Microsoft Translate apps (Microsoft, no date; WorkinTool, no date)

C) Pictorial Booklets

A pictorial booklet is a very thin book with a small number of pages and a paper cover, conveying information via texts and illustrations about a topic (Talhouk *et al.*, 2016). Literature findings show that illustrations could help enhance communication; for example, the use of images is prevalent in hospitals to improve health communication (Houts *et al.*, 2006). Global companies, such as the global furniture company IKEA, also use this alternative; they often provide booklets with products, which enables customers from different countries to install their products, usually with no need for written explanation (see Figure 2.6 for the installation booklet of IKEA Lack coffee table). The language barriers context also suggests examples for the use of booklets as a communication tool - see Badruddin and Arif (2017) as an example. As the use of pictorial booklets, also named as toolkits, is integrated into language barriers literature, there is a need for involving this option to be considered for eligibility to meet the requirements in this research.

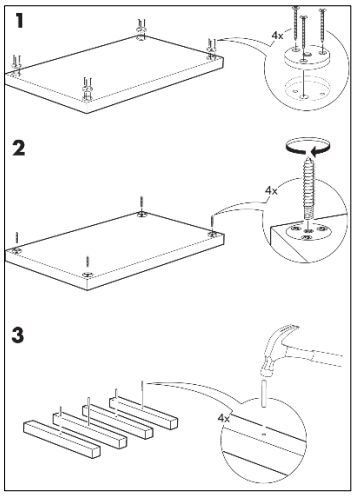


Figure 2. 6. A Page from the Installation Booklet of the IKEA Lack Coffee Table (UserManual.wiki, 2014)

2.2.3 In-depth Analysis of the Widely Used Practical Solutions

This section provides a detailed analysis of the communication channels introduced in Section 2.2.2. The investigation is organised around two primary sub-topics to enable a comprehensive examination of both practical implementation and theoretical underpinnings: Case Studies from Practice (1), which focus on example applications, and Research-Based Case Studies (2), which highlight empirical evidence. Case studies were identified through systematic database searches using targeted keywords. Initially, the term “language barriers case study” was employed, and subsequent searches combined this term with specific interventions or tools, including “app,” “interpreter service,” “VRI,” “pictorial booklets,” and “toolkits.” The research findings are presented and further elaborated upon in the subsequent sections.

2.2.3.1 Example Applications (Case studies from Practice)

A case-study based analysis was conducted to investigate the real-world utility of the communication channels and tools detailed earlier. This approach was particularly advantageous in that they provided detailed insights into the practical application of methods within a single setting, illustrating their processes, challenges, and outcomes. The insights gained from these case studies will serve as a valuable foundation for the current research, informing the development of strategies and

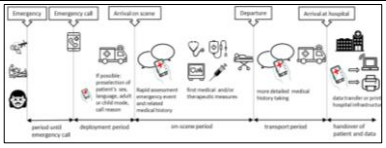
inspiring potential applications within the specific context of Turkish primary schools to better support parents and teachers.

The researcher examined a total of 8 practice-based cases (refer to Table 2.8 for the inclusion and exclusion criteria, and Table 2.9 for the complete list of case studies), the reason behind review of this amount of case studies is data saturation has been reached**.** This section covered three of them: Case Study 1 on interpreter services, Case Studies 2 on applications, and Case Studies 3 on pictorial booklets. A brief summary was provided after each group of case studies. Finally, an overall summary of the practice-based case studies was presented at the end of the section.

Table 2. 8. Inclusion and Exclusion Criteria for Case Studies from Practice

Inclusion criteria	Exclusion criteria
- The focus of the examples should be reducing language problems.	- The examples that have a different focus apart from language barriers.
- The examples suggest practical solutions eligible to be used in a real-life context.	- These examples do not yield practical solutions for the identified problems; rather, they remain solely conceptual.
- The examples should be eligible to use in different contexts.	- These examples offer solutions applicable only to a single, non-modifiable case.

Table 2. 9. List of the Practice-based Case Studies Examined

Year	Topic	Context & Communication channel		Image
2021	Designing an App to Overcome Language Barriers in the Delivery of Emergency Medical Services: Participatory Development Process (Noack et al., 2021)	Healthcare settings	App	*See Section 2.3.3.3.4*
2020	Beyond the language barrier: Recommendations for working with interpreters in individual psychotherapy (Martin et al., 2020)	Healthcare settings	Interpreter service	*Not given*
2020	Overcoming language barriers in paramedic care: a study protocol of the interventional trial 'DICTUM rescue' evaluating an app designed to improve communication between paramedics and foreign-language patients (Noack et al., 2021)	Healthcare settings	App	

2019	Inclusive Co-design Toolkit (Bridgeable, 2019)	General use	Pictorial booklet	
2018	Better communication, better care. A provider toolkit for serving diverse populations (L.A. Care Health Plan, 2018)	Healthcare settings	Pictorial booklet	*See Section 2.3.3.3.4*
2018	Strategies for overcoming language barriers in healthcare (Squires, 2018)	Healthcare settings	Interpreter service	
2017	Beyond the Language Barrier 'Speak','See','Help Me' (Badruddin & Arif, 2017)	Healthcare settings	Pictorial booklet	
2016	Overcoming the language barrier in mobile user interface design: A case study on a mobile health app (Ross & Gao, 2016)	Healthcare settings	App	

A) Interpreter Services

- **<u>Case study 1:</u>** Strategies for overcoming language barriers in healthcare (Squires, 2018)

This case study was chosen because it suggested practice-based strategies, and the guideline was developed with different groups of patients, not only based on the needs of a specific group, which could be useful for the reliability of the strategies. As a result, this research could be a useful example to improve similar guidance for other contexts as well.

- <u>Overview:</u> This study was conducted in the United States, a country home to diverse immigrant populations. The report, prepared by the researcher, aimed to mitigate language barriers between patients and nurses to enhance treatment efficiency. It outlines recommendations for healthcare staff, detailing strategies to maximize the benefits of interpreter services within a limited timeframe (refer to Table 2.10 for detailed suggestions).

Table 2. 10. Recommendations for Communicating with Interpreters (Adapted from Squires, 2018).

#	Recommendations for health staff
1	Find out the language required and how much time the conversation will last.
2	Introduce yourself, provide a digest of the work required, and a concise patient history.
3	Present the patient to the interpreter. Describe to the patient what will occur, and inform the patient he or she can ask the interpreter questions. Then, begin the activity.
4	Resist the temptation to talk to or look at the interpreter, unless you need clarification of something he or she said.
5	Prefer shorter statements than normal since it easier for the interpreter to recall the statement and enhances the translation's certainty.
6	If the interpreter seems confused about something you've mentioned, ask the interpreter if rephrasing / clarification is required in order to improve quality of interpretation for the patient.
7	Try not to cut off the interpreter when he or she is converting the patient's answer. Recognising what the patient is about to tell may not always be correct, and some cultures consider interruptions as mean attitude.
8	If the interpreter seems to be taking a long time to translate for the patient, it may mean that he or she is trying to phrase the statement in a way that will be finest received. In contrast, if an interpreter simply converts, for instance, "yes," to something the patient took a long time period to say, it may be a signal of low-quality translation. Validate that the translator completely interprets patients' answers. Don't accept a "yes" or "no" when the patient offers too much information, even when you're in a dash.
9	When the encounter finishes, ask the patient if he or she requires anything else while the translator is there. Most patients have more requirements, and frequently the interpreter encounter makes them feel satisfying enough to express them.
10	After walking away from the place with the interpreter, check the encounter to assure that both interpreter and you ended up on the same sheet. The interpreter may also have some cultural views to tell that may assist care planning.

Summary of the example applications focusing on the interpreter service and VRI: Examining the example case studies in the context, guidelines from different areas have been developed to enhance the effectiveness and gain maximum benefit from the service (see examples: Squires, 2018; Martin et al., 2020), which could also be eligible to adapt to different environments. The overall idea from the practical examples could be that there is a need for 1) planning the whole conversation - for example, 'requirements for the initial stage (for example, introducing the processes of the meeting)', 'technical information to enhance the effectiveness of the services (for example, use of short statements), 'requirements for the final stage (for example, final questions to be asked before concluding the meetings), 2) considering all stakeholders (for example, health staff, patients and the translator) and offering advice accordingly. Finally, similar guidelines could be developed based on the

needs for the potential users, and the overview suggestions could also be utilised when developing new strategies.

B) Apps

- **Case study 2:** Designing an App to Overcome Language Barriers in the Delivery of Emergency Medical Services: Participatory Development Process (Noack, Schulze and Müller, 2021)

This case study was selected mainly because it proposed details regarding developing an app to reduce language barriers. It could help to investigate requirements for such tools. With the explanations regarding features embedded in the app via attached images, the research could guide designers who are planning to develop similar solutions.

- Overview: This case study was conducted to mitigate language barriers between paramedics and patients in emergency medical contexts, utilizing technological interventions. The research illustrates the developmental and refinement process of a mobile application within a healthcare setting. Ultimately, it presents an example of a mobile application employed in a hospital environment to reduce language barriers and facilitate multi-lingual translation.

  Aim: This project aimed to improve a digital communication device that shows paramedic requirements in the unique conditions of prehospital emergency care and aids health staff to overcome language limitations when offering care to foreign patients.

  Method: The researchers vigorously engaged health staff and software designers in an action-oriented, participatory, iterative development process, which involved field observations, workshops, contextual discussions, surveys on rescue missions, reviewing the literature, and initial testing in the field.

  Outcomes: The application was developed based on existing requirements, supporting 18 languages and featuring 600 common phrases (see example images and explanations in Figure 2.7). The prototypes further verified that the theoretically discussed requirements for content, structure, and functions were indeed necessary in real-world application. Key features of the app include: audio playback and additional text display, a log for documenting patient responses, a quick access menu, and navigation.

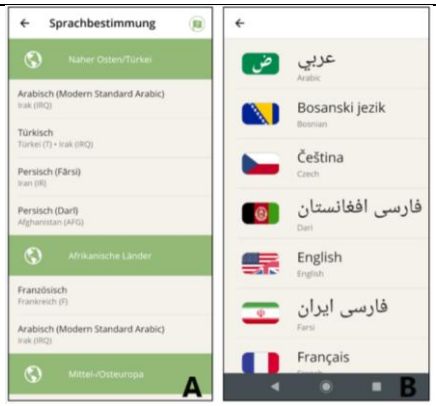
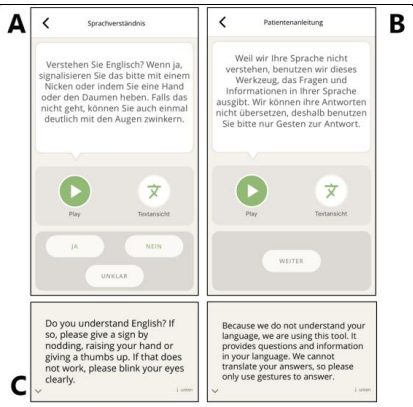
a	b
	
The image includes two pages from the app: Paramedics choose the language from (A) a geographically listed directory or (B) have the patient select from a flag button list that is listed alphabetically and labelled in the original language.	The image indicates three sections: (A) To confirm that the patient understands the chosen language, the app may request "Do you understand [chosen language]?" and ask the patient to sign "yes" if so. (B) The device offers a brief description of the app's role in order to avoid misunderstandings. (C) The respective passage is shown via the "Textansicht" button.

Figure 2. 7. Images from the App and Explanations for Its Functions (Noack et al., 2021)

In conclusion, this project primarily offered a better understanding of the requirements for developing an app to reduce language barriers in health centres. Nevertheless, this example case study also provides insights into potential needs for other contexts.

Summary of the example applications focusing on apps: The reviewed case studies confirmed the effectiveness of using applications to reduce language barriers across various contexts and offer valuable insights for developing similar solutions in other areas, including education. For instance, regarding the project conducted by (Noack, Schulze and Müller, 2021), several insights are pertinent to this research. The fixed phrases, originally designed for patient-doctor interactions, could be adapted to facilitate parent-teacher communication. Furthermore, features enhancing rapid communication, such as audio playback and supplementary text display, hold utility for improving exchanges within educational settings.

The feature of recording, as observed in doctor–patient interactions, is another valuable idea; a comprehensive record of parent–teacher discussions could inform the strategic planning of future meetings. Lastly, the application's design elements, including its use of colour, universal icons, and imagery, could similarly be leveraged in an application designed to streamline parent-teacher communication. Similarly, Ross and Gao (2016) highlight the pedagogical potential of combining visuals (e.g.,

national flags) with textual supports, offering additional strategies that could be leveraged in the educational domain.

These case studies offer significant utility not only for the mobile application development phase but also for formulating strategic recommendations for school administrators. For instance, prioritising the enhancement of parents' educational terminology knowledge (analogous to terminology integration in medical apps), the synergistic deployment of visual aids and textual information within the school environment, and the systematic maintenance of parent-teacher meeting records (similar to patient-doctor consultations) collectively represent valuable contributions for augmenting the informational resources provided to school managers.

C) Pictorial Booklets

- **Case study 3:** Better communication, better care. A provider toolkit for serving diverse populations (L.A. Care Health Plan, 2018)

This example was chosen mainly because it was designed for use in a real-life context to reduce language barriers between people from diverse groups, including those who have specific needs, via a pictorial booklet. This booklet was also useful because it covered additional information regarding how to communicate with people from different backgrounds, beyond language barriers themselves (for example, information about cultural awareness and how to tackle cultural barriers with illustrative scenarios). Furthermore, the research team considered different groups when developing this booklet (for example, interpreters, health staff, and patients), which may potentially increase its usability.

- Overview-summary for the pictorial booklet: The pictorial booklet was developed in the USA to decrease language barriers in healthcare services, serving a diverse immigrant population. This booklet not only covers commonly used phrases in different languages but also provides additional guidance and recommendations for health staff working with diverse groups of patients (for example, eye contact, touch and use of space, gestures, body posture and presentation, and use of voice) (see Table 2.11 for the content of the booklet and Figure 2.8 for example phrases in different languages).

Table 2. 11. Content of the L.A. Care Health Plan (2018) Pictorial Booklet

Sessions		Explanation
A	What You Need to Know?	The initial section provides guidance on the optimal utilization of this material.
B	Interaction with a Diverse Patient Base	This section offers guidance on effective engagement with diverse patient populations, specifically addressing considerations such as the American with Disabilities Act (ADA) requirements.

C	Crossing Barriers: Communication Across Language Barriers	This section primarily addresses the dynamics of communication between interpreters and patients. Users can access valuable information organized under pertinent subheadings, such as 'Tips for Working with Limited English Proficient Patients' and 'Common Signs / Sentences in Multiple Languages'.
D	Awareness of Cultural Background and Its Impact on Healthcare Delivery	The concluding section provides foundational information for effective communication with disadvantaged groups, exemplified by topics such as 'Effectively Communicating with the Elderly'

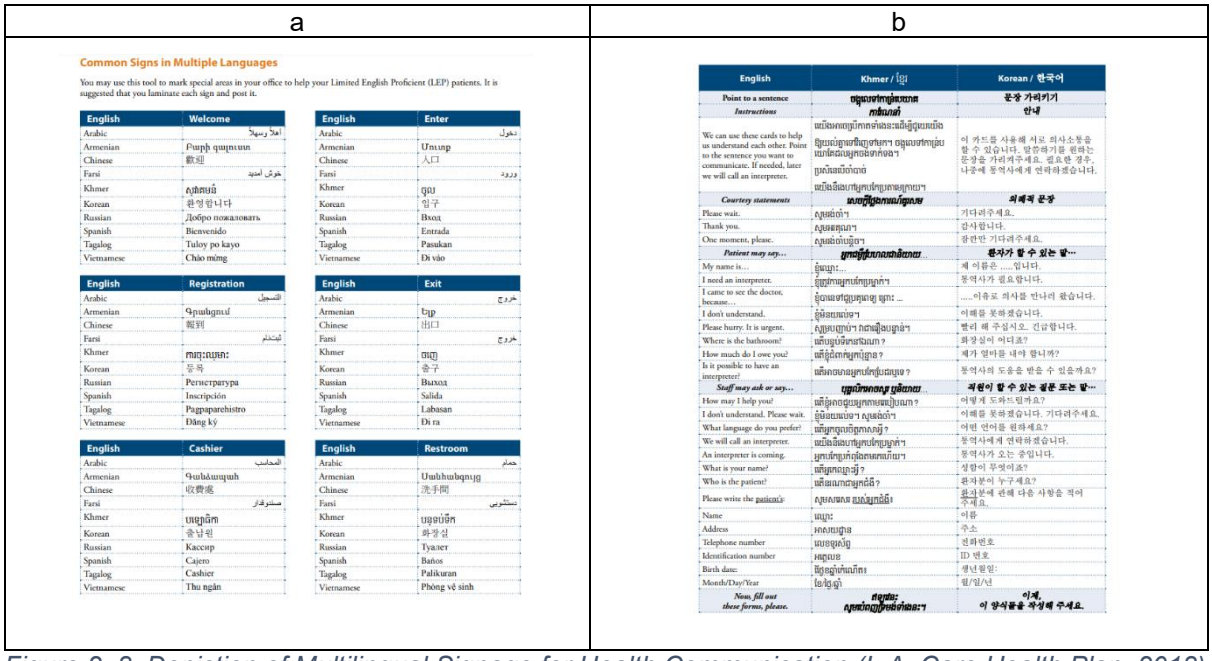


Figure 2. 8. Depiction of Multilingual Signage for Health Communication (L.A. Care Health Plan, 2018)

Overall, the pictorial booklet can be used as a guide when developing similar solutions to reduce language barriers. It is useful not only for tackling language barriers with images and often-used phrases, but also for increasing awareness regarding how to engage with different groups through the suggestions provided.

Summary of the example applications focusing on the pictorial booklets: The case studies provided valuable contributions to understanding the potential efficiency of pictorial booklets in mitigating language barriers and to generating a pictorial booklet for a specific case, as elaborated below:

- The use of solely images (without written explanations) can be sufficient in some cases, such as the installation booklets of international companies; customers can comprehend the essential information via drawings. However, such pictorial booklets may not be effective in facilitating communication within the education context, particularly in parent-teacher interactions.

- Examining the materials designed specifically to facilitate communication, I we can see that there is a need for widely used phrases and words and terminology in different languages that are often used in that context, and images to describe acts (for example, acceptable and unacceptable behaviours as seen (Inclusive Co-design Toolkit. Best practices for making co-design inclusive of people with language barriers., 2019). However, without accompanying text, such booklets may not be effective in facilitating communication.

Ultimately, it can be concluded that a pictorial booklet designed to facilitate interpersonal communication ought to integrate context-specific, frequently used phrases in multiple languages along with supplementary guidance to effectively mitigate linguistic barriers. Within the scope of this research, this would entail supplementing the booklet with education terminology-based words and sentences in both Arabic and Turkish. However, these pictorial booklets appear to function more effectively as advisory materials rather than comprehensive communication tools, primarily due to their inherently limited communicative capacity. While the direct proposal of a pictorial booklet to teachers and parents might lack efficiency given its restricted communication allowance, the underlying concepts embedded within it (e.g., culturally sensitive approaches to immigrants, appropriate communication behaviours) can be integrated into guidelines for school managers to be subsequently disseminated to Turkish teachers.

To summarise the Section 2.2.3.1, the case studies utilised to develop similar practical solutions for the context of this research project. For example. the technical information given in the examples could be applied when generating new tools. However, further investigation is essential to define the specific requirements of parents and teachers (see primary research in Chapter 3).

2.2.3.2 Empirical Examples (Research-based Case Studies)

This section examines the potential advantages and disadvantages of the practical solutions presented in Section 2.2.2 by analysing research-based case studies. This approach offers the opportunity to gain in-depth insights derived from studies conducted with a clearly defined target group, thereby providing a richer

understanding of the effectiveness and limitations of these solutions in practice. The findings from these case studies form a valuable foundation for the present research, guiding the development of contextually relevant strategies and inspiring potential applications within Turkish primary schools to enhance support for both parents and teachers.

A total of nine research-based case studies were examined according to predefined criteria, as outlined in Table 1.12 (see the reviewed case studies in Table 2.13). Of these, three case studies are discussed in detail in this section: Case Study 1 (interpreter services), Case Study 2 (mobile applications), and Case Study 3 (pictorial booklets). To analyse the data, a SWOT analysis was employed, which is defined as a strategic evaluative technique used to identify Strengths, Weaknesses, Opportunities, and Threats (Teoli, Sanvictores, & An, 2019). Although this approach is traditionally applied within management and organisational contexts, it is also applicable to the present study, as it enables a systematic assessment of the potential benefits and limitations of the reviewed tools for the target research group, based on contextual considerations.

Within this framework, *strengths* refer to the features of each tool that may have a positive impact on the research group, while *weaknesses* denote aspects that may present limitations or challenges. *Opportunities* encompass characteristics that hold potential for further usefulness or development, and *threats* represent features that may be unsuitable or should be reconsidered due to their limited relevance or effectiveness for the research group. A summary of the SWOT analysis for the research-based case studies is presented at the end of this section.

Table 2. 12. Inclusion and Exclusion Criteria for Research-Based Case Studies.

Inclusion criteria	Exclusion criteria
- One of the primary focuses is the reduction of language barriers.	- The examples do not focus on or involve language barriers.
- The examples suggest practical solutions eligible to be used in a real-life context	- These examples don't offer practical solutions to the problems; they're only theoretical.
- The examples should be eligible for use in different contexts.	- The examples that offer solutions for only a single case; they are not modifiable.

Table 2. 13. Reviewed Research-Based Case Studies

Year	Topic	Context	Addressed tools
2022	Language barriers in multilingual Saudi hospitals: causes, consequences, and solutions (Alhamami, 2022)	Healthcare settings	Interpreter service
2021	Enhancing patient safety through the quality assured use of a low-tech video interpreting system to overcome language barriers in healthcare settings (Kletečka-Pulker et al., 2021)	Healthcare settings	Video-interpreter service
2020	Successful Verbal Communication Using Google Translate to Facilitate Awake Intubation of a Patient with a Language Barrier: A Case Report (Kapoor et al., 2020)	Healthcare settings	App
2016	The "Battle" of Managing Language Barriers in Health Care (Steinberg et al., 2016)	Healthcare settings	Interpreter service
2016	Language barriers and patient safety risks in hospital care-A mixed methods study (van Rosse et al., 2016)	Healthcare settings	Interpreter service
2014	Using mobile technology to overcome language barriers in medicine (Chang et al., 2014)	Healthcare settings	App
2014	Prevention is the Best Medicine: Development of a work and health toolkit for new immigrants using settlement services in Ontario (Kosny et al., 2014)	General use	Booklet (Toolkit)
2006	The effects of a language barrier in a South African district hospital (Schlemmer and Mash, 2006)	Healthcare settings	Interpreter services
2004	Bridging the language barrier: the use of interpreters in primary care nursing (Gerrish, et al., 2004)	Healthcare settings	Interpreter service

A) Interpreter Services / VRI

This subsection included a case study on interpreter services and a summary of their use, drawn from research-based examples.

A1)

- **Case study 4:** Bridging the language barrier: the use of interpreters in primary care nursing (Gerrish *et al.*, 2004)

This case study was selected for this research primarily due to its clear presentation of issues from the perspectives of different groups. Although this case study was conducted over two decades, the problems reported are similar to contemporary ones. Therefore, the researcher did not exclude it and chose to utilize it. She believed that this report could help identify potential problems when parents and teachers communicate via an interpreter in educational settings. Furthermore, this case study from healthcare services could be used when developing solutions for parent-teacher communication.

- Overview: This case study examined the use of interpreter services within a healthcare setting. The research was undertaken in a UK city where a

significant minority population resides. This paper investigated the use of interpreter services from different perspectives: doctors, patients, and interpreters participated in the research. Finally, challenges were identified from the viewpoints of patients, doctors, and interpreters.

Aim: This research aimed to identify challenges associated with the utilization of interpreter services from the perspectives of different stakeholders within healthcare settings.

Method: Focus groups were undertaken with five separate groups of district nurses, health visitors, practice nurses, community midwives, and specialist nurses. Additionally, three groups of interpreters from different interpreting services and five groups of participants representing the main community languages in the locality where the study was undertaken (i.e., Arabic, Bengali, Cantonese, Somali, and Urdu) were included. Data analysis drew upon the principles of 'framework' analysis.

Results: The researchers identified challenges from the perspectives of health visitors, health staff, and interpreter services, as detailed in Table 2.14 below.

Table 2. 14. Challenges in İnterpreter Services from Diverse Stakeholder Perspectives (Adapted by Gerrish et al., 2004)

Diverse groups' perspectives	Key issues	Explanation
Problems from patients' side	Non-satisfaction with poor translation	Patients often reported concerns regarding inadequate translation. They stated that although they discussed their problems in detail, the interpreters rendered statements too quickly or in an overly brief timeframe. Hence, patients were uncertain whether their statements were accurately conveyed to the doctors.
	Feeling unconfident if the statements are kept secure	Most patients stated that they often hesitated to discuss private issues; they were unsure whether the information provided would be disseminated to other parties (the doctors and interpreters also mentioned patients' hesitancy in disclosing private matters). As a result, most of the required information could not be received by doctors in most cases.
	Cultural misunderstandings	Health visitors often found hard to describe some situations due to cultural differences. Hence, some statements could not be translated accurately in another language, which sometimes limited communication between doctors.

Problems from doctors' side	Inefficient communication due to interpreters' unfamiliarity with the healthcare context	Doctors frequently highlighted the inadequacy of interpreter staff within healthcare services. They noted problems arising from interpreters' unfamiliarity with health contexts, which hindered effective communication between doctors and patients. Consequently, it was stated that interpreters needed to be familiar with healthcare terminology.
Problems from the interpreter's side	Lack of awareness among health staff regarding interpreter collaboration	The interpreters stated that health staff were often unaware of how to use an interpreter efficiently. They underlined that interpreters are not only translators, but also serve as a bridge between patients and doctors, as evidenced by the following statement from an interpreter: "I was called in because a patient forgot her appointments. The health visitor didn't brief me beforehand. She didn't know what was involved. She didn't know about using short sentences and allowing me to explain to the patient before asking the next question. She was talking all in one go and then expected answers straight away." (p.411).

Overall, the findings suggest a clear need for enhanced utilization of interpreter services within healthcare settings, particularly considering the challenges identified by various stakeholder groups.

A2) Summary of the empirical examples focusing on interpreter services and VRI: The findings showed that interpreter services are quite convenient communication channels to reduce language barriers; however, there are also disadvantages to these services. Rosendo and Martin (2024) reported that interpreter services are one of the most practical and effective solutions. Van Rosse et al. (2016) also stated that professional interpreters are the best bridges between health staff and visitors). Kletečka-Pulker et al. (2021) reported further benefits of VRI and suggested its use as an alternative channel where in-person services are not feasible, highlighting:

- Rapid availability
- Data protection compliance
- The eligibility to meet the interpreter where an in-person meeting is not convenient
- The absence of potential external influence resulting from personal relationships

- Legal certainty
- Cost savings (compared to in-person meetings)

However, several studies (e.g., Ribeiro, 2007; Schlemmer & Mash, 2006; Steinberg et al., 2016) reported disadvantages of these services, such as high costs and time limitations. Nevertheless, due to the significant benefits of the services, their utilization could be prioritized where feasible. To reduce these disadvantages in different contexts, the effectiveness of the services could be enhanced by drawing upon insights from example case studies.

- To receive regular feedback from diverse groups (e.g., in schools, this could involve understanding challenges from various viewpoints, such as those of teachers, parents, school managers, and interpreters).
- To develop solutions based on the identified issues (e.g., revising service schedules based on specific requirements, or providing training for interpreters to enhance their awareness of cultural differences).

Finally, the suggestions can be summarized as follows: first, fostering a triadic relationship and conceptualizing interpreters as integral team members; second, providing cultural knowledge and supplementary training for interpreters; and third, establishing a termination policy and guidelines. Nevertheless, further primary research is also warranted to ascertain the effectiveness of interpreter services for this research group and to identify potential requirements for enhancing the usability of the services (details on primary research are provided in Chapter 3).

B) Apps

This subsection presents a case report and a summary of research-based case studies concerning the use of applications (apps).

B1)

- **Case study 5 (a case report):** Using mobile technology to overcome language barriers in medicine (Chang *et al.*, 2014)

This case report was selected for this research primarily due to its foundation in a real-life experience and its comprehensive presentation of the scenario and all relevant aspects. Beyond its practical application, it also examines financial considerations and offers a comparison with an alternative solution used to reduce language barriers. Therefore, it provides valuable insights into the multi-faceted use of an application (app).

- Overview/summary of the case report: This case report was developed based on the real-life experience of healthcare staff, providing an example of an app used to overcome language barriers between healthcare personnel and an adult Persian patient in Australia. The patient required regular monitoring by health professionals, and frequent communication was necessary. However, Persian interpreters were only available between 7:30 AM and 5:00 PM. Furthermore, it was challenging to organize and assemble the entire urology team when an interpreter was booked.

  Prior to this, telephone interpreter services were also considered; however, it proved difficult to explain diagrams over the phone, and there was a limited number of portable phones with speaker capabilities. Faced with these issues, the team utilised Google Translate™, a free online language translation service on a smartphone. This technology allowed two-way interpretation: the team typed or spoke into Google Translate™, which translated their input into written Persian words that could be either read from the screen or voiced aloud using the embedded speech engine, and vice versa. Patient information documents regarding ileal conduit diversion and stoma care were translated into written Persian using Google Translate™ for the patient to read. This allowed the team to communicate with the patient at any time, eliminating the need to book a professional interpreter for routine communications, except when informed consent for surgery was obtained and for discussions with stoma and continence nurses. Furthermore, healthcare staff ascertained that the use of apps was considerably more cost-effective compared to traditional translating and interpreting services (cost comparisons with hospital interpreter services are detailed in Figure 2.9).

Table 1 Comparison of rates charged by Australia's Translating and Interpreting Service and the pay rates of doctors from Western Australia (WA)[4,5]

Service	Qualifier	Details	Charge	Equivalent hourly rate
Prebooked telephone interpreting	Standard hours	First 30 minutes (or part thereof)	$62.59	$125.18
		Each additional 15 minutes	$27.17	$108.68
	After hours	First 30 minutes (or part thereof)	$100.21	$200.42
		Each additional 15 minutes	$43.34	$173.36
Standard interpreting on site	Standard hours	First 90 minutes (or part thereof)	$176.77	$117.85
		Each additional 30 minutes	$58.41	$116.82
	After hours	First 90 minutes (or part thereof)	$282.59	$188.39
		Each additional 30 minutes	$93.61	$187.22
Full day interpreting on site	Standard hours	Every 30 minutes	$47.52	$95.04
	After hours	Every 30 minutes	$76.45	$152.90
	Minimum charge	Each weekday	$761.42	–
		Each weekend / public holiday	$1221.99	–
Postgraduate year 3 resident in WA	Standard hours	Every 60 minutes	$40.53	$40.53
Postgraduate year 5 registrar in WA	Standard hours	Every 60 minutes	$46.81	$46.81

Figure 2. 9. Comparison of Rates Charged by Australia's Translating & Interpreting Service and the Pay Rates of Doctors in Western Australia (Chang et al., 2014)

Outcomes: The researchers found that apps (specifically Google Translate) were useful in reducing language barriers due to their flexibility of use at various times and their low cost. Hence, they were proposed as alternatives to traditional methods, such as interpreter services. However, further studies were required to examine the accuracy of these applications in comparison to professional interpreting services and whether their use leads to any significant clinical consequences.

B2) Summary of empirical examples focusing on apps

Based on the case studies focused on apps, it can be concluded that the use of them can effectively reduce language barriers owing to their several benefits, primarily 'practicality' and 'financial advantages'. Translation apps offer temporal flexibility, allowing individuals to communicate regardless of interpreter availability and facilitating multi-language communication. Furthermore, they are much cheaper than relying on human translation/interpretation. The researchers (Chang et al., 2014; Müller et al., 2021) suggest the wider adoption of translation programs to reduce language barriers in institutions.

C) Pictorial Booklets or Toolkits

This section presents a case study and a summary concerning the use of pictorial booklets, drawing upon research-based case studies.

C1)

- **Case study 6:** Prevention Is the Best Medicine: Development of a Work and Health Toolkit for New Immigrants Using Settlement Services in Ontario (Kosny et al., 2014)

In the context of language barriers, there were very limited practical resources primarily investigating the use of a booklet to address language barriers. Therefore, the researcher reviewed several toolkits and selected a relevant one to present. This project was primarily carried out to enhance the experience of new immigrants in a country, with language being only one aspect of the overall experience. Nevertheless, it remains useful to understand to what extent a booklet-toolkit format can help mitigate similar challenges, and whether this format is applicable to immigrant parents in Türkiye.

- Overview: This research was carried out in Canada, where a large number of immigrants reside. It focused on delivering a toolkit to enhance the integration of newly arrived immigrants into the country. The research team concentrated on effectively providing essential information to newcomers and developing a toolkit for this purpose.

  Aim: This project aimed to develop information and training modules for toolkits that could be delivered through settlement agency programming and integrated into existing language, job search, and employment programs for new immigrants.

  Method: Two focus groups were conducted: one with instructors from the settlement agency and another with clients/learners. Participants were asked to review previous toolkits, share their experiences with newcomers, and propose further suggestions for development.

  Outcomes: Participants found this form of informative resource helpful. Newcomers in Canada often need fundamental information, and providing prior knowledge through such tools aids their integration into a new country. For example, initial understanding of healthcare centre regulations led to smoother doctor appointments. As further research, the researcher aimed to expand this research to reach wider groups and enhance their initial experiences in the country.

C2) Summary of the research-based case study focusing on pictorial booklets/toolkits: In line with the examples, pictorial booklets were primarily used for informative purposes. Meanwhile, some resources were also designed to mitigate

language barriers, alongside their informative purposes. The overall strengths and weaknesses can be summarized herein:

Potential advantages:

- Portability (these resources offer significant portability, allowing users to easily transport and repeatedly utilize them for practice in diverse settings.).
- Simplicity (their design promotes ease of use, often requiring no additional equipment).
- Eligibility to direct communication (the provision of fixed words and phrases enables users to engage in direct communication with one another)
- Cost-Effectiveness (these materials were relatively inexpensive to produce and distribute, potentially avoiding ongoing costs, which made them a financially viable option)

Potential disadvantages:

- Limited flexibility (the predefined nature of pictorial booklets impeded users from engaging in effective, spontaneous dialogues due to inherent limitations in the scope of available phrases and visual representations - Figure 2.8 served as an illustrative example).
- Necessity for regular updates (pictorial booklets necessitate periodic updates and redesigns to align with evolving user requirements and contextual shifts; however, the update processes could be protracted, potentially leading to user dissatisfaction with outdated versions if revised editions were not promptly accessible).

Finally, it could be concluded that pictorial booklets represented a viable alternative for mitigating language barriers across diverse contexts; however, they should not have been proposed as the exclusive communication channel.

D) Summary of the Empirical Examples (Research-based Case studies)

The findings indicated that each of the tools presented advantages and disadvantages for users; hence, their simultaneous use could be suggested. However, some tools appeared more beneficial than other communication channels and could be prioritized accordingly. A large group of researchers reached a consensus that interpreter services and Video Remote Interpreting (VRI) constitute

the most convenient means of reducing language barriers; consequently, the use of interpreter services could be prioritized if feasible. Owing to their several benefits, applications can also serve as a supportive communication channel. Pictorial booklets could also be utilized to mitigate language barriers, provided they are not designated as primary communication channels. Nevertheless, each user group possesses specific features and communication dynamics; therefore, the usability of the tools provided should also be verified with potential users.

2.2.4 Overview of the Language Barrier Landscape

Based on the findings within the context of language barriers, Turkish teachers and Syrian immigrant parents struggled to communicate effectively. This struggle potentially stemmed not only from linguistic differences but also from cultural and emotional barriers, as well as the limited knowledge of parents regarding the local education system. These challenges could be elaborated as follows:

- Cultural barriers: The established modes of engagement with teachers in Syria might differ (e.g., varying hierarchies), potentially leading to parents' unfamiliarity with appropriate interaction levels with local teachers. Conversely, Turkish teachers might lack awareness of the cultural factors influencing immigrant parents' attitudes.
- Emotional barriers: Parents might harbour prejudices towards Turkish teachers and local parents, and they might be uncertain whether they would face exclusion or discrimination within the school environment. Similarly, Turkish teachers might hold prejudices against immigrant parents, or they might be unaware of the underlying factors contributing to limited interest in their children's education (e.g., concurrent health problems or financial issues).
- Unfamiliarity with an issue: Parents might lack sufficient information regarding the local education system, including parental expectations. Consequently, they might struggle to comprehend educational terminology and procedures within the Turkish school environment.
- Personal features: Beyond their nationalities, individuals possessed unique characteristic features that could result in diverse experiences during interactions. This included the dynamics of communication between Turkish teachers and immigrant parents.

Examining these potential issues alongside the aforementioned language barriers, it became evident that cultural and emotional barriers likely existed between parents and teachers. Additionally, barriers arose from parents' unfamiliarity with the local education system and from individual personal characteristics. Considering these complexities, it can be concluded that interpreter services have emerged as the most practical channel for parents and teachers for several reasons:

- Interpreter services were practical and straightforward to utilise, lacking unnecessary complexity.
- Both parents and teachers were already familiar with this communication channel.
- These services ensured privacy, allowing parents and teachers to converse without disclosing the conversation to third parties.
- A translator could facilitate communication in situations prone to misunderstandings or confusion, particularly those arising from cultural differences or parents' limited information regarding the Turkish educational context.
- Communication via a translator often necessitated parents' presence at the school to meet teachers, which could enhance parents' integration into the school environment.
- Interpreters could facilitate communication between parents and teachers via phone calls in instances where parents were unable to attend school (e.g., due to health problems).

Following the benefits outlined above, interpreter services could have served as the primary solution for this group, as previously explained; therefore, this approach can be associated with the *strengths* element of the SWOT analysis. Nevertheless, supplementary solutions might also have been necessary since all practical solutions possessed inherent capabilities and deficiencies, use of diverse tools can be more advantageous, leading to a greater sum of benefits (refer to Table 2.15 for a comparative analysis of practical solutions). Translation apps also present opportunities to reduce language barriers when interpreter services are not feasible within schools; consequently, they may be considered as alternative or complementary solutions to interpreter services, and can be linked to the

opportunities dimension of the SWOT analysis. Parents and teachers could benefit from these apps for the following reasons:

- The use of apps potentially eliminated the need for a staff member to facilitate conversations between parents and teachers, thereby offering financial advantages to the schools.
- Translation embedded apps can provide flexibility in communication, allowing parents and teachers to interact outside regular working hours when necessary.
- Apps with integrated translation functions may enhance parents' sense of comfort when communicating with teachers. For example, immigrant parents may have sufficient time to formulate their responses without feeling pressured.

In contrast, pictorial booklets might not have been as effective as interpreter services and applications for several reasons. First, parents and teachers could not communicate effectively due to the typically limited phrases available in pictorial booklets. Second, updating these booklets on a regular basis, in response to changing requirements, could prove challenging for the school. Compared with other communication tools, this option can therefore be associated with the *weaknesses* dimension of the SWOT analysis. Nevertheless, pictorial booklets may still be used effectively to disseminate general information to parents, thereby reducing language barriers in specific contexts.

Notably, with regard to *threats*, none of the communication tools appear to be directly associated with this dimension. Instead, broader external obstacles may constitute threats to effective parent–teacher communication, including financial difficulties, health-related issues, and other factors that hinder the reduction of emotional, cultural, and unfamiliarity barriers, thereby limiting the strengthening of parent–teacher interactions.

Table 2. 15. Comparison of the interpreter Services and Video -remote Interpretation, Translation-supported Apps and Pictorial Booklets Based on the Secondary Research

Key elements	Mode of communications		Potential time constraints		Reliance for external facilitators	
	Mostly direct	Mostly indirect	Mostly limited	Unrestricted by temporal constraints	Generally necessary	May not be required
Interpreter services and VRI		X	X		X	
Translation-supported apps	X			X		X
Pictorial Booklets	X			X		X

Overall, each solution was posited to offer distinct forms of facilitation to users. Consequently, to ascertain the optimal solutions for prospective users and to develop interventions accordingly, the application of appropriate methodologies was imperative.

2.3 DESIGN CONTEXT - HUMAN-CENTRED DESIGN AND INFORMATION DESIGN

The researcher reviewed several approaches for the research problem (such as co-creation, co-production, participatory design, behavioural design, and experience design: UX-see Appendix B3 for the overall reviewed approaches). Approaches outside of design field were also reviewed (such as the soft system methodology), and finally, Human-centred Design (HCD) and Information Design (ID) were selected for this research project.

The literature revealed numerous projects underpinned by HCD that aim to mitigate problems for various stakeholders affected by specific issues. For instance, Bartlett et al. (2021) developed a new healthcare app in Australia to reduce language barriers between healthcare staff and refugees. As this was based on the philosophy of ‘Human-Centred’, this researcher considered other factors that could affect the problem; involved interviewing diverse stakeholders, including refugees, paramedics engaging with refugees, and individuals from refugee associations, to gain a multifaceted understanding of the problems. Furthermore, given that 'empathy' constituted a cardinal tenet of the HCD methodology, the ideation phase saw designers formulating a solution directly informed by the insights derived from this initial empathetic inquiry. In light of both its inherent principles and its demonstrated

practical efficacy as evidenced in extant literature, HCD is similarly poised to furnish substantial benefits to the present research, as delineated subsequently:

- HCD was valuable because it allowed for the independent development of solutions within a scientific framework, aligning with the requirements of this research project. There were challenges in creating a solution collaboratively; this was because this research inherently needed a broad understanding (e.g., overall potential practical solutions and their strengths and weaknesses, sociocultural dynamics and interactions of Turks and Syrians, policies of the Turkish Government), but key stakeholders potentially had limited knowledge of the broader issue. Following this deep investigation, a profound understanding of the problems and potential solutions from multiple perspectives had already been established. Consequently, collaboration-focused design approaches (e.g., co-design, participatory design) were omitted, and HCD was thus chosen as the guiding methodology, as it supports the researcher's independent development of empirically informed solutions, leveraging a comprehensive understanding of the problem space.
- This project inherently needed to consider various factors that could influence the situation; both causing the highlighted problem and helping reduce it, which could be achieved through an HCD perspective. As previously discussed, numerous elements contributed to the language barriers between parents and teachers, such as limited parental engagement stemming from potential mindsets or logistical challenges, and prejudices hold by either parents or teachers. Effective solutions could only be developed by comprehensively understanding these contributing factors across all their facets. Consequently, HCD aligned well with this research, as it provided a framework for holistically examining all relevant aspects of the problem.
- 'Empathy' was the main focus in this research project, as it was in HCD philosophy. Empathetic thought was essential during the overall project, from data collection to finalising the solution phase. This was because the nature of the topic is sensitive; it covered vulnerable minority groups, immigrants, and refugees, and not many people experienced it firsthand.

> Therefore, the researcher needed to place empathy at the centre-for example, when preparing questions (e.g., making sure to address everything that could be investigated), when interviewing (e.g., to behave very kindly and avoid touching sensitive points), and when developing solutions (making sure to focus not only on practical aspects but also emotional aspects), etc. Overall, the philosophy fit well with the mindset of this research project, and empathy should have been at the centre throughout the research.

Furthermore, this research required an additional methodological component to effectively disseminate its outputs to relevant stakeholders (school managers), and the Information Design (ID) principles offered valuable precedents for this objective. For example, in contexts directly analogous to this project, numerous instances have demonstrated how the integration of information design (ID) principles into communication tools can visually facilitate information delivery, thereby mitigating language barriers (e.g., Ross & Gao, 2016; Noack et al., 2021). Moreover, numerous examples exist in the education context where strategies were employed for conveying information from one party to another at an appropriate cognitive level. These strategies were frequently employed to enhance student comprehension; for instance, posited that educators must possess familiarity with students' cultural backgrounds, developmental stages, and learning challenges when presenting content. Collectively, the principles of Information Design are crucial from two distinct perspectives: First, they guide the structuring of the overall presentation format to ensure optimal usability. Second, they provide specific strategies for organizing the inherent information itself.

2.3.1 Human Centred Design (HCD)

This section provided a comprehensive overview of HCD, tracing its definitions and historical evolution. Furthermore, it delineated the specific methodological application of its principles within the context of this research project.

HCD definitions & its brief history: HCD Definitions: The HCD approach was initially associated with meeting standardization requirements for a product by ensuring usability for customers (Bevan and Curson, 1997). The approach later expanded beyond product design. For example, Maguire (2001) defined the HCD

approach as the process of increasing productivity, as well as reducing errors and the need for training and supporting customers during their usage periods. More recently, the HCD approach was referred to as a theory for considering users as well as their environments in the design process (Giacomin, 2014). Subsequently, the approach became more empathy-focused and aimed to facilitate people's lives, as asserted by IDEO.org, p. (2015, p. 9) IDEO (2015:9): '...embracing human-centred design means believing that all problems, even the seemingly intractable ones like poverty, gender equality, and clean water, are solvable; in other words, the people who face those problems every day are the ones who hold the key to their answer'.

The evolution of HCD definitions appeared to reflect the priorities of the design process in different eras. In the 1990s, products and users were considered the main focus of the design process. During this period, it was crucial that outcomes of the design process met international standards and requirements of different product categories (Bevan and Curson, 1998; Meister, 2018). In the 2000s, in addition to physical ergonomics, emotional interactions with objects were perceived as important by designers (see Norman, 2005 as an example). From the 2010s onwards, the scope of the HCD approach expanded beyond primary users and began taking key stakeholders interacting with products and/or services into consideration (Giacomin, 2014; IDEO, 2015).

HCD philosophical framework and operational principles: In the early stages of the HCD approach, the focus was on end products. Its key considerations reflected the requirements of international standards, thereby develop objects to enhance users' quality of life (Bevan and Curson, 1998). For example, Technical Committee ISO/TC 159 (1999) offered guidelines focusing on products and users (e.g., ISO 13407 - standards on human-centred design). According to ISO 13407, key considerations were specified as: identifying and documenting users' tasks, identifying and documenting significant user attributes, allocating functions, producing a composite task model, using existing knowledge to design solutions, and developing and evaluating (early) prototypes. After, HCD approach expanded beyond product design, it was started to use together with also other design disciplines (Steen, 2011), and its employment area was expanded, which went beyond physical human factors and examined all aspects of design problems/phenomena - see (Krippendorff*, 2004; Krippendorff and Butter, 2008;

Steen, 2011)as examples. After that, its philosophical approaches were enhanced by Maguire (2001) as follows:

- Active user involvement and a clear understanding of user and task requirements: This principle referred to the paramount importance of including end-users throughout the design process.
- Appropriate function allocation between the user and the system: This highlighted the necessity of effective cooperation. The division of labour should have been meticulously planned, based on an appreciation of human skills, their limitations, and a thorough grasp of the specific needs of the mission.
- Iteration of design solutions: This entailed the requirement of receiving regular feedback from end-users for early design solutions. Furthermore, it was beneficial to utilise prototypes that closely resemble the final product.
- Multi-disciplinary design teams: This principle underscored that HCD necessitated a collaborative process, involving a diverse team that can include managers, usability specialists, end-users, graphic designers, software engineers, interaction designers, and training and support personnel.

As HCD went beyond physical human factors, a HCD pyramid was generated that indicate all relevant factors (Giacomin, 2014) as shown in Figure 2.10. This triangular pyramid included five phases from bottom to top: 1) human factors (who); 2) activities—tasks and functions (what); 3) interactivity (when); 4) semiotics—communication and discourse (how); and 5) meaning (why) as elaborated:

- Meaning (Why?): This element emphasised on the project's significance, including the researchers' rationale and anticipated benefits.
- Semiotics, communication and discourse (How?): This phase explored how a product, system, or service conveys meaning and interacts with its users.
- Activities, tasks and function (What?): This level focused on what users do, what they need to achieve, and the functions that the designed product, system, or service must provide to support these actions.
- Interactivity (When?): This part concentrated on the temporal and dynamic aspects of the user's interaction with the designed artifact.

- Human factors (Who?): This phase focused on deeply understanding the target users' inherent characteristics and capabilities, addressing the fundamental question of 'who' they are.

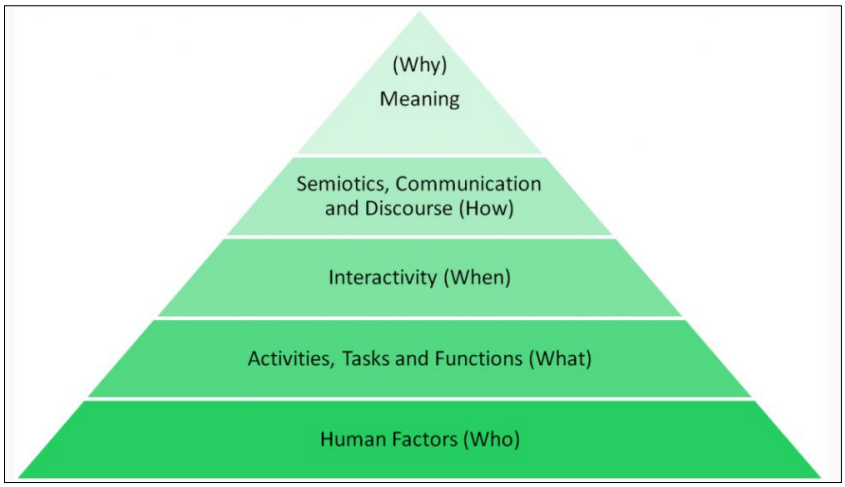


Figure 2. 10. The Human-Centred Design pyramid (Giacomin, 2014)

IDEO (2015) synthesised and summarized key elements proposed by earlier studies and other researchers. The core mindsets of HCD are summarized as "creative confidence," "make it," "learn from failure," "empathy," "embracing ambiguity," "optimism," and "iteration." Furthermore, the HCD process was framed within three main phases: Inspiration, Ideation, and Implementation, as elaborated:

The mindsets: ‘Creative Confidence’ fostered self-assurance in the generation of novel ideas. As design researchers frequently developed unprecedented solutions to existing problems, a process that can test self-belief, this mindset provides emotional support, thereby empowering designers in new undertakings. Regarding ‘Make it’ mindset, HCD researchers were tasked with the development of tangible solutions subsequent to research, employing prototypes for utility validation. ‘Learn from failure’ treats unsuccessful attempts as essential data for iterative learning, informing successive design iterations to achieve optimal solutions. ‘Empathy’ required researchers to meticulously comprehend the underlying problem determinants, alongside individuals' subjective experiences and cognitive frameworks, to facilitate effective solution formulation. With regard to ‘Embracing ambiguity’, HCD projects were inherently complex and lack the predictable solutions of mechanical endeavours, which demanded researchers persevere and tolerate uncertainty, actively navigating it until definitive conclusions emerge. ‘Optimism’ was crucial for

sustaining researcher motivation; it mitigated disillusionment from unforeseen obstacles, especially given the multi-faceted nature of HCD projects and their frequent lack of pre-existing solutions. ‘Iteration’ denoted a continuous, cyclical process of systematically collecting and integrating participant feedback to progressively refine solutions, ultimately achieving optimal and functionally valuable outcomes.

The phases: The Inspiration phase was dedicated to in-depth user understanding. It demanded empathy, which is the capacity to comprehend and share the experiences and feelings of others. During this phase, researchers immersed themselves in the users' world, gathering insights to identify their needs, challenges, and aspirations. Following inspiration, the Ideation phase serves as the generative core of HCD. In this stage, design researchers brainstormed and developed a wide array of potential solutions. The aim was to identify which individual solutions, or combinations thereof, most effectively address the user requirements uncovered in the Inspiration phase. This phase encourages divergent thinking before converging on promising concepts. The final stage, Implementation, involved the tangible development and refinement of solutions. Design researchers typically develop prototypes during this phase, allowing for testing and iterative improvement based on user feedback. If a solution demonstrates clear utility and viability, it could then be prepared for commercialization and broader adoption- see Figure 2.11 for the illustration of these stages.

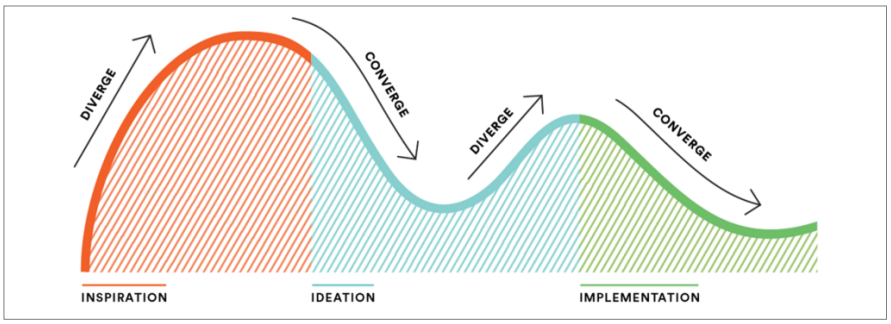


Figure 2. 11. The Main Phases of HCD: Inspiration, Ideation, and Implementation (IDEO, 2015)

To sum up, this research project draws upon frameworks from both IDEO (2015) and Giacomin (2014) due to their complementary strengths. IDEO's (2015) synthesis of previous Human-Centred Design (HCD) theories offered an updated approach to HCD, one that tackles problems from a wider perspective and often mitigated

socially impacted issues, which aligned directly with the aim of this project. Furthermore, the HCD pyramid developed by Giacomin (2014) proved useful because it enables clear definition of all elements within the processes, which was particularly beneficial when developing the content for the guidelines provided to school managers. Despite these robust frameworks, effective strategies were still needed to deliver the overall output to school managers in a useful manner, a point elaborated further in the next section (Section 2.3.2).

2.3.2 Information Design (ID)

This section provided a comprehensive overview of the Information Design (ID) approach, including its definitions and a brief history. Furthermore, it outlined its fundamental principles and strategies within the broader concept of Information System Design.

ID definitions & its brief history: In the early eighteenth century, Information Design became associated with a modern timeline (see Figure 2.12 for a visual representation from the 18th century). Subsequently, the mode of Information Design was described by Weigel in 1720 as "the user's glance encompasses a totality of information" (Black *et al.*, 2017, p. 16). Weigel emphasised the structural qualities of charts, specifically "the correct year-order and succession." Additionally, he highlighted how "one can see immediately, on one line through all the empires, who lived at the same time," suggesting that "people catch the eye quickly without a lot of searching."

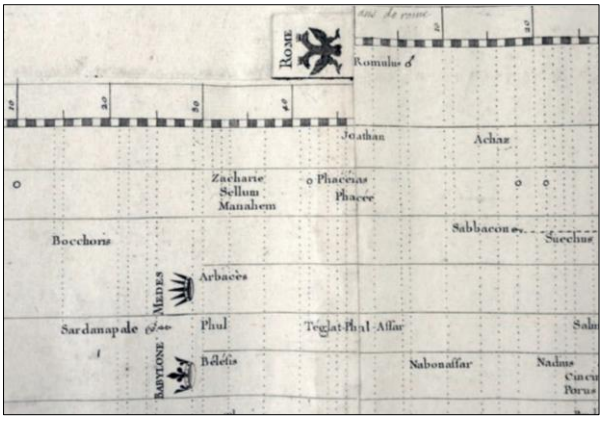


Figure 2. 12. Illustration of Time in 1753 by Barbeu-Dubourg (Black et al., 2017:16)

In the 1990s, DeLone and McLean developed a model called the Information Systems Success Model (IS) to enhance information clarity. Updated versions of this

model were developed later – see DeLone and McLean (2003) and Holsapple and Lee-Post (2006) as examples. In the late 1990s, Information Design was referred to as "visual function" (Mijksenaar, 1997, pp. 5–13), aiming to avoid confusion in daily life by suggesting correct directions (e.g., designing clear road maps, or designing car interiors for ease of use - see Figure 2.13).The IS model suggested that several components - system quality, information quality, use, user satisfaction, individual impact, and organizational impact/net benefits—need to be taken into account (see Sarasi, Chaerudin and Sundoro, 2023, as an example for the use of IS in education). The overall idea of IS and its updated-revised versions could be summarized as conveying relatively complicated or unfamiliar information to targeted groups in the simplest mode.

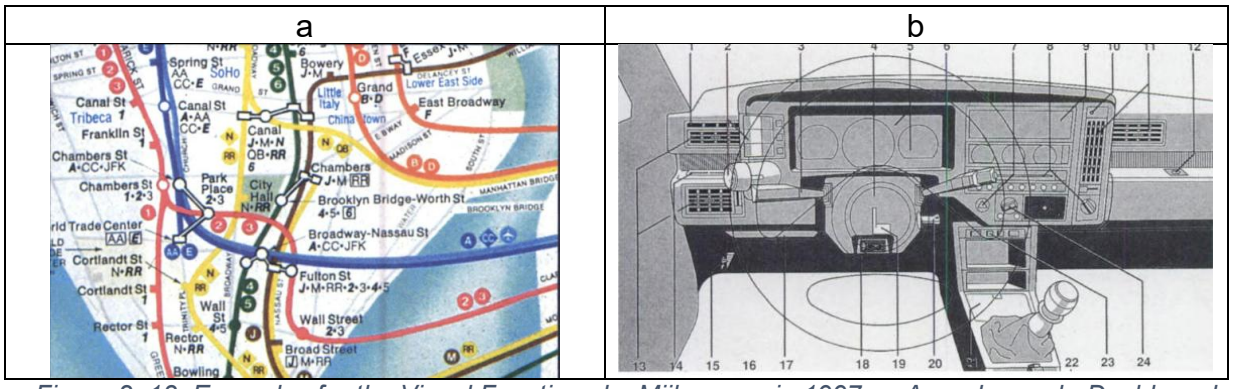


Figure 2. 13. Examples for the Visual Functions by Mijksenaar in 1997. a: A road map, b: Dashboard controls in an automobile.

Furthermore, Information Design was defined as "message design," referring to the process of designing information in a way that targeted groups can understand (Pettersson, 2002, p. 21). Pettersson (ibid) explained message design as interdisciplinary, encompassing influences from various research areas, and listed its components as "words," "visuals," and "form." In this theoretical model (see Figure 2.14), the main areas in message design included language disciplines, communication disciplines, behaviour and cognition disciplines, business and law, and media production technologies. The components (words, visuals, and form) could be utilised to produce, transmit, and interpret messages in different communication situations (ibid). Several principles of Information Design for effective communication were presented below.

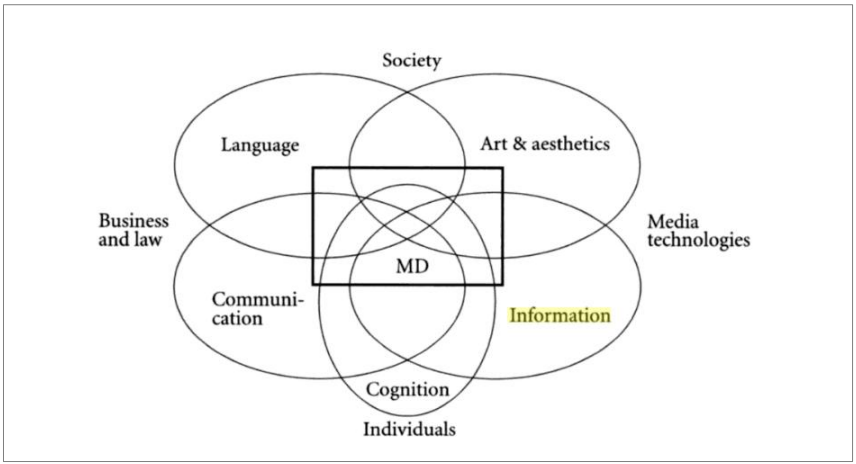


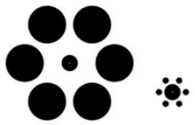
Figure 2. 14. The Message Design Model Proposed by Petterson (2022)

In addition, researchers (e.g., Gibson 2009; Dursin, 2012) frequently concentrated on the application of information design within specific domains. For instance, Gibson (2009) examined the use of information design in public spaces, whereas Dursin (2012) explored its application in educational contexts. Notably, a number of contemporary research studies (e.g., Anunrojwong, Iyer and Manshadi, 2022) continued to examine the diverse applications of information design across various contexts.

Fundamental Principles of Information Design: Information Design relied on a number of theories and techniques to deliver required information to users in the most convenient ways. This involved several key elements, including Typography, Gestalt principles, and prevalent visual elements, as elaborated below.

Gestalt principles are invaluable in document design for conveying information coherently. These principles, or laws of human perception, describe how individuals group similar elements, perceive patterns, and simplify complex figures (Schriver, 1997, p. 326). Applying Gestalt principles offers significant benefits; specifically, they allow crucial information within a document to be highlighted, thereby enhancing reader comprehension (see the main Gestalt principles in Table 2.16).

Table 2. 16. Explanation of Key Information Design Principles (Schriver, 1997; Petterson, 2017)

Key principles	Explanation	Figure
Similarity	The principle of similarity states that items which share a visual characteristic are perceived as more related than items that are dissimilar. Regarding this, people tend to understand and group their impressions of things. The figure on the side demonstrates an instance of "similarity of colour." The figure beside illustrates an example of "similarity of colour," where the black and white circles are distinguishable by their colour and are evenly spaced from one another,	
Contrast	This phenomenon is analogous to the interdependent relationship between opposing concepts; for example, "large" is only discernible in relation to "small," and vice versa. The presence of contrast facilitates differentiation and highlights salient features, thereby enhancing the clarity and impact of communicated information	
Continuity	This principle dictates that readers perceive elements as smooth, uninterrupted patterns. Thus, when observing two intersecting lines, readers typically interpret them as continuous lines crossing, rather than fragmented segments, which reflects people's innate preference for simplicity in visual organization.	
Proximity	This element states that individuals perceive individual elements but will perceptually group items that are close to one another. In the next figure, there are four groups of squares, each containing two squares. In each group, the squares have the same size, colour and shape, and they are equally spaced from each other.	
Grouping	In this principle, most figures are specified by a boundary. However, the existence of a boundary is not necessary for the perception of shape. In the related figure, small black dots form a square. All the dots have the same shape, size, and colour, and they have the same gap between each other.	

Symbols, icons, and diagrams are also widely employed principles of Information Design that serve to convey information clearly (Barnard, 2013; Lipton, 2011, pp. 179–206), as further elaborated herein.

A **symbol** is a mark, sign, or word that indicates, signifies, or is understood as representing an idea, object, or relationship which is also excessively important in terms of conveying information (Dewar, 1998). A message can be described more efficiently with a symbol- see Figure 2.15 as an example for the text 'Indoor swimming pool' with the symbol for this message. Its benefits include 1) Enhanced visibility (symbols are more noticeable and legible from a distance than text - Figure 2.14 demonstrates this with road signs), 2) Universal understanding: They bridge

language barriers, making them accessible to non-readers and 3) Rapid recognition (symbols are recognized more quickly and accurately than equivalent worded signs).

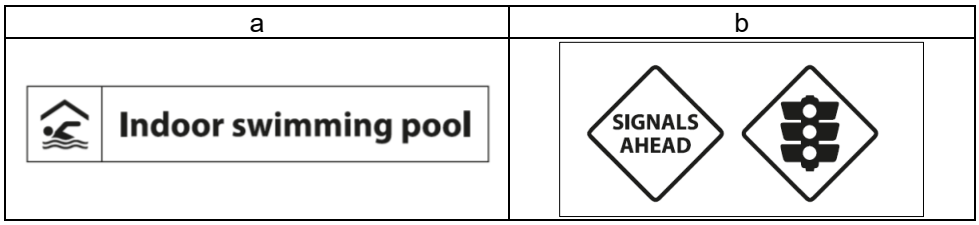


Figure 2. 15. Examples of Symbols. a: Symbol and Text for 'Swimming Pool', b: A Road Sign Featuring Both Text and a Symbol (Boersema, 2017, p. 305).

An **icon** is defined as a sign or representation that stands for its object by virtue of a resemblance to it, aiding individuals in using services or products more easily by highlighting functions (Black, 2017, p. 315). Icons are frequently used in digital platforms. For example, Yahoo and Gmail include various icons for "bin," "delete," "trash," and "remove," which help people use these platforms more easily (Figure 2.16 shows two different email platforms, one with icons and one without, to illustrate this point). Researchers, (e.g., Yan-e , 2011; Black, 2017) have reported that people generally feel more comfortable when using such services with icons. Another benefit of icons is their ability to convey information clearly across different cultures (e.g., icons associated with religions or witchcraft, hand gestures, gendered icons, immodest clothing) (Marcus, 2011). For instance, web browsers like Internet Explorer and Safari prefer icons that are easily understood by diverse groups, given that individuals from all over the world frequently use these programs.

Figure 2. 16. Example of Icon Usage on Webpages - icons are used in Figure a, and not used in Figure b (Black, 2017)

A **diagram** refers to a schematic or technical drawing that illustrates connections among variables or demonstrates how something is constructed (Amare & Manning, 2016, p. 93; Campbell, 2013, p. 2). They are often used to convey complicated information simply, as individuals can better understand issues through straightforward illustrations (Tversky, 2017, p. 363). For instance, as an example of diagram usage in education, Figure 2.17 depicts an LED headlamp torch (on the left)

and a diagram of the headlamp's electrical circuit (on the right). The diagram's plain lines describe the system more clearly. It removes nonessential parts, such as the headband, to avoid confusion. Arrows indicate directions, and other components like the switch, resistor, LED, and wire are also clearly drawn (Tversky, 2017, p. 363).

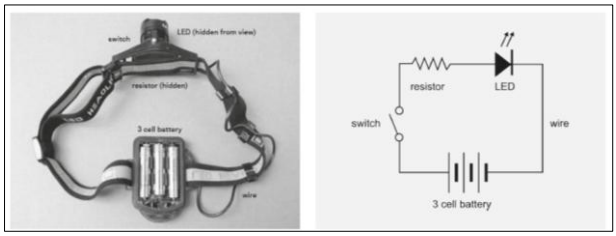
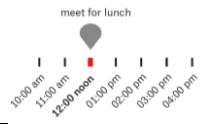
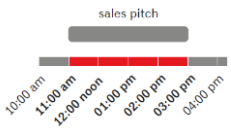
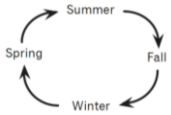


Figure 2. 17. Example of Diagram Use in Education (Lowe, 2017, p. 363)

There are numerous examples illustrating how combining these principles enhances information clarity. For instance, Table 2.17 visually represented time-oriented data using Information Design principles (Aigner *et al.*, 2007). This illustration also applied typography techniques, where stressed time scales are presented in bold and color-coded. Additionally, an icon accompanied the visualization, symbolizing instantaneous time or a single point. The collaboration of these elements was valuable because it could increase the fluidity of the information conveyed.

Table 2. 17. The Dimension of Time - Visual Representations of Time-Oriented Data (Adapted from Aigner et al., 2007)

Key elements with the explanations	Examples
• Instant *(The figure illustrates a distinct point in time)*	
• Interval *(The figure shows a time segment with a specific duration)*	
• Linear arrangement of time *(The figure depicts the flow of time)*	
• Cycling arrangement of time *(The figure displays recurring temporal patterns)*	

Information System Design strategies: Building on the DeLone and McLean Information System Success Model (1992), numerous strategies have been developed since the 1990s to enhance the effective delivery of information between

target groups. Among these, the strategies proposed by Tore-Yargin (2013) addresses the communication of user research findings to designers. The core objectives in delivering such information are to provide inspiration, guidance, and justification, thereby enabling designers to apply user research insights effectively in product development. These strategies, which encompass both the content of the information system and the manner of its delivery, have been successfully implemented across various contexts (see Wager, Lee and Glaser, 2021 as an example for its use in healthcare management). Ultimately, similar strategies could be considered also in other related studies.

Overall, this section collectively reviewed the literature pertaining to Information System Design strategies and the Fundamental Principles of Information Design. The overarching objective of the Information Design (ID) principles discussed herein is to effectively bridge the interpretative gap between the designated end-users (namely, primary school managers) and the forthcoming guidelines intended for school management teams within the scope of this research project.

2.4 SUMMARY OF THE SECONDARY RESEARCH

The literature review revealed existing information regarding immigrant parent-teacher communication in Türkiye. It offered insights from education, language barriers, and design contexts, which could be utilized to develop this research project, as elaborated below:

Drawing upon the empirical insights gleaned from the Turkish education context, information regarding potential influencing factors from both sides is available. Table 2.18 and Figure 2.18 elaborate on the effects more relevant to immigrant parents, which were complemented by factors from teachers' perspectives, as detailed after the discussion of parents' factors.

Table 2. 18. Factors Potentially Influencing the Language Barriers Between Parents and Teachers.

Potential factors	Explanation
Practical factors	The points that demonstrably influenced the language barriers
Emotional factors	The issues that emotionally impacted the language barriers
Direct factors	The elements that directly impacted the language barriers
Indirect factors	The aspects that indirectly influenced the language barriers

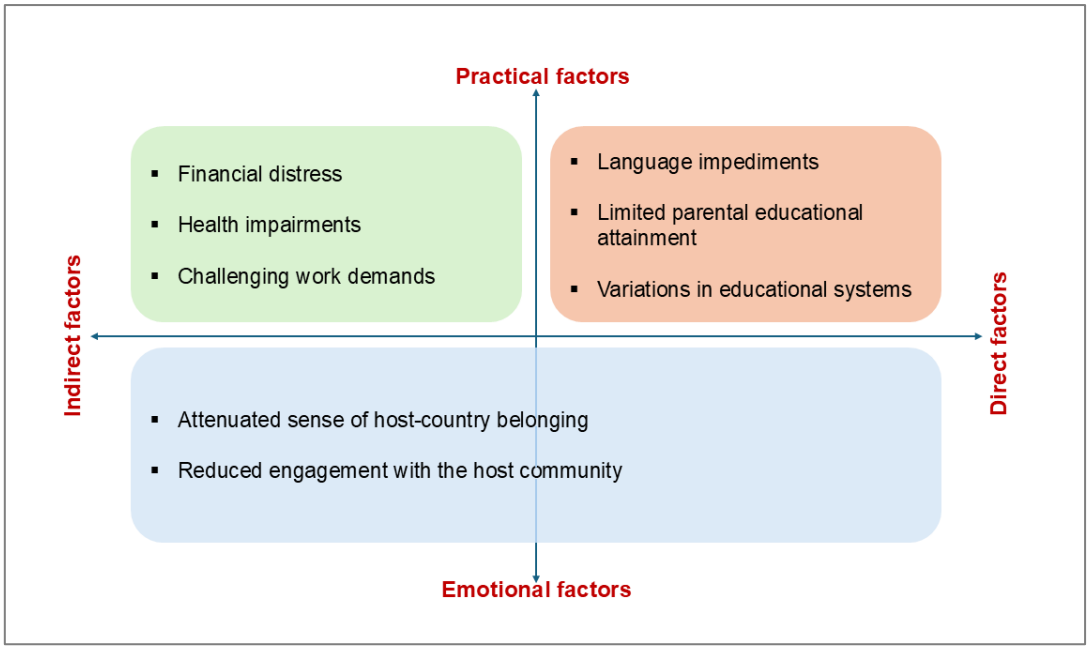


Figure 2. 18. Factors Contributing to the Language Barriers Between Parents and Teachers

- Regarding the practical and direct factors, the language barriers was at the centre and relatively low education among parents and differences in education system some other have also high influence (see the upper right corner in Figure 2.18). These supplement factors potentially might cause limited understanding of the local education system, and connecting to this, limited activation at their children's education and appearance at schools and dialogue teachers for sharing scholar issues of their children.
- Concerning the practical and indirect reasons, issues stemming from the post-war impact and unprepared immigration to Türkiye could be observed (see the upper left corner in Figure 2.18). For example, when parents struggle with financial concerns, their focus on children's education may diminish, similar to the effect of health problems. Ultimately, while not directly linked to the school environment, these were indirect factors that also function as practical factors by directly hindering parents from attending to their children's schooling.
- With regard to the emotional factors, a limited sense of belonging to the host country among parents and restricted engagement with the local community were identifiable (see the bottom in Figure 2.18). These factors had both direct and indirect effects on parental interactions with school staff. For instance, a lack of intent to remain in the host country, consequently leading to a diminished focus on children's education, was associated with practical

implications, whereas a hesitancy to engage stemmed from emotional considerations.

On the contrary, with respect to the potential influencing factors from the perspective of teachers, language problems were most likely to constitute practical and direct barriers to effective communication. Furthermore, limited empathy towards parents (e.g., a restricted understanding of their survival concerns and priorities) could exert both direct and indirect negative effects on parent-teacher interactions. Nevertheless, further investigation was warranted to comprehensively identify the overall factors influencing parent-teacher interactions from both sides, drawing upon primary findings. Table 2.19 systematically summarised these factors under the overarching titles of "Emotional and Cultural Barriers between Parents and Teachers," "Unfamiliarity of Syrian Parents with the Turkish Education System," and "Personal Features of Parents and Teachers," aligning with the previously elaborated context of language barriers, and also with discussion of the focus on these elements in this research project.

Table 2. 19. Inclusion and Exclusion Criteria for Language Barrier Elements

Elements	Evaluation for this research	Inclusion/ Exclusion
Emotional barriers between parents and teachers	The Turkish education context revealed that both parents and teachers hold prejudices toward each other, which appears to be an emotional barrier. For instance, parents often hesitated to engage with the school environment due to uncertainty about how they would be treated. Ultimately, these emotional barriers seemingly affected parent-teacher interaction, and therefore, this aspect should have been carefully considered in that research.	Included
Cultural barriers between parents and teachers	The literature findings showed that there were several factors behind limited interactions between immigrant parents and Turkish teachers, such as having various mindsets. For example, parents did not prioritize their children's education due to different approaches toward education. From the teachers' perspective, for example, they were often not aware of elements of their different cultural dynamics when approaching parents. Finally, it could be understood that cultural barriers ostensibly affected the mode of parent-teacher communication; therefore, this topic should also be investigated.	Included
Unfamiliarity of Syrian parents with the Turkish education	The secondary findings indicated that a limited command of Turkish educational terminology significantly impeded parental integration within their children's school environments. Consequently, addressing this specific terminological barrier held considerable importance in mitigating broader language-related challenges. Eventually, the unfamiliarity of Syrian parents with the Turkish education system should also have been taken into account.	Included

Personal characteristics of parents and teachers	While "personal features" were identified as a contributing factor to language barriers, their inclusion in this research project was deemed inefficient. This decision stems from the project's broad scope, encompassing a large population rather than a limited number of individuals. Consequently, a detailed consideration of each participant's unique personal attributes within a study of this scale was deemed impractical. Therefore, this element was not incorporated into the research design.	Excluded

The focus of this research project was strategically placed on the emotional and cultural dynamics between the two cohorts, alongside the degree of parental familiarity with the Turkish educational framework, as illustrated in Figure 2.19. The thematic analysis of secondary findings served to illuminate the causal relationships among these components. This analysis further elucidated potential negative impacts on the prevailing circumstances and identified factors capable of mitigating these barriers, with each of these aspects addressed in a dedicated section. Ultimately, these insights necessitate triangulation with primary findings, as further elaborated in Chapter 4. The research gaps addressed were delineated in Table 2.20, while the elaborated methodology was detailed in Chapter 3.

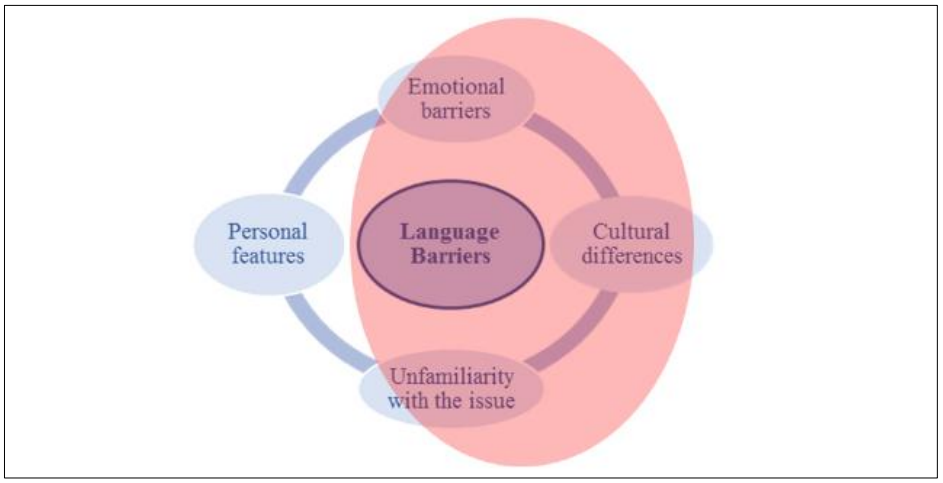


Figure 2. 19. Research Focus within the Language Barriers Context within the Scope of This Research

Table 2. 20. Synthesis of the Secondary Research Findings

Sections	Explanation	Results
Education context *(Section 2.1)*	- The researcher reviewed the overall situation in Turkish schools, specifically the involvement of immigrant parents in their children's scholarly process and the interactions between teachers and parents. The researcher also reviewed various international education context to gain wider insights (see Section 2.1.2). - The researcher reviewed factors that could indirectly influence the language barriers between parents and teachers. Meanwhile, she reviewed their background, lifestyles of two groups, prevalence problems of Syrian Immigrants in Türkiye and Policies of the Turkish Government Regarding Immigrants (see Section 2.1.4) - Finally, she partially developed an in-depth understanding of the experiences of immigrant parents in local state schools, context that immigrant parents are experiencing in Turkish schools, the impact of the language barriers between parents and teachers and potential positive elements that could help make the overall situation better, thereby reducing language barriers.	The secondary findings, derived from the educational context, partially addressed Objectives 1, 2, and 3. These objectives were slated for full completion upon the incorporation of the preliminary findings.
Language barriers context *(Section 2.2)*	- The researcher deeply examined the elements contributing to language barriers through literature findings - (see Section 2.2.1). - The researcher defined the potential practical solutions that could help mitigate language barriers based on literature review. After that, their overall potential advantages and disadvantages were examined through case studies. - Ultimately, the research discussed the appropriability of each potential tools for this research group based on secondary findings.	The secondary findings emanating from the language barriers context partially addressed Objective 4 - *'To evaluate existing solutions and case studies regarding language barriers in other contexts which could help provide potential solutions/good practices'.* This objective was projected for full completion subsequent to the integration of the preliminary findings.

Design context *(Section 2.3)*	- The researcher reviewed the theoretical frame of HCD, and then investigated how this approach can frame the methodology of this research. - The researcher reviewed the theoretical frame of Information Design principles, and then investigated how its principles can be used in the guideline to be proposed to school managers.	The secondary findings from the design context entirely addressed Objective 5 – *'To evaluate existing solutions and case studies regarding language barriers in other contexts which could help provide potential solutions/good practices'.* and partially addressed Objective 6 – *'To explore how Information Design could be applied to reduce language barriers between Turkish teachers and immigrant parents'*.
Summary of the secondary research *(Section 2.4)*	Finally, the researcher necessitated an in-depth understanding of factors accompanying language barriers and potential solutions for their mitigation. To address these identified gaps, primary research was utilised, as elaborated in Chapter 4. The subsequent Chapter elaborated the overall methodology to be implemented when combining the overall information and turn this into a practical material, a guideline for school managers.	Preliminary findings were crucial for fully addressing Objective 7 – *'To propose Information Design guidelines that could assist Turkish school managers to foster better communication between primary school teachers and immigrant parents'*.

Chapter 3. METHODOLOGY

This chapter is dedicated to expanding the methodology of this research project.

- Section 3.1 Introduction to Methodology: This introductory section provides a concise overview of the methodological framework employed in this study, outlining the key components that was be elaborated upon in the subsequent sections of this chapter.
- Section 3.2 Research Plan: The research plan, guided by a set of selected design principles, was presented in this section. Specifically, it articulated the implementation of Human-Centred Design Principles(A) and Information Design Principles (B). The complete research plan was then summarised at the section's conclusion (C).
- Section 3.3 Research Methodology: This section outlined the reviewed and selected research methodologies for the current study.
- Section 3.4 Research Approach: This part outlined the overview of the research approaches and subsequently, explained the chosen research approach for this investigation.
- Section 3.5 Research Strategy: This section included the overall research strategies and the selected strategy for this research project.
- Section 3.6 Data Collection: This broad section outlined the comprehensive research strategy employed in this study. It detailed the evaluation of relevant data collection methodologies and the rationale for selected techniques (A), the development of data collection instruments (B), the adopted sampling strategy (C), and the official protocols for participant data acquisition (D). Essential participant demographics and characteristics were also provided (E), and the section concludes with a synthesis of the entire data collection process (F).
- Section 3.7 Data Analysis: This section presents the data analysis methods employed (B) and describes the application of Thematic Analysis and Conceptual Mapping in this research, illustrated with an example.

- Section 3.8 Summary of the Methodology Chapter: This section provides a comprehensive summary of the methodology chapter, with particular emphasis on the perspective of the Human-Centred Design approach.

3.1 INTRODUCTION TO METHODOLOGY

Research methodology often refers to a system of models, guidelines, techniques, and procedures used to collect data, examine findings or results of a research project (Blessing and Chakrabarti, 2009, pp. 2–6; Thomas, 2022). The previous chapter indicated that there was a need for primary research to reach the aim of this project, and dedicated strategies can help combine the overall secondary and primary findings to create meaningful outcomes, as elaborated in Table 3.1. In line with this target, research plan (Section 3.2), Research Methodology (Section 3.3), Research Approach (Section 3.4), Research Strategy (Section 3.5), Data Collection processes (Section 3.6), and Data Analysis (Section 3.7) were explicitly given in the subsequent sections. Table 3.1 shows the overall view of this research project, that could be fulfilled with certain strategies explained through this chapter. At the end, the chapter was synthesised from the perspective of Human-Centred Design (HCD), as its principles underpinned the methodology section, as briefly mentioned earlier and further elaborated in the following section (see Section 3.2). Prior to delving into the chapter's content, Table 3.1 re-presents the strategic alignment between the research questions and the overarching research aim.

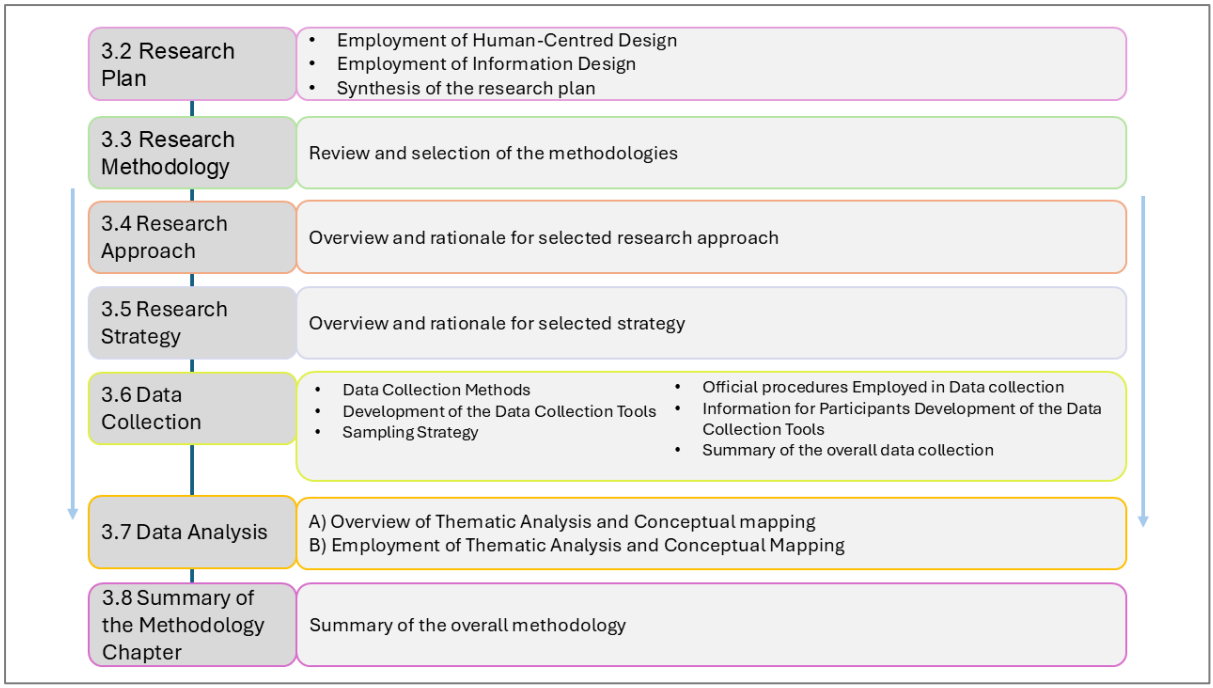


Figure 3. 1. Overview of the Methodology Chapter

Table 3. 1. Alignment of the Research Questions and Objectives

Research questions (RQ)	Objectives aligned with research questions (O)
RQ1 *'What are the main reasons that caused language barriers between immigrant parents and Turkish primary school teachers?'*	• Objective 1 *'To develop an in-depth understanding of the context that immigrant parents are experiencing in Turkish schools'.* • Objective 2 *'To gain in-depth understanding of language barriers preventing effective communication between immigrant parents and Turkish primary school teachers.'*
RQ2 *'To what extend existing solutions, research, and/or current practices address these language barriers?'*	• Objective 3 *'To explore elements which could help reduce experienced problems by immigrant parents, such as the policies suggested by the Turkish Government for immigrants.'* • Objective 4 *'To evaluate existing solutions and case studies regarding language barriers in other contexts which could help provide potential solutions/good practices.'*
RQ3 *'How could Human-centred Design principles and Information Design applications be used to address language barriers between immigrant parents and Turkish primary school teachers?'*	• Objective 5 *'To critically review relevant Human-Centred Design principles and explore how they could be used to gain better understanding of language barriers and come up with solutions.'* • Objective 6 *'To explore how Information Design could be applied to reduce language barriers between Turkish teachers and immigrant parents.'* • Objective 7 *'To propose Information Design guidelines that could assist Turkish school managers to foster better communication between primary school teachers and immigrant parents with the assessment with relevant stakeholders before finalising it.'*

3.2 RESEARCH PLAN

This section details the research plan for this project; specifically, it covers the application of Human-Centred Design (HCD) principles (A), the integration of Information Design (ID) principles (B), and the subsequent synthesis of the comprehensive research plan (C).

A) Employment of Human-Centred Design Principles

Within the paradigm of Human-Centred Design, researchers are required to internalize its core tenets and systematically apply relevant theoretical frameworks throughout the research endeavour. This section elucidates the specific philosophical approaches and practical principles that guided this research, presented sequentially below.

IDEO's (2015) principles are well-suited to practice-based studies, as in the case of this project; therefore, its philosophical approach (mindsets) was the focus of this discussion. To align with the principle of 'creative confidence,' the researcher acknowledges the novel nature of this research problem and anticipates inherent challenges. The 'make it' mindset necessitates continuous consideration of how comprehensive data (both secondary and primary) can be transformed into practical, problem-solving outputs. Given this project's foundational contribution to the literature, the researcher recognizes that 'learn from failure' is an intrinsic component of the developmental process and will embrace such instances as opportunities for advancement, mitigating potential discouragement. 'Empathy' will remain a central tenet throughout the entire process. This involves recognizing that comprehending underlying issues demands sustained attention and effort, potentially requiring nuanced investigative techniques (e.g., strategic prompting during inquiry). Furthermore, 'embracing ambiguity' and 'optimism' resonate with 'creative confidence,' reminding the researcher that the project's complex nature and lack of immediately predictable solutions should not impede progress. Finally, 'iteration' may be employed as needed, with the researcher revisiting primary and secondary findings to achieve optimal and functionally valuable outcomes.

Regarding practically applicable principles, IDEO (2015) was employed throughout the research, while the HCD pyramid (Giacomin, 2014) was utilised more specifically in the guideline development section. Examining the phases of IDEO (ibid), as

illustrated in Table 3.2, the Inspiration phase necessitated the combination of secondary data, presented in this chapter, and primary data, included in Chapter 4. The Ideation phase focused on the information to be proposed to school managers, aiming to mitigate language barriers in schools. Implementation centred on the guideline itself, encompassing both its development and evaluation with relevant stakeholders (this aspect was further elaborated in Chapter 3, the methodology chapter).Turning to the HCD pyramid (ibid), the proposed guideline should include certain information for the overall material and for each suggestion, specifically addressing: 'Why' (e.g., why this material could be beneficial); 'How' (e.g., how this material can be practically applied in the school environment and in what manner); 'When' (e.g., at which period of education they should consider the suggestions); . 'What' (e.g., what school managers should do exactly) and ‘Human factors’ (e.g., with whom they may need to collaborate to implement the provided suggestions). Finally, Giacomin’s (ibid) strategies were likely to enhance the clarity of information (see Chapter 5 for further details), which was complemented by Information Design principles.

Table 3. 2. Application of Human-Centred Design Phases in This Research Project

HCD phases	Objectives
1. Inspiration	1. To develop an in-depth understanding of the context in which immigrant parents are embedded in Türkiye including practical and psychological perspectives.
2. Ideation	2. To identify major barriers preventing effective communication between immigrant parents and Turkish primary school teachers.
	3. To examine existing practices carried out by the Turkish government in terms of education for immigrants.
	4. To examine existing solutions and case studies in other contexts which could help the problem solving.
	5. To critically review relevant theories and identify Human-Centred Design and Information Design tools/techniques that could be used to address these issues.
	6. To explore how information design could be used to overcome cultural differences between Turkish people and immigrant people.
3. Implementation	7. To propose a guideline that could assist Turkish school managers to foster better interactions between primary school teachers and immigrant parents, with the assessment with relevant stakeholders before finalising it.

B) Employment of Information Design Principles

The application of Information Design (ID) principles in this research project primarily focused on strategies for Information System Design alongside the core principles of Information Design.

With regard to Information System Design, the strategies proposed by Tore-Yargin (2013) aligned closely with the objectives of this study, particularly in their emphasis on *practicality*. Tore-Yargin's framework aims to convey user research information to designers in a form that can be readily applied in product development. Similarly, in this research, the goal was to convey information to school managers in a way that could be practically implemented to address the identified problems. Moreover, the strategies have been successfully applied in various fields, demonstrating their adaptability and effectiveness, which further supports their use in this project. Ultimately, the strategies adapted to this research project as explained in Table 3.3 and 3.4 below.

Table 3. 3. Content Strategies (suggested by Tore-Yargin, 2013) and Their Adoption in This Research Project

Strategies	Explanation	Implementation of the Strategies within the Guideline
CS-1 - Multidimensionality	This strategy involves informing designers of all relevant factors and considerations that shape design needs and constraints. Understanding these elements enables a deeper knowledge of the user and supports the maintenance of empathy.	This strategy requires incorporating insights from multiple stakeholder groups throughout the guideline.
CS-2 – In-depthness	This strategy provides insight into the root causes of user behaviours, fostering empathy and inspiring the design process.	This strategy requires the inclusion of examples drawn from participants' real-life experiences to ensure the guideline is grounded in empirical reality.
CS-3 - Persuasiveness	This strategy entails presenting compelling data to persuade designers and team members, enhancing the utility of the provided information.	This strategy requires clear background information in the guideline, outlining its importance and potential benefits.

CS-4 - Credibility	This strategy emphasizes supporting design researchers' findings with qualitative and quantitative data to ensure validity.	This strategy requires providing a concise overview of the methodology used in developing the guideline.

Table 3. 4. Delivery Strategies (suggested by Tore-Yargin, 2013) and Their Adoption in this Research Project

Strategies	Explanation	Implementation of the Strategies within the Guideline
DS-1 – Representativeness	This strategy facilitates a connection between designers and the target audience by advocating the use of tools such as video recordings, personas, and images to foster empathy.	This requires providing background information to school managers about the target groups, Syrian immigrants.
DS-2 – Interpretability	The main concept is to present information in a way that enables target users to draw their own insights, leading to more creative outputs and allowing them to tailor suggestions based on current requirements and available resources.	This requires providing optional solutions for school managers so they can tailor suggestions based on the situation.
DS-3 – Concrete exemplification	It highlights the necessity of using clear examples to prevent misinterpretations and misconceptions.	Clear examples are needed for each suggestion to facilitate school managers' understanding and implementation.
DS-4 – Explanatoriness	This involves conveying persuasive information to key personnel as emphasised that designers must comprehend the underlying causes of users' problems.	This requires providing concise explanations for each proposed solution to equip school managers with sufficient background knowledge prior to implementation.
DS-5 – Prioritisation	This emphasizes the importance of clearly ranking information, as prioritizing findings is essential when communicating with designers.	This necessitates presenting practical suggestions in a hierarchical order, enabling school managers to allocate resources effectively.

With respect to the fundamental principles of Information Design, Gestalt principles such as similarity, contrast, continuity, proximity, and grouping should be incorporated into the overall material design. For example, information presented in a similar format (e.g., quotes) should maintain consistent formatting throughout, which aligns with the principle of similarity. Similarly, when prioritizing information as suggested by DS-5 (Prioritisation), suggestions of a similar hierarchical level should be perceived as a cohesive whole; this can be achieved through the application of the grouping principle. Furthermore, icons, symbols, and diagrams are intended to be utilized throughout the material to enhance the clarity and comprehensibility of the written information.

C) Synthesis of the Research Plan

To summarize the project's requirements, the integrated design frameworks presented herein aimed to facilitate the development of impactful educational materials for schools. A central tenet of the adopted Human-Centred Design (HCD) was its inherent capacity to generate meaningful practical solutions, thereby enhancing the utility of developed materials within this specific educational environment. Concurrently, the anticipated primary benefit of employing Information Design (ID) principles was the optimised and efficient presentation of crucial information, aligning with the aim of this research.

By synthesizing data from a Human-Centred Design (HCD) perspective and processing it through these Information System Design strategies the developed material was expected to achieve its expected goals: inspiration and guidance. The inherent qualities of the guideline, shaped by these processes, can be summarized through four elements: ‘Usefulness’ encompasses the material's utility, inherent value, and direct applicability (Ware, 2019, pp. 23–30), ‘Comprehensiveness’ ensures the material contains an adequate level of detail (Lowe, 2017) ’Clarity’ is fundamentally concerning "whether the information is understood or not by a particular audience (Pettersson, 2015, pp. 60–67; Richards, 2017), and ‘Practicality’, pertaining to the information's direct applicability for implementation (Janssen, Westbroek and Doyle, 2015).

Notably, ‘Clarity’, ‘Comprehensiveness’, and ‘Usefulness’ are all associated with both the 'Inspiration' and 'Guidance' goals. For instance, when school managers find the

information easy to understand, sufficiently detailed, and inherently meaningful, they are more likely to be inspired to utilise the suggestions within their specific school environment. Practicality, on the other hand, specifically aligns with the 'guidance' goal, as it directly facilitates the adoption processes for school managers. Ultimately, these combined elements are crucial for achieving the overall research aim of developing a truly beneficial and actionable guideline within this project, and would therefore serve as key criteria during the guideline's evaluation by end-users."

3.3 RESEARCH METHODOLOGY

This section outlines the terminology pertaining to research methodology and subsequently elaborates on the specific methodology selected for this research project.

I. Reviewed research methodologies: Broadly, research methodologies can be categorized into three primary types: 'Exploratory Research,' 'Descriptive Research,' and 'Explanatory Research. Exploratory research is characterised as an initial investigation into a novel domain. Its primary objective is to gain a deeper understanding of the subject matter and to establish foundational insights for subsequent inquiry. Regarding descriptive research, following the establishment of foundational understanding, a new area often necessitates the acquisition of more detailed information. Its objective is to systematically delineate and characterize the phenomena under investigation, thereby providing comprehensive insights. The objective is to systematically delineate and characterize the phenomena under investigation, thereby providing comprehensive insights. Lastly, the aim of explanatory research is to describe cause-and-effect relationships. Occasionally, it is defined as 'causal studies,' focusing on an analysis of a situation or problem to explain the patterns of relations between variables (Walter, 2006, p. 10; Bhattacherjee, 2012, p. 6; Akhtar *et al.*, 2016, pp. 73–80).

II. Selected research methodology for this research: This study stands apart from existing literature by uniquely focusing on the comprehensive identification and remediation of language barriers within the Turkish school system; adopting a multifaceted approach. While the Turkish educational landscape has been the subject of numerous studies investigating challenges faced by immigrant parents from various perspectives, there remains a notable absence of research singularly

focused on the resolution of language barriers. This project aims to address this critical gap by meticulously examining these linguistic impediments. For instance, the research will analyse the interplay of emotional and cultural barriers between different groups, as well as assess the Syrian parents' familiarity with the Turkish education system. Consequently, an exploratory approach was necessary to gather the requisite information and address this identified gap in the literature.

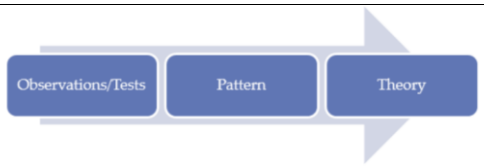
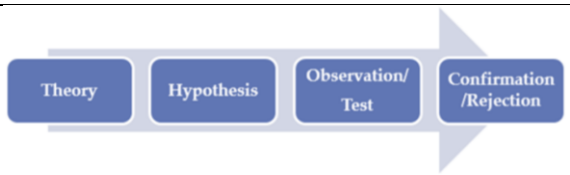
Furthermore, this research is pioneering in its development of practical material for school managers aimed at mitigating language barriers in Turkish schools. While some informational resources regarding immigrant children have been disseminated through literature and Turkish education websites, their conceptual framework diverges significantly from this project. This study extends beyond purely theoretical discussions to provide actionable tools. Consequently, to align with the research's objective of proposing a practical resource for school managers, it was essential to gain a foundational understanding and establish the necessary groundwork, which inherently aligns with the nature of exploratory research.

3.4 RESEARCH APPROACH

This section provides an exposition of research approach terminology, subsequently detailing the specific approach adopted for this research project.

I. Reviewed Research Approaches: The acquisition of new knowledge is primarily facilitated through two common approaches to reasoning: inductive and deductive. Inductive reasoning is a theory developing process, beginning with observations of particular instances, and pursuing to establish generalisations about the phenomenon under investigation whereas deductive reasoning has been defined as a theory testing process which begins with a recognised theory or generalisation and seeks to see if the theory applies to specific cases (O'Leary, 2007) - see Table 3.5 below for the elaborated information.

Table 3. 5. Comparison of Inductive and Deductive Approach (Guest et al., 2011)

Inductive Approach	Deductive Approach
For instance, inquires: "What do x individuals think about y?"	• For instance, hypothesizes: "x individuals think z about y"
• Specific codes/analytic categories NOT predetermined	• Specific codes/analytic categories predetermined
• Codes derived from the data	• Codes generated from hypotheses
• Data mostly generated	• Mostly uses existing information
• Most often uses purposive sampling	• Commonly employs random sampling
• More prevalent approach	• Less preferred approach
	

II. Selected Approach for This Research: The foundational premise of this project is to expand existing knowledge rather than to definitively prove a specific hypothesis. For instance, while the secondary research initially surveyed the challenges between immigrant parents and Turkish teachers from a general perspective within the Turkish context, a more profound, in-depth understanding of these issues was imperative to address the research objectives comprehensively. To articulate this information effectively, the secondary data served as a crucial basis, enabling the derivation and subsequent elaboration of themes and codes through primary research.

Moreover, the nature of this investigation necessitated a purposive sampling strategy. This involved precisely defining the research cohort, specifically including immigrant parents attending Turkish schools who had resided in the host country for a designated period, as well as Turkish teachers who had interacted with immigrant parents during particular timeframes. Consequently, considering the requirements of the various research approaches, this study is demonstrably well-suited to an inductive approach.

3.5 RESEARCH STRATEGY

This section provides an elaboration of general research strategies and subsequently details the specific strategies employed in this research project.

I. Reviewed research strategies: The term 'research strategy' is defined as focusing on either quantifying or qualifying the collection and analysis of data (White et al., 2006) Fundamentally, there are three primary research strategies: qualitative research, quantitative research, and mixed methods:

a. Qualitative research: This method is utilised to develop a deeper understanding of a particular issue. Its primary purpose is to discover and acquire in-depth insights into personal experiences, opinions, thoughts, and trends, and to explore the complexities of the problem at hand. To achieve this aim, methods such as individual interviews, focus groups, and behavioural observations are widely applied (Bhattacherjee, 2012, p. 113; White et al., 2006).

b. Quantitative research: This method is employed to obtain numerically defined results. Quantitative techniques typically include various forms of surveys and questionnaires, structured interviews, and behavioural observation based on explicit coding and categorization schemes (Alston, 2020, pp. 376–384; Bhattacherjee, 2012, p. 119; White et al., 2006).

c. Mixed Method: Mixed methods involve the collection of both qualitative and quantitative data in response to research questions or hypotheses; several projects necessitate the combination of qualitative and quantitative methods to achieve accurate and comprehensive results, leading researchers to opt for a mixed-method approach tailored to their studies (Sandelowski, 2000; Kara, 2015:26; Jason and Glenwick, 2016:233-236).

Ultimately, the key distinctions among the strategies are summarised as follows:

- Qualitative analysis is based on logic and interpretation, whereas quantitative analysis relies on statistics.
- Qualitative analysis does not adhere to rigid rules but rather follows flexible guidelines. In contrast, quantitative analysis follows agreed-upon, standardized processes and rules.
- Qualitative analysis often occurs simultaneously with data collection, whereas quantitative analysis typically commences only after data collection is completed.

- Qualitative analysis methods may vary depending on the specific situation, while quantitative analysis methods are defined in advance as an integral part of the study design (ibid) - further information is given within Table 3.6 below.

Table 3. 6. Fundamental Attributes of Qualitative and Quantitative Research (Blaxter et al., 2010)

Qualitative	Quantitative
Concerned with understanding behaviour from actors' own frame of reference	Seek the facts/causes of social phenomena
Naturalistic & uncontrolled observation	Obstructive & controlled measurement
Subjective	Objective
Close to the data: the 'insider' perspectives	Removed from the data: the 'outsider' perspectives
Process-oriented	Outcome-oriented
Valid: real, rich, deep data	Reliable: hard and replicable data
Ungeneralisable: single case studies	Generalisable: multiple case studies
Holistic	Particularistic
Assumes a dynamic reality	Assumes a stable reality

Furthermore, mixed method combines the strengths of qualitative and quantitative methods and is used when both forms of data are required for a comprehensive analysis.

Selected research strategy for this research: The intrinsic nature of this research necessitates a focus on the qualitative dimension or substantive content of information, rather than numerical data. Specifically, an in-depth understanding of the multifaceted factors contributing to language barriers between parents and teachers was required. This imperative necessitated the collection of authentic, rich, and profound qualitative data. Concerning the generalizability of findings, this research project's outcomes are anticipated to be context-specific rather than broadly generalisable, differentiating it from studies employing quantitative methods with large populations. Consequently, it is evident that the epistemological orientation and the specific research questions posed in this study are optimally addressed through a qualitative research strategy.

3.6 DATA COLLECTION

This section provides a comprehensive elaboration of the data collection process employed in this study. Part A details the selected data collection methods, offering both a review of various approaches and a specific justification for those chosen for this research project. Part B describes the systematic development of the data

collection instruments tailored for both key stakeholders and domain experts. Part C outlines the sampling strategies implemented for the selection of both the school site and its participants. Part D delineates the official administrative procedures undertaken, including ethics applications and participant recruitment processes. Part E presents essential contextual information pertinent to the participants, key stakeholders, and experts involved. Finally, Section F synthesizes the entirety of the data collection methodology.

A) Data Collection Methods

Data collection is the systematic process of gathering data and measurements on variables within an established system, thereby enabling the answering of related questions and the assessment of such systems (Willson and Miller, 2014). Among the various methods, secondary research, also identified as desk research, involves the summary, collation, and synthesis of existing research (Collins, 2018, p. 108), which was presented in Chapter 2. The primary focus of this current section is primary research, defined as a methodology employed by researchers to collect data directly, rather than relying on data from previously conducted studies (ibid). In accordance with commonly employed qualitative data collection tools, an overview of the methods utilised in this study is presented below.

a. In-depth case study method: The term 'case' refers to an event, an entity, an individual, or even a unit of analysis (Yin, 2003, pp. 1–21). Following this explanation, an in-depth case study is a comprehensive examination of a particular case (or cases) within a real-world context (Bell and Waters, 2018, pp. 11–12; Collins, 2018, p. 146), which aims to achieve a sufficient understanding of how and why things happen within a specific group (Noor, 2008). Case studies may incorporate several methods, such as observation, interviews, focus groups, etc., depending on the requirements and objectives of existing projects. Researchers who aim to obtain required information for a defined group often apply case studies in their projects (Yin, 2003).

b. Interview method: Collins (2018, p. 134) defines interviews as a technique primarily used to gain an understanding of the fundamental reasons and motivations behind individuals' attitudes, preferences, or behaviour. There are certain interview structures (structured, semi-structured and unstructured interviews), which are

elaborated as follows: Structured interviews are based on a clearly worded interview schedule. They mostly require short answers, which are beneficial when there are a number of questions that are not especially contentious or thought-provoking (Collins, 2018, p. 134).

- Semi-structured interviews, also defined as standardised open-ended interviews (Marlett and Emes, 2010), require asking certain questions but provide scope for the participants to express themselves at length (Collins, 2018, p. 134).
- Unstructured interviews are also defined as in-depth interviews, and they require asking a general question at the beginning and encouraging participants to talk freely (Marlett and Emes, 2010; Collins, 2018, p. 134). Researchers utilise an unstructured format, with the subsequent direction of the interview being determined by the participant's initial answer (Collins, 2018, p. 134).

c. Card sorting method: Card sorting is a technique that was originally developed by psychologists to observe how people organise and categorise their knowledge. Currently, this method has been used by researchers for a similar purpose: researchers prepare labels representing concepts on cards and then ask participants to sort (categorise) the cards (Wood and Wood, 2008). In this way, researchers have an opportunity to systematically define how participants prioritize their preferences in a study (Nurmuliani, Zowghi and Williams, 2004).

Finally, for this research, primary research employed a case study methodology, focusing on a Turkish primary school to investigate language barriers between immigrant parents and local teachers. The employment of interviews and card-sorting exercises with the participants within a case-study based research is elaborated below:

- The interview method provided immigrant parents with the opportunity to express their perspectives individually, thereby allowing them to respond to questions without being influenced by the opinions of other participants. This approach also enabled parents to discuss sensitive or private matters in a confidential, one-to-one setting with the researcher. Alternative data collection methods, such as surveys and focus groups, were considered but deemed

less appropriate for the aims of this study. Surveys may generate more superficial data, whereas this research required an in-depth understanding of participants' experiences and perspectives; therefore, interviews were more suitable. With regard to focus groups, this method requires multiple participants to be available simultaneously during data collection. However, coordinating such sessions can be challenging, particularly in this research context. For example, school staff often have demanding schedules and may only be able to allocate limited and varying amounts of time to participate. Similarly, parents may have differing availability due to individual responsibilities. Additionally, some participants may prefer to share their personal thoughts freely without disclosing them in a group setting, which is more readily facilitated through one-to-one interviews than through focus groups.

- Semi-structured interview questions framed the topics discussed with participants, thereby directing individuals to provide answers related to those topics. Moreover, they allowed the researcher to prompt, thereby providing an opportunity to gather further information from participants. Furthermore, these processes provided immigrant parents with a greater opportunity for extensive explanation compared to structured interviews, thereby allowing them to express themselves with enhanced flexibility.

Notably, an open-ended card sorting technique was incorporated into the interview protocol. This method was included because it facilitates the collection of structured and well-defined responses, which was essential for evaluating existing communication solutions. While participants were able to offer general insights during the interview regarding alternative tools, such responses alone may not have provided the level of clarity required for systematic assessment. Through the use of card sorting, the researcher was able to obtain more tangible and comparable data, with each decision accompanied by participants' explanations. Given that the primary aim of this research is the development of practical recommendations, the use of card sorting was particularly valuable in identifying the most effective and comparatively suitable communication tools to inform guidelines for school managers. At the conclusion of the interview stage, participants were presented with

four printed cards (illustrated in Figure 3.3) and were asked to sort them according to their perceived effectiveness, while also providing a rationale for their choices.

B) Development of the Data Collection Tools

Semi-structured interview protocols were meticulously developed for distinct participant groups: key stakeholders and domain experts, with each protocol tailored to specific objectives (data collection tools are available in Appendix C5). The questions directed towards key stakeholders were principally formulated to cultivate a more profound comprehension of the prevailing circumstances and to solicit actionable recommendations for ameliorating the identified challenges. Conversely, questions posed to experts were designed to elicit broad insights pertaining to potential solutions. Throughout the conceptualization and articulation of the interview content, the principles of Human-Centred Design were integrally applied.

I. Questions for key stakeholders: The researcher developed distinct sets of questions for each key stakeholder group, as illustrated in Figure 3.2, while maintaining substantial thematic commonality across all protocols. The thematic scope of these questions broadly encompassed: The thematic scope of these questions broadly encompassed: procedures governing parental meetings at the school; attendance rates and engagement levels of immigrant parents in school meetings, including their interactions with school personnel and teachers; the effectiveness of currently employed communication channels and tools; the identification of prevailing challenges; the analysis of potential barriers hindering effective communication between parents and teachers; and the exploration of prospective solutions and recommendations.

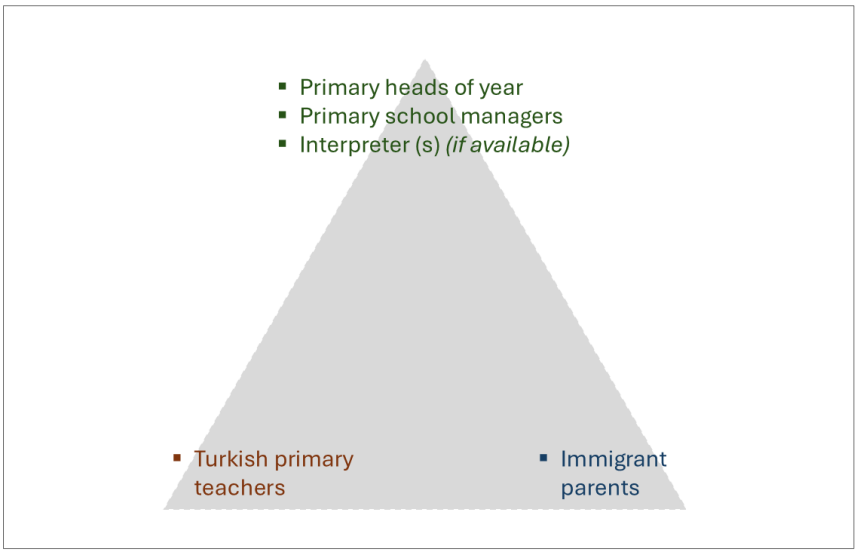


Figure 3. 2. Key Stakeholders of This Project

a. Procedures of parental meetings at the school: Initially, the objective was to ascertain the protocols governing parent-teacher meetings, encompassing both collective and individualized sessions. While the existing literature concerning the Turkish educational context provided adequate information regarding collective meetings (see 2.1.3.1), a notable dearth of information existed concerning individualized sessions. Consequently, this set of questions served to corroborate and expand upon the existing data within the Turkish context regarding collective meeting protocols, while simultaneously acquiring novel information pertaining to the procedures for individualized meetings (see Q1-Q3 for teachers, Q1 for heads of year in Appendix C5).

b. Attendance of immigrant parents at meetings, and their level of engagement with school staff: This inquiry investigated the extent of immigrant parents' involvement in their children's education and their degree of engagement with various school personnel, including teachers, heads of year, and school managers (referencing Q4 and Q5 for teachers, Q1 for parents, Q1 and Q2 for heads of year, and Q1 for the school administrator). The extant literature provided a general understanding of parental involvement, drawing from international case studies (as detailed in Section 2.1.2), and the Turkish context likewise offered pertinent information regarding challenges faced by immigrant parents in primary schools (as discussed in Section 2.1.3.2). Nevertheless, a more granular understanding was imperative to comprehensively grasp the specific dynamics within the chosen case study school.

Consequently, the findings yielded from these questions were anticipated to either corroborate existing scholarly discourse or introduce novel insights into the phenomenon under investigation.

c. Currently used communication channels/tools and their effectiveness: The investigation centred on communication channels, specifically exploring the mechanisms through which immigrant parents and Turkish educators interact despite linguistic impediments. Furthermore, the study aimed to ascertain the perceived efficacy and associated challenges of current communication modalities from diverse perspectives (referencing Q6 and Q7 for teachers, and Q2 and Q3 for parents).

d. Overview of the prevalent problems: This inquiry investigated recurring challenges pertaining to immigrant parents, examining them through the perspectives of diverse stakeholders, specifically teachers, heads of year, school managers, and the interpreter service team (referencing Q8 for teachers, Q3 for head of year, and Q1 for school managers). While the extant literature presented findings from various international contexts, including Türkiye, the unique contextual specificities of this particular case study necessitated novel empirical investigation. Consequently, the insights garnered from these questions were anticipated to either corroborate and augment existing scholarly discourse or to yield genuinely novel contributions to the field.

e. Potential language barriers between parents and teachers: This segment of the inquiry delved into language barriers, including emotional and cultural factors between the two groups, and the limited understanding immigrant parents possessed regarding the local education system.

- Emotional Barriers: The researcher sought to elucidate emotional factors, from various stakeholder perspectives, that potentially impede effective communication (referencing Q9 for teachers, Q4 for parents, Q4 for heads of year, and Q3 for school managers). While extant literature within the Turkish context reported challenges in immigrant parent-teacher communication, these issues had not been systematically examined from an emotional perspective. Consequently, the findings derived from these questions are anticipated to offer a distinctive contribution to the discourse on language

barriers (further elaborating on how emotional factors accompany language barriers, as discussed in Section 2.2.1) and to the broader Turkish education context.

- Cultural Barriers: A dedicated set of questions specifically addressed the cultural impediments between Turkish teachers and Syrian immigrant parents that could engender communication difficulties (referencing Q10 and Q11 for teachers, Q5 for parents, Q5 and Q6 for heads of year, and Q4 and Q5 for school managers). While the existing contextual information provided some generalized insights into similarities and differences between the two cultures (as presented in Section 2.1.4), there was a conspicuous absence of empirical data concerning how these cultural congruencies and divergences influenced the modalities of parent-teacher communication within Turkish schools. Therefore, further rigorous investigation was warranted. As a result, the findings emanating from these questions represent unique contributions to the understanding of language barriers (particularly concerning the interplay of cultural factors with linguistic challenges, as explored in Section 2.2.1) as well as to the Turkish education context.
- Unfamiliarity Barriers: A dedicated set of questions concentrated on assessing the degree of immigrant parents' familiarity with the Turkish education system and the subsequent ramifications for parent-teacher communication (referencing Q12 for teachers, Q6 for parents, Q7 for heads of year, and Q6 for school managers). While existing scholarship within the Turkish context has documented challenges in immigrant parent-teacher communication, these issues had not been rigorously examined from the perspective of 'unfamiliarity.' Consequently, a more focused investigation was deemed imperative. The findings derived from these questions are thus anticipated to yield novel contributions to both the understanding of language barriers and the broader Turkish education landscape.

f. Potential solutions / any recommendations: Finally, the researcher investigated appropriate communication channels. Initially, a preliminary inquiry was directed to both teachers and parents to ascertain their receptiveness to a proposed solution (referencing Q13 for teachers, Q7 for parents). Subsequently, participants were invited to articulate any potentially efficacious communication modalities for

development (referencing Q14 for teachers, Q8 for parents, Q8 for heads of year, and Q7 for school managers). Thereafter, participants were presented with four distinct communication methods derived from the contextual analysis and requested to evaluate these solutions using a card sorting methodology (referencing Q15 for teachers, Q9 for parents, and Q9 for heads of year).

The cards utilised in this exercise were meticulously prepared based on synthesised findings from both the broader language barriers context and the specific Turkish education context. Prominent communication tools identified as prevalent within the language barriers literature, such as interpreter services, Video Remote Interpreting (VRI), mobile applications, and pictorial booklets, were therefore included. Additionally, given the frequent utilisation of WhatsApp by both Turkish teachers and immigrant parents for inter-group communication (a trend also observed in other international contexts, as exemplified by Mayangsari & Aprianti, 2017; Wasserman & Zwebner, 2018). Ultimately, the communication tools for the card sorting exercise are demonstrated in Figure 3.3.

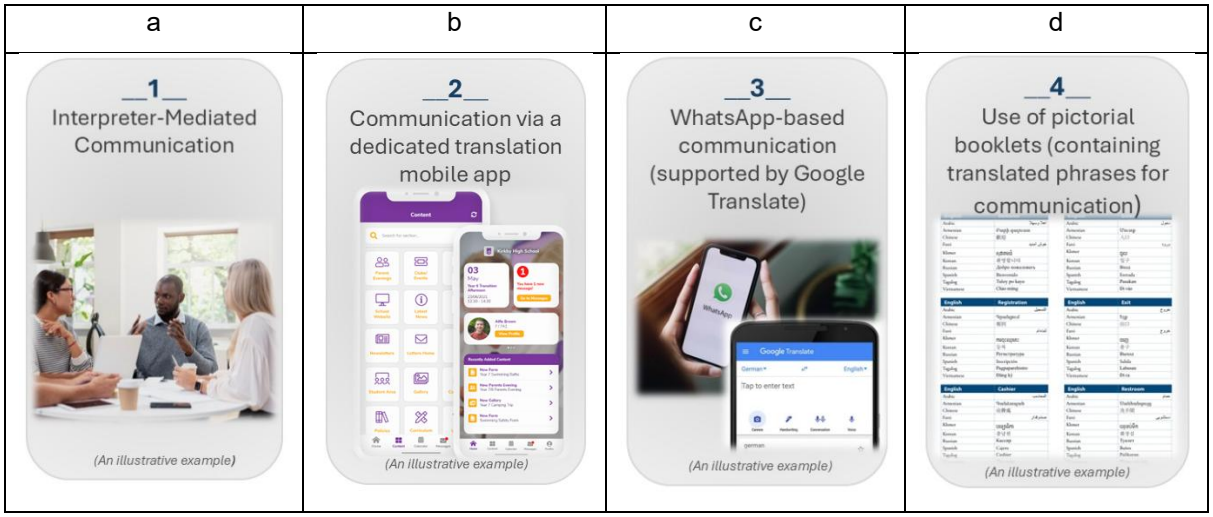


Figure 3. 3. Communication Tools for Card Sorting by Participants (Freepik Company S.L., no date; Google News Initiative, no date; Parentapps, no date; L.A. Care Health Plan, 2018)

Employment of card-sorting method in this research: The researcher personally prepared the cards for the sorting method, embedding descriptive titles and illustrative images on each. After printing, these were affixed to cardboards. To understand their sorting choices, participants were prompted to justify their decisions, responding to questions such as, "Why do you think this is the most effective?" or "Why do you believe this approach is unworkable?" The researcher also ensured that all aspects of the cards and the task were comprehensively

understood by stakeholders; therefore, she provided an explanation for each card type, as follows:

Card 1 - Interpreter-Mediated Communication: This concept involves using a translator to bridge language barriers and enable effective communication. The researcher offered a relatable example, mentioning that immigrant parents often encounter such services in hospitals, helping them communicate with doctors.

Card 2 - Communication via a Dedicated Translation Mobile App: The proposed concept involves an education-focused mobile application with built-in real-time translation. Available for download on standard platforms (e.g., Google Play, Apple App Store), this app would allow parents and teachers to communicate remotely. It would also organize conversations into relevant sections dedicated to parent-teacher topics.

Card 3 - WhatsApp-based communication (supported by Google Translate or other AI-enabled tool): This method involved employing WhatsApp as the primary communication channel, with language barriers addressed through the manual translation of messages using Google Translate (given participants' existing familiarity with this widely adopted approach, further extensive instruction was not required).

Card 4 - Pictorial Booklets with Translated Phrases: This concept involved facilitating communication through printed booklets containing commonly used phrases translated into different languages (e.g., Turkish and Arabic for this study). Beyond text, these booklets incorporated illustrative images to support understanding. To familiarize participants with this method, the researcher provided two complete example booklets for examination (L.A. Care Health Plan, 2018; Co-design Toolkit, 2019) prior to their feedback (Table 3.7 demonstrates how interview questions and card sorting could help address the objectives).

Table 3. 7. Interview Question Content for Key Stakeholders

Scope of the questions	Interview questions proposed to key stakeholders			
	Teachers	Parents	Heads of year	School managers
Procedures of parental meetings at the school	Q1, Q2, Q3	-	Q1	-
Attendance of Immigrant Parents at Meetings, and their level of engagement with school staff	Q4, Q5	Q1	Q2	Q1
Currently used communication channels/tools and their effectiveness:	Q6, Q7	Q2, Q3	Q3	Q2
Potential language barriers between parents and teachers:	Q8, Q9, Q10, Q11, Q12	Q4, Q5, Q6	Q4, Q5, Q6, Q7	Q3, Q4, Q5, Q6
Potential solutions / any recommendations:	Q13, Q14, Q15	Q7, Q8, Q9	Q8, Q9	Q7

II. Questions for experts

Participants were interviewed in order to seek potential solutions from different aspects (see Table 3.8).

a. Area of expertise: At the outset of each interview, the researcher sought explicit confirmation of the expert's professional background and its direct relevance to the scope of the project (Q1). This initial validation ensured that the subsequent suggestions would be grounded in pertinent knowledge, thereby contributing effectively to problem mitigation.

b. Relevant experiences: Following the confirmation of expertise, the researcher sought to elicit descriptions of analogous experiences without delving into minute details, with the objective of acquiring holistic conceptual suggestions (Q2). Concurrently, inquiries were made regarding the overall project processes employed in their prior experiences and the underlying principles that guided them. Furthermore, experts were asked to propose design philosophies and principles that could potentially ameliorate the research problem. While this research project had already established its foundational design principles (Human-Centred Design and Information Design), these further suggestions provided crucial insights that were integrated into the practical resource material intended for school managers (Q3).

c. Specific recommendations: The researcher then directed questions specifically aimed at garnering insights into strategies for resolving emotional, cultural, and unfamiliarity barriers (Q13 and Q14). For each distinct sub-barrier, separate and

targeted questions were posed. For instance, concerning emotional barriers, experts were asked if they had engaged in projects specifically addressing such impediments, or if they were aware of colleagues' endeavours in this area. If affirmative, they were prompted to detail the overall process involved. Additionally, they were asked to provide their suggested approach to address this specific research problem, focusing on strategies to reduce emotional barriers between immigrant parents and Turkish teachers. This structured inquiry was systematically replicated for each identified element of language barriers.

d. Concluding inquiries: Finally, the researcher provided an opportunity for experts to offer any additional pertinent information beyond the scope of the pre-defined questions. This strategic inclusion aimed to ensure no valuable insights were overlooked and to capture diverse perspectives from external, expert viewpoints.

Table 3. 8. Content of the Interview Questions for Experts

The scope of the questions		Interview questions
• Area of expertise		Q1
• Relevant experiences		Q2 and Q3
• Specific recommendation	- Cultural barriers	Q4, Q5, Q6
	- Emotional barriers	Q7, Q8, Q9
	- Unfamiliarity barriers	Q10, Q11
• Concluding inquiries		Q12 and Q13

C) Sampling Strategy

Sampling is a technique involving the selection of members or a subset from a population, with the aim of drawing analytical inferences and identifying characteristics applicable to the entire population (Thompson, 2012). Recognising that collecting data from every individual is both time-consuming and resource-intensive, a practical necessity arises for delimiting the scope of the research (Thompson, 2012; Collins, 2018, p. 178). Adhering to this rationale, the researcher implemented specific strategies for both organizational and participant selection, detailed as follows.

I. Selection of the school: The study was conducted within a Turkish primary school situated in Istanbul. Istanbul was chosen due to its status as the most populous and cosmopolitan city in Türkiye (TUIK Türkiye İstatistik Kurumu [Turkish Statistical Institute], 2022 - see also Figure 3.4), factors that contribute to a significant presence

of diverse communities, including immigrant populations. Out of the 1068 public primary schools in Istanbul within 39 districts, the specific school for this case study was purposively selected from an area exhibiting a high concentration of Syrian immigrant residents (further information about the school, specifically primary Classroom Units is available in Appendix C4). This strategic selection aimed to maximise the potential for gathering rich, pertinent information regarding the challenges associated with immigrant integration and communication within an educational setting.

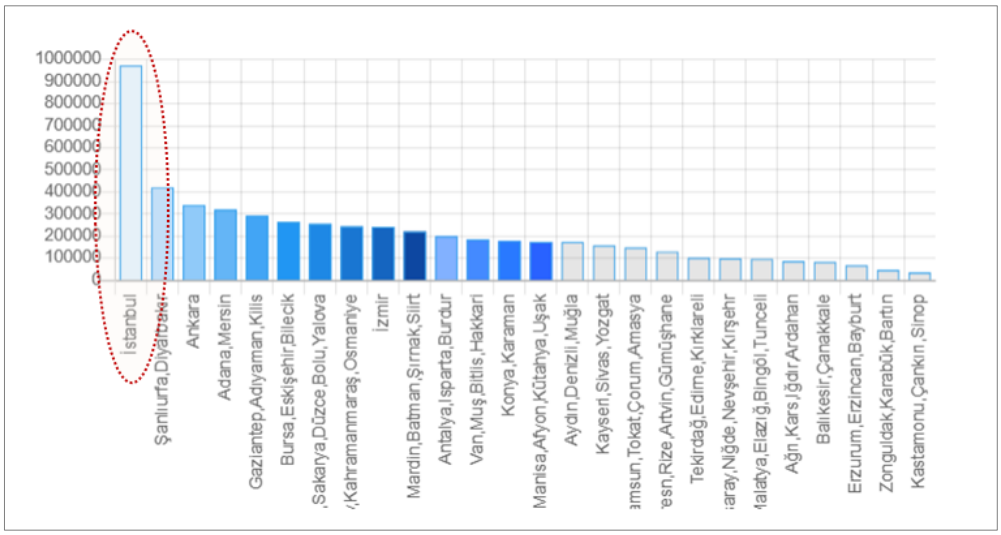


Figure 3. 4. Distribution of Primary School Students Across Turkish Cities, with Istanbul Highlighted (Strateji Geliştirme Başkanlığı [Strategy Development Department], 2022)

Furthermore, among 39 districts, the researcher identified regions and specific schools with the highest concentrations of immigrant populations by consulting the immigration map of Istanbul and quantitative statistics obtained from official government websites (see Figure 3.5), including the Turkish Statistical Institute (www.tuik.gov.tr), the Republic of Türkiye Ministry of National Education Strategy Development Presidency (https://sgb.meb.gov.tr/), and the Republic of Türkiye Ministry of Interior Presidency of Migration Management (https://en.goc.gov.tr/). Among districts with a high population of Syrian residents, the researcher purposively selected one district that was geographically proximate to her place of residence. This pragmatic consideration enabled repeated and sustained access to the research site throughout the study period. Primary schools within the selected district were identified, and school managers were contacted via email using publicly available contact information. Despite these efforts, many school managers indicated

limited availability and were therefore unable to participate in the study during the data collection period. Ultimately, one school manager agreed to participate, demonstrating both availability and a willingness to facilitate the research. This participant was therefore selected through a combination of purposive and convenience sampling, reflecting both the relevance of the research context and practical access considerations.

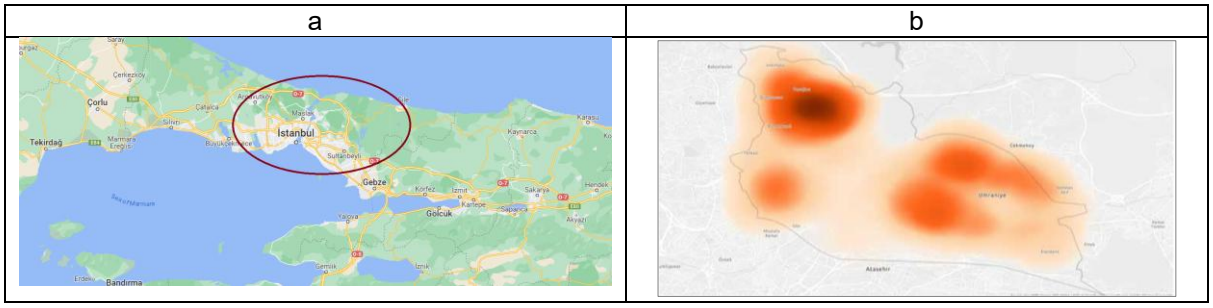


Figure 3. 5. Geographical Context and Immigrant Prevalence at the Study Site in Istanbul. a: Map of Istanbul, indicating the location of the study school, b: Section of Istanbul's immigration map, illustrating the prevalence of immigrant populations within the school's specific region (TUIK Türkiye İstatistik Kurumu [Turkish Statistical Institute], 2022)

II. Stakeholder analysis: Stakeholder analysis is formally recognised as the systematic process of evaluating a system and its prospective changes in relation to relevant and interested parties. This analytical framework is employed to ascertain how the interests of these stakeholders ought to be integrated into a project plan, program, policy, or other action (Thompson, 2012). In the context of this research, stakeholder analysis was instrumental in delineating the specific groups to be engaged in the study. This research encompasses various key stakeholder groups, necessitating a comprehensive stakeholder analysis to define their respective positions within the project. Stakeholders were identified as being differentially influenced by the addressed problems and possessing varying levels of authority or capacity to contribute to the problem's amelioration through their participation in the research. The categorisations are explained as follows:

- Heads of year: In Turkish primary schools, heads of year are primarily responsible for facilitating students' educational, career, and social development. They typically collaborate extensively with parents, teachers, and administrative staff to foster student academic success. Despite their frequent engagement with students, teachers, and parents, they are categorized as having 'high interest' within the stakeholder matrix. However,

their direct influence over the core research problem is comparatively limited, thus positioning them as 'low influence' (see Figure 3.6 - upper left quadrant).

- Immigrant Parents and Turkish Primary School Teachers: These two groups formed the central focus of this project. Their perspectives and experiences are critically significant for the successful improvement of the issues under investigation, given their direct exposure to the identified problems. Consequently, they are classified as possessing both 'high interest' and 'high power' within this research.
- School Management Team: The school management team bears the institutional responsibility for overseeing all educational activities in alignment with the objectives of National Education. While their relationship with parents may be indirect, they exert substantial influence within the school environment. Therefore, the school management is characterized as having 'low interest' but 'high power'.
- Other people: This category encompasses individuals who may have indirect interactions with immigrant parents, such as additional school staff (e.g., health personnel, cleaning staff, administrative officers, and local parents). These individuals were grouped as 'others' due to their assessed 'low interest' and 'low power' regarding the central research problem, and as such, they were not actively included in this specific research project.

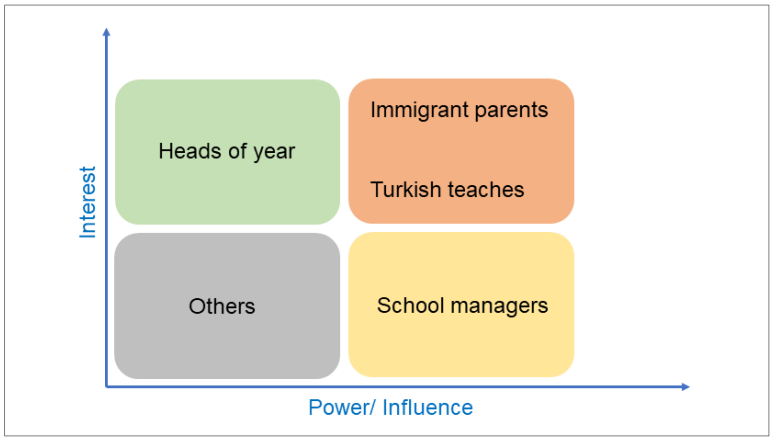


Figure 3. 6. Use of Stakeholder Map in this Research

The participant recruitment strategy was determined by a stakeholder analysis, prioritizing Turkish primary school teachers and immigrant parents due to their direct relevance, thus requiring a large number of participants from these groups. Conversely, Heads of Year (high interest, low power) and school management staff

(low interest, high influence) were represented by smaller participant numbers, which were deemed sufficient for understanding their perspectives given the stakeholder analysis outcomes. The approximate numbers for teachers, parents, and experts followed qualitative analysis requirements, while the limited numbers for Heads of Year and school managers were a direct result of the stakeholder analysis Additionally, engagement with interpreter service team members was planned where such services were available, as the literature indicates variability in the provision of interpreter support across schools as detailed in Chapter 3. (see Table 3.9 for participant allocation).

Table 3. 9. Participant Allocation Based on Stakeholder Analysis

Participants	Numbers
Turkish primary teachers (Teachers were mixed group between 1st and 4th level)	8-12
Immigrant parents (Parents were mixed group; they had children between 1st and 4th level of primary school)	8-12
Primary heads of year	1-3
Primary school managers	1-3
Interpreter(s) (if available)	1-3
Experts from diverse fields	10-12

III. Participant selection criteria: Inclusion criteria define the characteristics of the target population, establishing the generalizability of research outcomes. Conversely, exclusion criteria specify reasons for which individuals from the target population are excluded from the study sample (Patino and Ferreira, 2018; Connelly, 2020). The participant criteria for this research are detailed in Table 3.10.

Table 3. 10. Inclusion and Exclusion Criteria for the Participants.

Interview groups	Inclusion criteria	Exclusion criteria
Immigrant parents	Parents whose child/children are currently attending a Turkish primary school and have completed a minimum of one semester there.	Parents whose child/children are no longer studying in a Turkish primary school.
Turkish primary teachers	Teachers with a minimum of one academic term's experience teaching immigrant students.	Turkish primary school teachers who never had immigrant students before.
Primary school management staff	Members of staff in the school management team who engaged with immigrant students and/or their parents at least one semester.	Members of the school management team with no record of engaging with immigrant students or their parents for at least one semester.
Primary heads of year	Heads of year who engaged with primary school immigrant students at least one semester.	Heads of Year overseeing students across different

		educational levels, for instance, in secondary school.
Translator (s) *(if available)*	Translation teachers who worked at least one mid-term with Syrians.	The interpreters who have never engaged with Syrian parents before.
Experts	Experts with backgrounds in design, sociology, psychology, or education, who also have experience working with disadvantaged communities, non-native speakers, or involvement in social innovation initiatives.	Experts without design, sociology, education or psychology backgrounds.

D) Official Procedures in Data Collection from the Participants

Prior to participant engagement, the researcher secured ethical approval from Brunel University of London and requisite permissions from Turkish authorities (relevant documents are available in Appendix C).

I. Ethic applications: The ethical review process involved dual applications: one submitted to Brunel University of London and another to the Turkish Ministry of Education (see Appendix C6).

a. Ethical approval from the university: The researcher submitted comprehensive research plans, including research instruments (e.g., interview questions) and research procedures (e.g., recruitment strategy, data management plans), to the University Research Ethics Committee (UREC) at Brunel University of London. Approval was secured from UREC prior to the commencement of any primary research. Throughout the development of the research questions and procedures, careful consideration was given to sensitive and personal issues.

b. Ethical approval from the Turkish Education Ministry: Similarly, detailed research plans, encompassing research instruments (e.g., interview questions) and research procedures (e.g., recruitment strategy, data management plans), were provided to the Turkish Education Ministry. Official permission was obtained from the Ministry before any primary research activities began. The development of questions and procedures meticulously accounted for sensitive and personal issues, alongside considerations for the dissemination of research results.

II. Recruitment of the participants: The researcher applied different procedures for participants in school and for design experts.

a. In-School Participant Recruitment: The School management was initially contacted via publicly available information on the institution's website. Participant recruitment was then facilitated by the researcher. To mitigate any potential pressure on parents, the school's involvement was strictly limited to circulating the researcher's invitation; all direct communications between the researcher and participants remained independent of school influence. The invitation letter, distributed by school management to all eligible primary school teachers and immigrant parents, explicitly stated the study's independent nature and its dissociation from any school evaluation (the documents are available in Appendix). Parents were informed of their ability to contact the researcher directly, bypassing school mediation. The Participant Information Sheet further clarified the voluntary nature of participation and the availability of translation support. Interested teachers and immigrant parents were subsequently invited for an interview. Interviews were primarily conducted online. For participants lacking access to online meeting platforms (e.g., Zoom, MS Teams, Skype), face-to-face interviews were arranged in secure, public-school premises (e.g., meeting rooms), with scheduling accommodating participant availability. Notably, all communication with parents was voluntarily facilitated by the school translator. With the informed consent of the parents, the translator accompanied the researcher during the interviews to support effective communication.

b. Recruiting experts: Design experts were identified and approached through the researcher's professional network and social media platforms (e.g., LinkedIn). Additionally, Brunel University of London design academics were recruited, with contact initiated via publicly shared details on the university website. Eligibility for design experts required prior experience working with disadvantaged groups, non-native speakers, or involvement in social innovation projects. The cohort of design experts represented diverse disciplines, including architectural, interior, graphic, visual communication, product, industrial design, and urban/regional planning. All prospective expert participants received a Participant Information Sheet and provided informed consent prior to the commencement of interviews (the documents are available in Appendix C).

E) Information for Participants

This part presents demographic information for all participants involved in the research, encompassing both key stakeholders and experts.

I. Key stakeholders: This division provides fundamental details for Turkish primary school teachers, immigrant parents, Heads of Year, school managers, and any translators involved.

a. Turkish primary school teachers: A total of nine teachers were interviewed, representing a diverse group across grades 1-4 and various genders. Comprehensive demographic information for this group is provided in Table 3.11 (further details are available in Appendix C4).

Table 3. 11. Information for Turkish Primary School Teachers

Teachers (T)	**Sex** F: Female M: Male	**Primary School Grades** (1-4)	**Number of Syrian students in the classroom**	**Total students**
T1	F	4	4	30
T2	F	2	2	24
T3	M	1	4	31
T4	F	2	2	21
T5	F	4	6	28
T6	F	3	3	24
T7	M	4	- *	24
T8	F	4	2	26
T9	F	2	2	25

**He has taught immigrant students in the past.*

b. Syrian parents: In total, nine Syrian parents interviewed who were mixed group, they had children between 1st and 4th grades – see the overall information in Table 3.12.

Table 3. 12. Fundamental Information for Immigrant Parents

Syrian parents	**Number of primary school students**	**The primary school grades of their children**
P1	2	2
P2	1	4
P3	2	2
P4	1	3
P5	1	4
P6	1	4
P7	2	2 / 4*
P8	2	4 / 4*
P9	1	4

** The parents have two children attending primary school.*

c. Heads of year: In this school, Heads of Year were designated by educational level, with separate roles for primary and secondary students. For this project, only the

Heads of Year responsible for the primary school were included. Both primary school Heads of Year, totalling two individuals, were interviewed.

d. School Management Team: The school's management structure included a principal school manager overseeing both primary and secondary levels. Additionally, there were four deputy school managers: two assigned to the primary school and two to the secondary school. For this research, interviews were conducted exclusively with the school management staff responsible for the primary level.

e. The school's interpreter service team comprised a single Syrian national, specifically designated to support primary school students. This individual holds a history teacher qualification degree from Syria and previously worked as a history teacher in her home country. Currently, she is funded by the Turkish Government and UNICEF to mitigate language barriers experienced by immigrant students and their parents. Having served the school for several years, her working hours were Monday to Friday, 9:00 AM to 1:00 PM. The researcher scheduled a meeting with this staff member upon confirming her availability at the school.

II. Experts: A total of 16 experts were interviewed for this study, drawn from universities in both Türkiye and the United Kingdom. Table 3.13 provides fundamental information regarding their professional and academic backgrounds.

Table 3. 13. Fundamental Information for Experts

Part.	Ethnicity and employment setting	Field of bachelor's degree	Master's degree discipline	PhD field
E1	Turkish/ Türkiye	Interior Design	Interior & Product Design	Design History
E2	Turkish/ Türkiye	Architecture	Environmental control and construction technology	Building sciences
E3	Turkish/ Türkiye	Architecture	Architecture	Urban Planning
E4	British/ United Kingdom	Product Design	Product Design	Product Design
E5	Italian/ United Kingdom	Mechanical Engineering	Product Design	Product Design
E6	Turkish/ Türkiye	Architecture	Architectural Design	Architectural Design
E7	Chinese/ United Kingdom	Industrial Design	Architectural Design	Design
E8	Turkish/ Türkiye	Industrial Design	Graphic Design	Graphic Design

E9	Turkish/ Türkiye	Sociology	Visual communication design	Design, Technology and Society
E10	Chinese/ United Kingdom	Industrial Design	Industrial Design	Industrial Design
E11	Italian/ United Kingdom	Industrial Design	Industrial Design	Physics
E12	Turkish/ Türkiye	Industrial Design	Interior Architecture and Environment Department of Design	Interior Architecture and Environment Department of Design
E13	British/United Kingdom	Industrial Design	-	-
E14	American/United Kingdom	Graphic Design	Graphic Design	-
E15	Turkish/ Türkiye	Architecture	Architecture	Architectural Design
E16	Turkish/ Türkiye	Printing Training	Education Management and Supervision	Media Studies

F) Overall Summary of the Overall Data Collection

Figure 3.7 presents the overall participant demographics, and the entire data collection process was summarized using triangulation (see Figure 3.8), a qualitative research approach that involves applying multiple methods or data sources to develop an extensive understanding of phenomena (Patton, 1999). This research project employed both data triangulation and methodological triangulation. Data triangulation involves applying the same data collection approach to various data sets to verify or challenge generalizable trends identified in one data set (Oppermann, 2000; Carter, 2014). In this research, data triangulation covered the literature review, data from participants, and data from experts. Methodological triangulation uses more than one research method to measure the same issue (ibid). In this study, it included case studies, semi-structured interviews, and card sorting (see Figure 3.8). Ultimately, the entire data collection section is synthesized within Table 3.14, illustrating how both secondary and primary data collectively address the research objectives.

Figure 3. 7. Summary of Primary Data Collection in this Research

Notably, the sequence of data collection was not determined by methodological considerations but was instead guided by practical factors that facilitated the research process. As the school was approaching a scheduled break, interviews with school staff were conducted first, prior to staff commencing their leave. Within the group of school stakeholders, interviews were organised by participant category; for example, teacher interviews were completed before proceeding to interviews with other staff groups. As stated, there was no strategic or analytical rationale for the ordering of these staff groups; rather, this approach served to streamline and manage the data collection process within the school context. Following the completion of interviews with school staff and parents, interviews with expert participants were subsequently conducted, based on their availability.

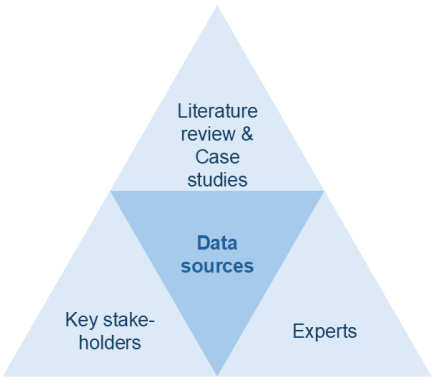
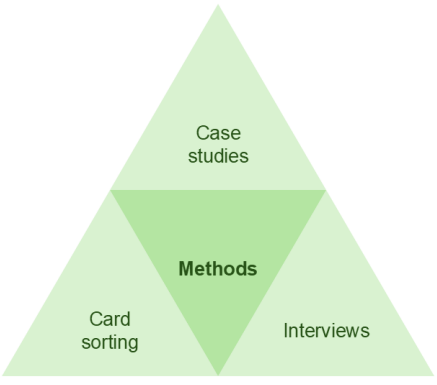
Data triangulation	Method triangulation
	

Figure 3. 8. Employment of Triangulation in this Research Project

Table 3. 14. Addressment of Research Questions and Objectives with Primary and Secondary Data

<table>
<tr><th rowspan="3">Research questions</th><th rowspan="3">Objectives</th><th colspan="8">Collected data</th></tr>
<tr><td rowspan="2">Secondary data (literature review and case studies)</td><td colspan="7">Primary data</td></tr>
<tr><td colspan="6">Stakeholder interviews (In-depth case studies covering interviews within card sorting)</td><td>Expert Interviews</td></tr>
<tr><td>RQ 1</td><td>O1</td><td rowspan="2">Section 2.1.3 / 2.1.4</td><td>T</td><td>P</td><td>H</td><td>M</td><td>I</td><td>-</td></tr>
<tr><td rowspan="2">RQ 2</td><td>O2</td><td></td><td></td><td></td><td></td><td></td><td>-</td></tr>
<tr><td>O3</td><td>Section 2.1.5</td><td>T</td><td>P</td><td>H</td><td>M</td><td>I</td><td></td></tr>
<tr><td rowspan="2">O4</td><td rowspan="2">Section 2.3.3</td><td colspan="6" rowspan="2">-</td></tr>
<tr><td>RQ 3</td></tr>
<tr><td></td><td>O5</td><td>Section 2.4</td><td colspan="6">-</td><td>E</td></tr>
<tr><td></td><td>O6</td><td>Section 2.4.2</td><td colspan="6">-</td><td>E</td></tr>
<tr><td></td><td>O7</td><td colspan="8">Overall secondary data + primary data</td></tr>
</table>

(Turkish primary teachers: T, Immigrant parents: P, School management staff: M, Heads of year: H, Interpreter staff: I, Experts: E)

3.7 DATA ANALYSIS

This section outlines the data analysis methods employed in this research (A) and provides illustrative examples of their application within the project (B).

A) Review of Thematic Analysis and Conceptual Mapping

I. Thematic analysis: This is a widely utilized method in qualitative research, focusing on the identification, analysis, and interpretation of meaningful patterns within qualitative data (Clarke and Braun, 2013; Terry and Hayfield, 2020). Researchers employing thematic analysis typically follow a systematic six-phase process: 1) Familiarisation, 2) Coding, 3) Generating themes, 4) Reviewing themes, 5) Defining and naming themes and 6) Writing up (Javadi and Zarea, 2016), as further detailed in Table 3.15

Table 3. 15. The Six Phases of the Thematic Analysis (Javadi & Zarea, 2016; Clarke & Braun, 2013; Terry & Hayfield, 2020)

Phases	Explanations
Familiarisation	This initial phase requires the researcher to thoroughly immerse themselves in the data. This involves repeated engagement with the collected material, such as reading transcripts or listening to audio recordings, while concurrently documenting initial observations and emergent patterns.
Coding	This phase involves the systematic generation of concise labels or tags, known as codes, to identify significant features within the data. These codes are specifically derived from and directly responsive to the research questions guiding the analysis.
Generating themes	In this phase, a theme is identified as a significant and recurring pattern within the data that directly pertains to the research question. The culmination of this phase involves the systematic organization of all coded data according to its relevance to each emergent theme.
Reviewing themes	This phase requires researchers to verify the coherence of each theme by systematically checking whether individual data extracts align meaningfully with its

	designated theme. During this iterative process, themes can be reconsidered and regrouped as necessary to ensure all categorized data contributes to a cohesive and representative pattern.
Defining and naming themes	This phase demands a detailed written analysis for each identified theme. Researchers must articulate 'The narrative that the theme conveys' and 'How the theme integrates into the overall data story'. The responses to these questions are crucial for determining the essence of each theme and subsequently assigning it a precise, descriptive name.
Writing up	This final phase involves the production of a report that presents a coherent and persuasive narrative of the data analysis, enabling readers to clearly comprehend the entire research process.

II. Conceptual mapping: A concept map is a diagrammatic or graphical tool used to visually represent relationships between ideas and concepts (Kane and Trochim, 2009). For this study, conceptual mapping was crucial for examining problems and their contextual relationships. Specifically, communication challenges between immigrant parents and Turkish primary school teachers were identified based on existing information from the Turkish context and interview data. Subsequently, conceptual mapping was employed to delineate the relationships among these defined problems.

B) Employment of Thematic Analysis and Conceptual Mapping in this Research

This research integrated thematic analysis with conceptual mapping. Thematic analysis primarily served to extract key themes from the data, while conceptual mapping delineated the relationships among these themes. Conceptual mapping was embedded within the thematic analysis framework, with its application commencing in the fourth phase and specifically employed during the 'defining and naming themes' and 'writing up' stages. Notably, during the generation of codes and themes, the two reviewers examined the themes identified by the researcher as a means of achieving analytical triangulation. Table 3.16 briefly summarizes the data analysis process for this research project, with a supporting example following the table.

Table 3. 16. Employment of the Thematic Analysis and Conceptual Mapping

	Phases of thematic analysis	Process
	Familiarisation	The researcher listened to the recordings several times to become familiar with the conversations.
	Coding	The researcher manually transcribed the recordings. This process was then divided into two steps: - Preliminary data analysis: The researcher reviewed the transcriptions question by question to extract initial codes - Secondarily data analysis: This involved a second round of analysis where the researcher grouped relevant codes
The employment stage of conceptual mapping	Reviewing themes	The researcher reviewed initial codes to identify patterns and common issues. The researcher also used a conceptual mapping to help her link different codes to visualise their relationships.
	Defining and naming themes	The researcher grouped codes with common meanings, assigning a suitable theme or name to each cluster. Subsequently, in alignment with conceptual mapping, causal relationships were established among these themes. This process was instrumental in visualizing the overall conceptual framework.
	Writing up	The researcher produced a report summarizing key findings and their interrelationships. Moreover, illustrations were developed to visually represent the overarching narrative to enhance clarity alongside the written text.

An example for the employment of these analyse methods: Question 10 from the teacher interview questionnaire (Q10: "How do you describe cultural differences between immigrant people and based on your experiences and observations?") served as an illustrative example for this research's analytical approach (refer to Appendix C for the complete interview questions). The objective was to ascertain how cultural elements, particularly within the context of language barriers, influenced parent-teacher interactions. The researcher proceeded through the following five steps:

- Step 1. Familiarisation: The researcher began by repeatedly listening to the audio recordings, then manually transcribed them. She subsequently read through all the transcripts multiple times, thoroughly familiarising herself with the responses prior to coding.

- Step 2. Coding**:** The researcher conducted both preliminary (a) and secondary (b) data analysis phases, employing a color-coding method throughout.

- Step 2.1. Preliminary data analysis: The researcher initiated the process by reviewing each teacher's responses individually. For each participant's answer to Q10, she highlighted statements indicating cultural differences or similarities. For instance, in the example of Q10 provided below, phrases such as "…they hesitate," "…because I am a man," "…little contact with men," and "…female parents do not leave the house much" were highlighted as references to cultural barriers. These statements were then coded and extracted to construct themes, specifically addressing cultural barriers as components of language barriers in Turkish primary schools. This process was crucial for understanding the underlying factors, as aligned with the principles of Human-Centred Design, thereby facilitating the development of more trustworthy and contextually appropriate solutions. Notably, Teacher 3's response focused primarily on cultural differences; however, several other interviews also highlighted instances of cultural similarities.

In addition to these direct statements, extra information that offered potential insights for future solutions was also noted. For example, the statement "...this situation has been changing over time. We could never see them before" was highlighted in orange. This extra information was recorded separately due to its potential utility in developing solutions for identified problems once all primary research data was analysed (e.g., this specific insight was later connected to the idea of increasing immigrant parents' exposure to Turkish society to facilitate adaptation).

Q10. T3: "They are hesitant to communicate with me due to my gender. Unless there's an urgent situation, they avoid interaction. I believe this stems from their culture, where female parents have limited contact with men and often stay home, resulting in less Turkish proficiency. However, this dynamic has been evolving; previously, we had no engagement with them."

- Step 2.2. Secondarily data analysis: During the secondary data analysis phase of coding, the researcher organized the responses (see example quotes in Table 3.17). She grouped statements related to cultural differences and similarities based on the participants' viewpoints.

Table 3. 17. Illustrative Codes for Cultural Aspects

Part.	Perceived Cultural Similarities Between Immigrants and Turks	Perceived Cultural Differences Between Immigrants and Turks
T6	• We share the same religion. • They also love to serve treats, just like us. There are tea and coffee cultures, and they enjoy hosting guests. They respect and care about teachers. • They respect relatives, family and elders. Similar to east of Türkiye, relatives are highly connected to each other-just like traditional Turkish families. Some of them live with their relatives in same house.	• Food is different. We usually drink tea in the morning, whereas they drink coffee. • The decoration of houses is a bit different.
T7	• There are common characteristics that come with being from the same religion. Our holy days are the same, our lifestyles are similar.	• Women from the traditional regions of Syria are socially in the background, and fathers are in the foreground.

The codes derived from Question 10 of the teacher interviews are presented below:

- Similarities: similar mode of hosting guests, shared religion, similar holy days, similar values, comparable attitudes in daily lives.
- Differences: Variations in food, house decoration, clothes, limited contact with men, limited time spent outside the home, hesitation to talk to male teachers, early marriages, relatively lower educational levels among parents, conservative lifestyles (mostly for women), larger families (more akin to the traditional side of Türkiye), and relatively aggressive behaviours observed in some male students.

Furthermore, positive and negative elements with potential impact on the situation were separately noted from additional stakeholder information, mirroring the approach taken in the preliminary coding phase.

- Step 3. Reviewing themes: In this step, the researcher gathered data from various groups. In the example given above, cultural differences and similarities were demonstrated only from teachers' perspectives; however, there was a need to see the situation from all perspectives. Ultimately, the emergent codes were gathered, and similar codes were grouped and placed under the relevant themes. Furthermore, the researcher also gathered positive and negative elements that could potentially influence the overall situation.

- Step 4. Defining and naming themes: At this stage, the researcher defined and refined both the overarching main themes and their constituent sub-

themes. Building upon the previous example, the core theme pertaining to cultural barriers was re-designated as 'cultural gap - differences in lifestyles and mindsets,' further recognized as a phenomenon. Regarding the sub-themes, they were re-articulated based on recurring patterns in the data. For instance, 'living together with elderly family members' was re-categorized as 'large families.' All these sub-themes were then systematically organized under the main theme, encompassing elements such as 'low education level' and 'marriage at early ages.'

Following the thematic definition, conceptual mapping was strategically employed to gain a holistic perspective of the situation. This technique facilitated an understanding of causal relationships and their effects among identified issues, potential opportunities, and possible negative influences. The researcher utilised Miroboards to visually arrange the sub-themes around the central main theme. Initially, all themes were positioned on the Miroboards surface. Subsequently, the researcher established interconnections between these themes, illustrating cause-and-effect relationships. For example, the presence of large families and a high number of children was linked to potentially increased expectations from teachers.

Notably, some additional elements, such as 'having the same religion,' were recorded on separate notes and were not directly integrated into the cause-effect relationships. The remaining elements were categorized as either potential opportunities or potential negative influences, earmarked for consideration during the subsequent solution development stage. This approach provided a comprehensive visual representation of the intricate interplay of factors at play.

- Step 5. Writing up: Prior to commencing this stage, the codes and themes were reviewed by the two supervisors to ensure validity. Following this process, the researcher consolidated all analysed data collected throughout the study and synthesised it into a coherent and meaningful narrative.

To summarise the overall data analysis process, the combined application of thematic analysis and conceptual mapping proved instrumental in extracting valuable insights, directly contributing to the overarching aim of this research project.

3.8 SUMMARY OF THE METHODOLOGY CHAPTER

The methodology of this research was framed according to the Human-Centred Design principles which were introduced by IDEO (2015). With regard to this, the methodology covered the three main stages: inspiration, ideation and implementation (see Table 3.18):

1. **Inspiration:** The research's foundational inspiration stemmed from secondary research, specifically a review of existing literature on education and language barriers, as detailed in Chapter 2. This involved exploring language barriers between teachers and immigrant parents across various international contexts, with a focused examination of Türkiye . Concurrently, potential solutions to mitigate these barriers were investigated through case studies from diverse settings. This secondary analysis then informed the development of primary research instruments, particularly interview questions. These questions were strategically designed to gather direct insights from stakeholders, covering prevalent issues, the effectiveness of current communication tools, and desired features for future tools, thereby ensuring a well-rounded and evidence-based approach.
2. **Ideation:** The ideation process involved synthesizing secondary research on language barriers and design principles to generate potential solutions, which were then elaborated upon through primary research. The language barrier context informed the identification of beneficial tools, along with their respective advantages and disadvantages, a subject further explored via semi-structured interviews incorporating open-ended card sorting. Examples included discussions with stakeholders on the efficacy of interpreter services, VRI, applications, and pictorial booklets. Expert interviews provided crucial input for developing alternative solutions to reduce language barriers in Turkish schools. Furthermore, the design context highlighted the applicability of Human-Centred Design (HCD) and Information Design (ID) in addressing the research problems. Post-analysis, all findings were integrated within Giacomin's (2014) HCD pyramid, which ultimately facilitated the development of guidelines for school managers.
3. **Implementation:** The outputs derived from the Human-Centred Design (HCD) pyramid formed the basis for establishing the Information Architecture

of this research project. Subsequently, the researcher applied specific information system design strategies and Information Design (ID) principles. This was complemented by insights drawn from existing guidelines in diverse contexts. The draft material underwent an iterative evaluation process with both experts and key stakeholders. Through this rigorous refinement, the material reached its definitive version, thereby concluding the implementation phase of the HCD framework.

Table 3. 18. Illustration of the Project's Overall Methodology Based on IDEO's (2015) Human-Centred Design Principles

HCD phases	Objectives	Employed methods
1. Inspiration	O1. To develop an in-depth understanding of the context that Syrian parents are experiencing in Turkish schools. O2. To gain in-depth understanding of language barriers preventing effective communication between Syrian immigrant parents and Turkish primary school teachers.	- Secondary research (literature findings from the education and language barriers context) - In-depth case studies (semi-structured interviews) - Thematic analysis and conceptual mapping (see Chapter 2 and Chapter 4)
2. Ideation	O3. To explore elements which could help reduce experienced problems by Syrian parents, such as the policies suggested by the Turkish Government for immigrants.	- Secondary research (literature from diverse fields within the Turkish context, with a particular focus on the Turkish education) -see Chapter 2. - In depth case studies (Semi-structured interviews with integrated card-sorting) - see Chapter 3. - Analysis - see Chapter 2 and Chapter 4.
	O4. To evaluate existing solutions and case studies regarding language barriers in other contexts which could help provide potential solutions/good practices.	- Secondary research (review of the literature and case studies) - see Chapter 2.
	O5. To critically review relevant Human-Centred Design principles and explore how they could be used to gain better understanding of language barriers and come up with solutions.	- Secondary research (literature review) - see Chapter 2.
	O6. To explore how Information Design could be applied to reduce language barriers between Turkish teachers and Syrian parents.	- Data analysis (conceptual mapping and thematic analysis) - see Chapter 4.
3. Implementation	O7. To propose Information Design guidelines that could assist Turkish school managers to foster better communication between primary teachers and Syrian immigrant parents.	- Prototyping (guideline development and guideline evaluation processes) - see Chapter 5 and 6. - Discussion and future research (highlighting avenues for subsequent enhancements) - see Chapter 7.

Chapter 4. RESEARCH FINDINGS

This chapter presents the research findings and is organized into three main sections: Section 4.1 summarizes the principal findings from key stakeholder interviews, Section 4.2 details the principal findings from expert interviews, and Section 4.3 provides a comprehensive summary of all data analyses. Each section is further divided into sub-sections, as outlined in Table 4.1, to ensure a clear and structured presentation of the results.

Table 4. 1. Content of the Chapter 4

Sections	Sub-sections	Explanation
4.1 Principal Findings from the Key Stakeholders	4.1.1 Current Modes of Immigrant Parent-Teacher Communication at the School	Prevalent communication practices for immigrant parents and teachers at the school was elaborated within this part.
	4.1.2 Contemporary Dynamics of Immigrant Parent-Teacher Communication	The Current Landscape of Immigrant Parent-Teacher Communication is expanded within this section.
	4.1.3 Current Communication Channels Employed to Support Parent-teacher Interactions	Current Modalities of Parent-Teacher Communication Support was elaborated within this part.
	4.1.4. Factors Influencing Parent-Teacher Interactions Amidst Language Barriers A) Emotional Barriers B) Cultural barriers C) Unfamiliarity barriers	The researcher expanded on the language barrier phenomenon, providing insights from the viewpoints of diverse stakeholder groups.
	4.1.5 Suggestions from the Key Stakeholders A) Suggestions the primary teachers B) Suggestions from parents C) Suggestions from heads of year D) Suggestions from the school manager E) Synthesis of the Key Stakeholder suggestions	This section details the solutions proposed by key stakeholders to mitigate the identified problems.
	4.1.6 Synthesis of Key Stakeholder Interview Findings A) Key issues identified B) Further Contributing Factors to Limited Parental Engagement C) Positive Determinants in reducing language barriers	This section culminates in the researcher's synthesis of the collective insights provided by key stakeholders.

	D) Overall Synthesis of Key Stakeholder Interviews	
4.2 Principal Findings from Expert Interviews	4.2.1 Analysis of the Expert Interviews	This section is devoted to the analysis of 16 expert interviews.
	4.2.2 Synthesis of the Expert Interview Findings	This section presents a synthesis of the expert interview findings.
4.3 Summary of the Chapter	4.3.1 Key Stakeholder Requirements	The existing needs of the key stakeholders were illustrated using Giacomin's (2014) Human-Centred Design (HCD) pyramid within this section.
	4.3.2 Expert suggestions A) Advice for the requirements of the school managers B) Suggestions in regard to teachers/heads of year's requirements C) Suggestions in regard to parents' requirements D) Suggestions in regard to the translator's requirements	Drawing from the key stakeholder requirements outlined in Section 4.3.1, the expert interview results present distinct suggestions pertinent to each group.
	4.3.3 Consolidated Synthesis of the Section	The section concludes with a summary of expert-proposed solutions aimed at addressing the identified needs of schools and parents, presented in tables and visually represented using the HCD pyramid.

4.1 PRINCIPAL FINDINGS FROM THE KEY STAKEHOLDERS

This section synthesizes the principal findings from interviews with five key stakeholder groups, which included teachers (n=9), immigrant parents (n=9), Heads of Year (n=2), the school management team, and an interpreter/translator service representative (n=1). The school's primary level consisted of nine branches, where teachers maintained close interaction with students and were expected to be in regular contact with their parents. The nine Syrian parents, all of whom migrated to Türkiye as a result of the Syrian conflict, arrived in 2013. The primary Heads of Year described their role as mediators, stating, "communicating with parents is when teachers turn to us in the classroom when problems with students or parents remain unresolved; we have a mediating role. We carry out our studies in a child-oriented, child-centred way." Primary school managers primarily focused on administrative and procedural matters, while the interpreter/translator served both primary and secondary school levels.

The detailed interview results are organized into the following sub-sections: the mode of parent–teacher meetings at the school (Section 4.1.1); the current state of

immigrant parent–teacher communication (Section 4.1.2); existing communication tools employed to support parent–teacher communication (Section 4.1.3); language barriers between immigrant parents and Turkish teachers (Section 4.1.4); and suggestions from the key stakeholders (Section 4.1.5). Notably, in addition to the quotations presented within this chapter, further representative excerpts from participants' responses are provided in Appendix D.

4.1.1 Current Modes of Immigrant Parent-Teacher Communication at the School

Based on the findings, the school conducted two primary types of meetings: **group meetings** and **one-to-one meetings**. Additionally, meetings with **Heads of Year** were occasionally held, as described in detail below.

- **Group meetings:** A clear **mandatory protocol governed** group meetings, which was closely aligned with the guidelines issued by the Turkish Ministry of National Education. Teachers are required to set up a group meeting at the beginning of the spring and winter terms. This should be done within the first two weeks of each term. T2 confirmed that: "We definitely hold group parents meeting twice a year". T7 reported that: "As a standard, parent-teacher meetings are held once per term". The meetings are usually held in person at school and the reports documenting the conversations are submitted to the school management teams. The primary purpose of formal group meetings between parents and teachers is to disseminate general information., such as school entry-exit hours and required textbooks. These meeting could also be used to provide additional information. For example, T8 mentioned that: "Currently, we are discussing providing an extra course for students after school hours. To launch the course, a certain number of students should be willing to join". To summarise, parents can receive general information from the school through group meetings.
- **One-to-one meetings:** Discussions addressing individual student needs were conducted through informal meetings, carried out on an **ad hoc basis**. There were **no established rules, regulations, or formal guidance** governing the conduct of one-to-one meetings. Consequently, the scheduling and structure of such meetings were determined **at the discretion of the teachers**. This might be because the Turkish Educational Ministry does not provide an official

regulation regarding one-to-one meetings. T1 explained that: “Parents are invited when needed”. T2 added that: “When parents come to pick up their children after school time or visit the school for some reason, they come and talk to me whenever we encounter each other”. T3 reported that: “I do not set any restrictions such as an appointment and suggest parents find me in the school garden when they come to pick up the students”. These informal one-to-one meetings - conducted via phone, WhatsApp, or during chance encounters when parents dropped off or picked up their children - were considered highly valuable, as they addressed individual concerns, including behavioural, educational, and health-related issues.

- **Meetings with heads of year:** Findings suggested that there was no regulation regarding meetings with heads of year. For example, H1 reported that: “We do not have a regular meeting routine. Whenever the need arises, we may invite them to school”. They usually help find solutions for academic and students’ behavioural problems. They mostly met teachers rather than parents. However, when needed they might invite parents to the school and have a conversation with them with support from a translator at school or students (H2 stated that: “We meet with parents through the interpreter or through the children who speak both Turkish and Arabic”).

To summarise the types of meetings, the absence of official procedures and formal guidance for one-to-one communication with parents means that **each teacher develops their own strategies** for addressing individual needs. Consequently, parents are likely to receive **varying levels and types of support**. The key issues (codes) identified through thematic analysis, along with the corresponding main theme, are presented in Table 4.2.

Table 4. 2.Overview of One-to-One Parental Meeting Practices

Theme	Codes	Sources
Lack of official school procedures	• Teachers’ personal strategies • Different practices • Reliance of personal relationships	T1, T2, T3, T4, T5, T6, T7, T8, T9, P1, P5, P6, P8, P9

4.1.2 Contemporary Dynamics of Immigrant Parent-Teacher Communication

The interviews with key stakeholders revealed that communication between teachers and Syrian immigrant parents was **very limited**. Most of the participants (school staff and parents) stated that the majority of immigrant parents do not attend parental meetings or educational activities of their children. For example, T6 stated that: “None of the Syrian parents in my current class contacted me, I don't know any of them”. T1 added: “They only come when we call for help such as financial help and food help”. In return, P1 reported that: “I met with the teacher once this year”. P3 also mentioned that: “I don't go to school at all. I have never met the new teacher”. Since teachers were required to arrange meetings (at least twice a year), while parents are not obliged to attend them, their **effort in terms of communication appear imbalance**. The results of this situation were briefly summarised as, H2, stated:

> “Since the students do not know the language, they face academic problems and fall behind in reading and writing. Behavioural differences have also been noted, with some students facing challenges in managing conflict and a tendency toward aggressive interactions. Furthermore, these students tend to form friendships among themselves, they experience difficulty integrating socially with their Turkish peers”.

Ultimately, the key issues and overarching themes are summarised in Table 4.3 below.

Table 4. 3. Overview of Current Immigrant Parent-Teacher Communication Landscape

Themes	Codes	Sources
Imbalanced effort	• Extra responsibilities for teachers • Limited parental interactions with teachers	T1, T3, T4, T5, T6, T7, T8, T9, P1, P2, P3, P4, P6, P7, T, H1, H2

4.1.3 Current Communication Channels Employed to Support Parent-Teacher Interactions

Interviews with key stakeholders revealed that WhatsApp, phone calls, and face-to-face meetings constitute the primary modes of communication between immigrant parents and teachers, as further elaborated below.

- **WhatsApp** was identified as one of the primary channels for communication between parents and teachers. Teachers often used WhatsApp groups to **disseminate general information to all parents at once**. Immigrant parents typically relied on translation applications, such as Google Translate, to comprehend messages and respond when necessary. However, in many cases, children responded to WhatsApp messages on behalf of their mothers, raising concerns about privacy. As P8 noted: "The child follows the WhatsApp correspondence, not the parent." Another challenge arose from the parents' use of local dialects. Immigrant parents generally did not speak formal Arabic; rather, they communicated in their local dialects, which translation software frequently failed to interpret accurately. Nevertheless, most teachers viewed WhatsApp as a useful tool for conveying general information—such as homework assignments or school trip notices—and for receiving responses or confirmations.
- **Phone calls** were also noted as a channel that supports parent-teacher communication, with the main advantage being the ability to receive quick responses. However, in many instances, direct communication was hindered by language barriers. As a result, a third party, such as a neighbour, friend, or older child, was often required to facilitate translation. This arrangement was generally considered problematic, as these individuals were not professional interpreters and frequently introduced misunderstandings. T6 remarked: "It's like a word-of-mouth game. Information is added or lost. I end up hearing completely unrelated statements." Additionally, the presence of third parties made it difficult to discuss personal matters. Nonetheless, teachers still found phone calls advantageous for sharing urgent or time-sensitive information (e.g., when a student was unwell).
- **In-person (face-to-face) meetings** were identified as another key communication channel that fosters parent-teacher engagement. Most teachers and parents agreed that face-to-face communication had numerous benefits, including the use of body language, which **enhanced both verbal and non-verbal expression**. However, direct communication was often not possible without a third-party translator, as most immigrant parents did not speak Turkish. T6 shared: "Last time, a father came with his friend who

speaks Turkish." Similarly, P1 said: "We went to school with a neighbour who speaks Turkish," and P3 noted: "My older child translates for me." This reliance on third parties posed privacy concerns and limited the depth of discussion between parents and teachers. T4 stated: "Sometimes I want to say something privately to a parent, but I cannot." Additionally, not all translations were accurate. T6 commented: "His friend relayed the information but only communicated half of it. He interpreted it from his own perspective," while T9 added: "The older sister struggles to communicate and can only say very short sentences, so we cannot have effective communication." Although an interpreter was available at the school, most teachers were unable to utilize this support effectively due to a lack of information about her working hours or availability. The school manager also acknowledged that the interpreter service at the school was ineffective. Despite these challenges, teachers continued to regard face-to-face meetings as beneficial. As T3 conveyed: "We can communicate more easily in face-to-face communication."

To summarise, the findings indicate that parents and teachers frequently encounter communication challenges due to: 1) limited access to effective interpreter services, 2) a lack of privacy resulting from the involvement of third parties, and 3) mistranslation issues associated with translation applications, particularly when handling regional dialects via WhatsApp, as shown in Table 4.4.

Table 4. 4. Challenges Due to the Limited Translation Capabilities

Themes	Codes	Sources
Challenges Stemming from Inadequate Translation Support	• Limited support of the interpreter service • Lack of privacy due to the presence of other people • Mistranslation when using WhatsApp	SM, T1, T3, T4, T5, T6, T7, T8, T9, P1, P2, P3, P4, P5, P6, P7, P8

4.1.4. Factors Influencing Parent-Teacher Interactions Amidst Language Barriers

This section discusses factors contributing to language barriers and affecting communication between Turkish teachers and immigrant parents, namely a) emotional barriers; b) cultural barriers and c) unfamiliarity barriers.

A) Emotional Barriers

This section investigates emotional barriers between immigrant parents and Turkish primary school teachers from the perspectives of different stakeholder groups.

A1) Emotional Barriers from the Turkish Primary Teachers' Point of View

Teachers identified three primary factors contributing to emotional barriers between themselves and immigrant parents: 1) language barriers, 2) unfamiliarity with the local culture, and 3) limited parental involvement in their children's education. Additionally, teachers emphasized that discrimination was not present within the school and therefore did not constitute a contributing factor to these emotional barriers.

- **Language barriers** were indicated as major factors behind emotional barriers. Most teachers believed that there was nothing they could do to enhance parent-teacher communication without overcoming this problem. They felt they could not engage with each other or establish an emotional connection because of this issue (T2 and T4 said that they could not establish an emotional connection because of the language problem, and T9 maintained that: "They do not show any emotional reaction because they do not understand us"). This suggests that tackling language barriers could reduce emotional barriers and contribute to developing more emotional connections between parents and teachers.
- Teachers also believed that **unfamiliarity with the local culture and the Turkish education system** contributed to emotional barriers. They frequently observed that many immigrant parents were hesitant to approach or engage in conversation with them. T3 suggested that this hesitation may stem from parents' uncertainty regarding appropriate behaviour and how their actions would be perceived by teachers. As T3 expressed: "I feel like they are unsure whether they will be listened to by teachers like other parents." Therefore, limited knowledge of the local culture and education system, including informal norms and unwritten societal rules, can be considered a contributing factor to emotional barriers.

- The majority of teachers reported that immigrant parents generally assumed **limited responsibility for their children's education, which in turn diminished their perceived need to engage with teachers**. As T5 remarked: "They often ignore education." This attitude was attributed to several interrelated factors, including uncertainty about their long-term future, the belief that they would eventually return to their country of origin, and generally low levels of formal education. Teachers noted that many parents expected to return to Syria following the end of the conflict. As T1 explained:

  "They may think in this way: 'One day this war end, and we will return to our country'. It seems that they are not adopting this place. I mean, I do not think they believe, 'If I came here. I have to adapt to this place'. They do not try to learn Turkish; they do not try to adapt here."

  Furthermore, teachers observed that parents with higher levels of education were more likely to take an active role in their children's learning. These parents were generally more aware of the long-term value of education and viewed it as essential to their children's future prospects.

Beyond that, **teachers generally did not perceive discrimination as a contributing factor to emotional barriers**. Most Turkish teachers believed that they approached immigrant parents with empathy and a positive attitude. For example, T2 affirmed: "I've always been kind and smiling." This supportive stance was attributed to their awareness of the difficult circumstances that immigrant families had experienced (e.g., T1 stated that: "They came from another place, under difficult conditions." Teachers consistently emphasised that no distinction was made between immigrant and local students within the school context. T4 stated: "I never accept any discrimination; all the students are equal."); in fact, they went beyond what was typically offered to students and their parents (T2 expressed that: "I especially try to involve immigrant students in all of the events"; T6 indicated that: "We give them more tolerance because they are immigrants"). It was also noted that local parents often helped immigrant parents when needed (T1 stated that: "I was collecting monthly donations from Turkish parents for an immigrant child who had no food. We even paid the natural gas bills with the support of other parents"). Based on

teachers' statements, emotional barriers were not caused by negative attitudes; rather, the barriers could potentially be reduced by addressing all the factors listed above.

A2) Emotional Barriers from the Heads of Year's Points of View

The Heads of Year identified two primary factors contributing to emotional barriers between teachers and immigrant parents: 1) the high expectations held by Turkish primary school teachers, and 2) limited empathy towards the challenges faced by immigrant families. They further noted that discrimination did not contribute to these emotional barriers.

- Heads of year indicated **high expectations of teachers** as a factor creating emotional barriers between parents and teachers.
- They also observed that teachers sometimes exhibited **limited empathy** towards immigrant parents. Teachers often held similar expectations for both local and immigrant students/parents, which consultant teachers deemed unrealistic given that immigrant families were often affected by war and faced additional challenges (H2). This disparity in expectations could lead immigrant parents to feel misunderstood, thereby making them uncomfortable engaging with teachers.

On the other hand, the heads of year emphasised that **discrimination was not evident** within the school environment. They maintained that teachers treated all students and parents fairly and with kindness. Moreover, positive relationships between local and immigrant parents were also observed; as H1 noted: "I did not witness any separation or grouping between teachers and parents or between parents."

A3) Emotional Barriers from the Immigrant parents' Point of View

The primary sources of emotional barriers reported by immigrant parents were language difficulties and a lack of established trust with teachers. Only one parent mentioned the limited empathy of teachers. Importantly, parents did not perceive hesitation as a factor contributing to emotional barriers.

- Several parents identified **language barriers** as the fundamental reason for emotional barriers. They frequently stated that their inability to communicate

effectively was the main cause of limited interactions and lack of emotional connections (P5, P3). This firmly establishes language barriers as a significant factor.

- Parents also explained that their **experiences varied with different teachers**, which made building trust challenging. For example, P5 expressed comfort with the current teacher but discomfort with a previous one, while P8 stated that: "The teacher of one of my children has changed, I have never met the new teacher." The absence of a standardized school protocol meant parents were unsure what to expect from each teacher.
- Only one parent (P1) indicated **limited empathy from a teacher** as a contributing factor, citing an instance where the teacher's inability to understand her non-Turkish speaking child's situation led to the child being kept from outdoor activities. However, this was an isolated concern among the parent group.

Beyond that, most parents affirmed that **they did not hesitate** to talk to teachers; however, they could not easily approach them mainly because they did not know Turkish (P3 asserted that: "There is no prejudice against us. My only problem is the language barrier"; P2 expressed that: "She is a very good, very caring teacher. The child is successful because of the teacher. I don't hesitate when approaching her" and P8 revealed that: "Teachers in Türkiye are very good, they treat children very well"). Their perspectives further confirmed the **absence of discrimination**.

A4) Emotional Barriers from the School Management Team's Point of View

The school manager provided limited input on this topic due to their indirect role in parent-teacher communication. Nonetheless, the manager expressed the expectation that immigrant parents should adapt to the host country, noting: "It's been more than five years since they arrived. Based on my observations, it seems they have set aside their traumas, time has passed, and they are now somewhat settled in their everyday lives" (M).

A5) Synthesis of the Emotional Barriers

Several factors contribute to emotional barriers between parents and teachers, alongside positive elements that could help mitigate their effects, as shown in Table 4.5 and 4.6.

Both Turkish primary school teachers and immigrant parents identified **language barriers** as a central factor. While teachers expected more effort from immigrant parents regarding their children's education, parents often felt unsure of what was expected of them due to varied experiences with different teachers. This suggests the utility of a **clear school protocol outlining roles and responsibilities** for both parties, which could also manage unrealistic teacher expectations, as noted by consultant teachers. There is a clear need to foster **empathy and trust** between Turkish primary school teachers and immigrant parents. Given the confirmed absence of discrimination and parents' willingness to engage when needed, the school has a strong foundation to build upon. By leveraging existing positive teacher behaviours and addressing **unfamiliarity with the local culture and the Turkish education system**, the school can further support immigrant parents' effective adaptation, thereby reducing emotional barriers (Figure 4.1 below provides a visual representation of the elements identified in these tables).

Table 4. 5. Key Factors Potentially Causing Emotional Barriers Between Teachers and Parents

Themes	Codes	Sources
Emotional barriers from school's perspective	• Language barriers • Limited responsibility for children's education • High expectations from teachers • Limited empathy towards immigrant parents • Unfamiliarity with the local culture and the Turkish education system	T1, T3, T4, T5, T6, T7, T8, T9, T, H1, H2
Emotional barriers from parents' perspective	• Language barriers • Different experiences with each teacher	P1, P2, P3, P4, P5, P6, P7, P8, P9

Table 4. 6. Positive Elements That Could Help Reduce the 'Unfamiliarity' Barriers

Themes	Codes	Sources
Positive views of Syrian parents toward Turkish education system	• High quality education in Turkish schools • More freedom and less pressure on students • Approachable teachers and members of staff	P2, P3, P4, P5, P6, P7, P8, T5,
Opportunities to become familiar with Turkish education system	• Through exposure – being in a school for a certain period of time • Through experience – having an older child who went to the school before	P4, P5, P9, T2

Building on the information presented above, the key findings related to emotional barriers are illustrated in Figure 4.1. The central phenomenon is positioned at the core of the figure and is identified as the presence of high expectations on the part of both parties, combined with limited mutual empathy. Surrounding this central phenomenon are the associated causes and effects that contribute to the formation of emotional barriers, with their interrelationships indicated through directional arrows. For instance, limited engagement between Syrian parents and members of the local community contributes to reduced adaptation to the host country, which is in turn linked to diminished parental involvement in their children's education. In addition, both positive and negative influencing factors are represented around the central framework. For example, the absence of discrimination is identified as a positive factor that may help mitigate emotional barriers, whereas the relatively low educational level of parents is shown as a negative factor that may exacerbate the overall phenomenon. In summary, the figure provides a visual synthesis of the emotional barriers discussed in this section, and the other type of barriers are subsequently shown in the following sections.

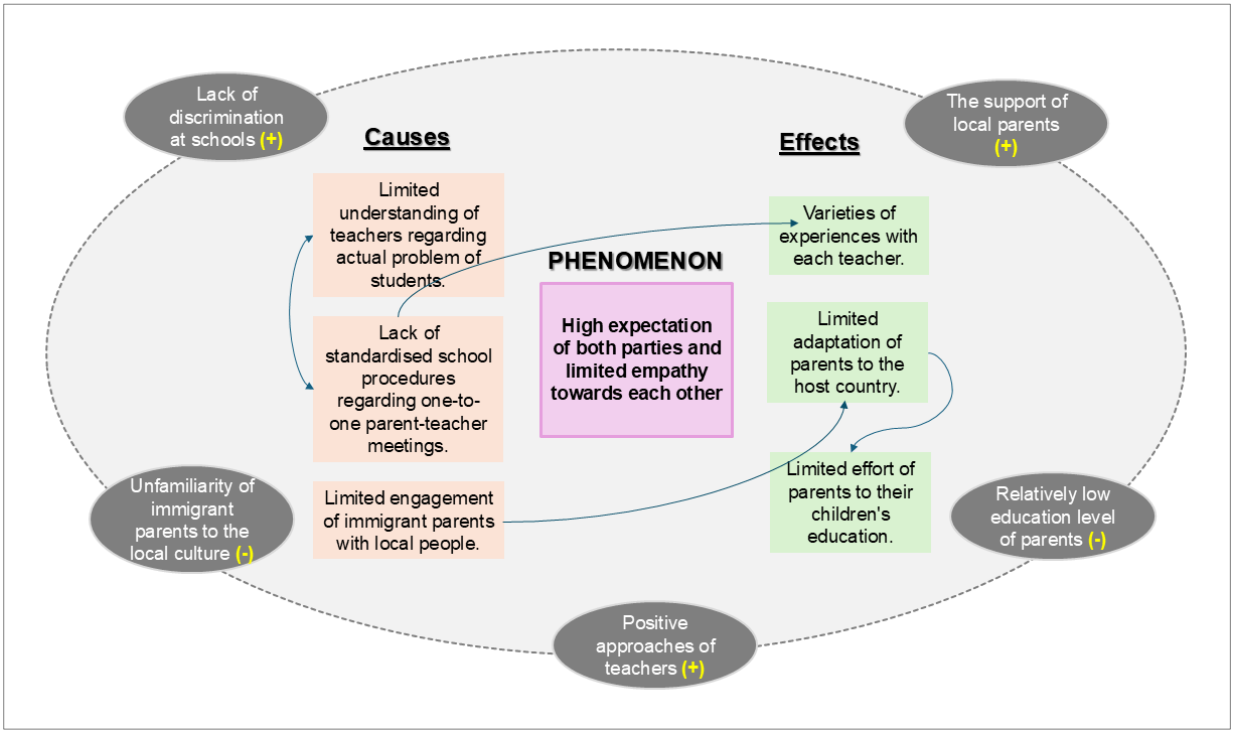


Figure 4. 1. Language Barriers and Their Contribution to Emotional Barriers Between Immigrant Parents and Primary Teachers in Turkish Schools

B) Cultural Barriers

This section investigates emotional barriers between immigrant parents and Turkish teachers, drawing on insights from multiple stakeholder groups.

B1) Cultural Barriers from the Turkish Primary Teachers' Point of View

Turkish primary school teachers generally expressed the belief that no significant cultural disparities existed between Turkish and Syrian populations. Shared religious beliefs were frequently cited as a foundation for commonalities in lifestyle, including holidays such as Eid and similar daily practices (T7 stated that: "There are common characteristics that come with being from the same religion. Our holidays, such as eids, are the same, our lifestyles are similar"; T9 noted that: "They fast during Ramadan"). Furthermore, teachers observed analogous social customs, such as the mode of hosting guests (T6 expressed that: "They love to serve treats, hosting guests just like us"), particularly noting parallels with traditional regions of Türkiye (T6 conveyed that: "Similar to east of Türkiye, relatives are highly connected to each other; just like traditional Turkish families. Some of them live with their relatives in the same house").

On the other hand, teachers did identify some cultural differences, primarily concerning variations in food and nutritional habits. Nevertheless, a prevalent sentiment among most teachers was that the integration of **diverse groups enriches communities** (T4 affirmed that: "I do not think that cultural differences have negative effects affects; they bring richness"). Ultimately, they attributed the observed cultural barriers in parent–teacher communication to three primary factors: 1) language barriers, 2) differences in lifestyles, and 3) disparities in mindset, including high expectations of teachers and limited parental responsibility for children's education.

- The most significant barrier, as identified by the majority of teachers, was **language**. They frequently observed that immigrant parents' inability to communicate effectively with the broader community, including school staff, significantly hindered their integration. This linguistic isolation negatively impacted the school environment, with one teacher noting a lack of interaction

between teachers and parents (T5 asserted that: "We cannot express ourselves without overcoming the language").

- Teachers also highlighted **differences in lifestyles** as a contributing factor to communication challenges. A recurring observation was that immigrant women often maintained a more secluded social presence (T3 affirmed that: "Women usually do not go outside very often"). This perceived conservatism was thought to contribute to their hesitation in engaging with male teachers (T3 stated that: " Culturally, females have limited interaction with men. As a male teacher, they typically do not engage with me unless there is an urgent matter "). However, it was also acknowledged that this particular attitude was evolving over time. Additionally, teachers noted that early marriages and limited educational opportunities among women often resulted in larger families and increased domestic responsibilities, consequently restricting their capacity to dedicate sufficient time to their children's education.
- Conflicts occasionally arose due to **differing mindsets**, particularly concerning parental expectations of teachers. Teachers reported instances where parents exhibited defensiveness, especially when their children received criticism. Some parents also appeared to expect preferential treatment, such as the provision of free textbooks (T6 conveyed that: "They usually do not criticise themselves, and expect positive privilege when problems occur"). Furthermore, teachers observed a limited sense of responsibility for their children's education among some parents, manifested through a lack of assistance with homework and infrequent attendance at parental meetings.

Ultimately, Turkish primary school teachers expressed a desire for parents to engage with them objectively and collaboratively in addressing issues concerning their children. They also emphasised the importance of greater parental involvement and increased responsibility in their children's educational journeys.

B2) Cultural Barriers from the Heads of Years' Point of View

The heads of year observed no significant cultural differences between the two groups (H1 maintained that: "Since the families arrived a long time ago, cultural differences are not as dominant"), mainly due to having the same religion (H2 expressed that: "We are Muslim, so we have a number of common points").

However, they identified specific cultural differences that were perceived to negatively impact parent-teacher communication. These were categorised into three main areas: 1) language barriers, 2) differences in lifestyles, which may impede adaptation to the host country, and 3) differences in mindset, such as elevated expectations of the school.

- The heads of year (H1 and H2) identified **language barriers** as the primary source of most communication difficulties. They observed that parents frequently hesitated to engage with teachers, primarily due to their inability to speak or comprehend Turkish.
- Heads of year suggested that **variations in lifestyles** negatively affected parent-teacher communication (H1 affirmed that: "There are differences in family types; they often have large families and a large number of children. There are differences regarding the role of women in society as well; Syrian mothers usually do not work outside and spend time at home"). They noted that Syrian mothers, often managing large families and extensive housework, might have limited time to dedicate to each child's education. The demanding nature of childcare and a predominantly home-based lifestyle were also perceived to hinder Syrian mothers' adaptation to the host country (H1, H2).
- Regarding conflicts stemming from **differences in mindset**, heads of year highlighted immigrant parents' high expectations of the school. In situations involving student problems, parents often expected teachers to resolve all issues independently, H2 stating: "Parents' expectations of the school are very high; they often expect teachers to completely take responsibility for students". This was exemplified by a seminar where a parent demanded Arabic-speaking staff, questioning why services were exclusively in Turkish rather than embracing the opportunity to learn Turkish (H2), which indicated a perception of entitlement to services in their native language rather than an impetus for linguistic integration.

B3) Cultural Barriers from the Immigrant Parents' Point of View

The parents often thought that the **lifestyles of Turks and Syrians were similar** in general (P8 contended that: My sister's husband is Turkish. Their lifestyle is very similar to ours), and having the **same religion** was the main common point (P3

emphasised that: “Religious holidays are the same”), which was followed by sharing Eid, holy days and other religious rituals (P7 noted that: “We meet with Turkish neighbours to read Quran. We go on trips with Turkish neighbours such as visiting mosques and historical places”). However, parents pointed out **differences in lifestyles**, such as personal relationships, marriage age, family types and social status of women which could have direct or indirect effects on parent-teacher communication.

Regarding differences, the parents underlined that social relationships were stronger in Syria (P8 indicated that: “Hospitality is more prevalent in Syria than in Türkiye”). Moreover, the age of marriage in Syria is earlier than in Türkiye (P7 pointed out that: *“*Turks get married at the age of 18 minimum, whereas Syrians can get married at the age of 14”*),* and Syrian women tend to have a large number of children (P5 highlighted that: “The number of children is low in Türkiye whereas the families are generally quite large in Syria, e.g., 7-8 children”). As a result of this, women were usually housewives and responsible for children and housework. Furthermore, they usually lived together with their husbands’ families (P6 reflected that: “Those who get married in Syria live with their husbands' families, but here they live separately”*).* Thus, Syrian mothers often had a lot of responsibilities and might not have enough time for each child. Lastly, it was pointed out that the social status of women in Syria was rather low (P5 explained that: “In some regions and villages, husbands do not want women to go to school and see a male principal. This practice varies according to the region, while women are more comfortable here”).

B4) Cultural Barriers from the School Management Team’s Point of View

The school manager indicated that she had not observed significant cultural differences that posed substantial barriers. She further noted, "Generally, there isn't much that requires communication with parents," implying that the limited interaction might contribute to the perception of minimal cultural discrepancies.

B5) Synthesis of the Cultural Barriers

Across all stakeholder groups, a general consensus emerged that Turkish and Syrian cultures did not exhibit significant fundamental differences. However, variations in lifestyles and mindsets were identified as potential sources of cultural barriers and conflicts (as detailed in Table 4.7). Conversely, the observed similarities

in lifestyle (see Table 4.8) could be leveraged as an opportunity to reduce these cultural barriers (Figure 4.2 below provides a visual representation of the elements identified in these tables).

Table 4. 7. Key Factors Causing Cultural Barriers Between Teachers and Parents

Themes	Codes	Sources
Cultural barriers from school's perspective	• Language barriers • Differences in lifestyles (e.g., large families) • Differences in mindset (e.g., having high expectation of teachers and taking limited responsibility for their children's education)	T1, T3, T4, T5, T6, T7, T8, T9, T, H1, H2
Cultural barriers from parents' perspective	• Differences in lifestyles (e.g., large families and women status in the society)	P2, P5, P7, P9

Table 4. 8. Positive Elements That Could Reduce the Cultural Barriers

Themes	Codes	Sources

Similarities in lifestyles	• Similar beliefs
	  ○ Similar values
	  ○ Similar religious practices (for example, fasting in certain periods)
	  ○ Similar rituals (for example, celebrating Eid and other various holy days)
	• Similarities in daily habits-attitudes (for example, the way of hosting guests)
		P2, P3, P4, P5, P6, P7, P8, T1, T4, T5, T6, T7, M, H1, H2

Based on the preceding discussion, the key findings related to cultural barriers are synthesised in Figure 4.2. The central phenomenon, cultural gaps arising from differences in lifestyles, is positioned at the centre of the figure, with related causes and effects arranged around it and their interrelationships indicated by arrows. For example, among the identified causes, the relatively low social status of women in Syria is associated with lower educational attainment among Syrian parents and a tendency towards conservatism, which together contribute to parents' reluctance to communicate with male teachers. In addition, positive moderating factors are presented around the framework, such as shared beliefs and similarities in lifestyle between Türkiye and Syria, which may help reduce cultural barriers. Overall, image provides a representative visual summary of the findings related to cultural barriers within this research context.

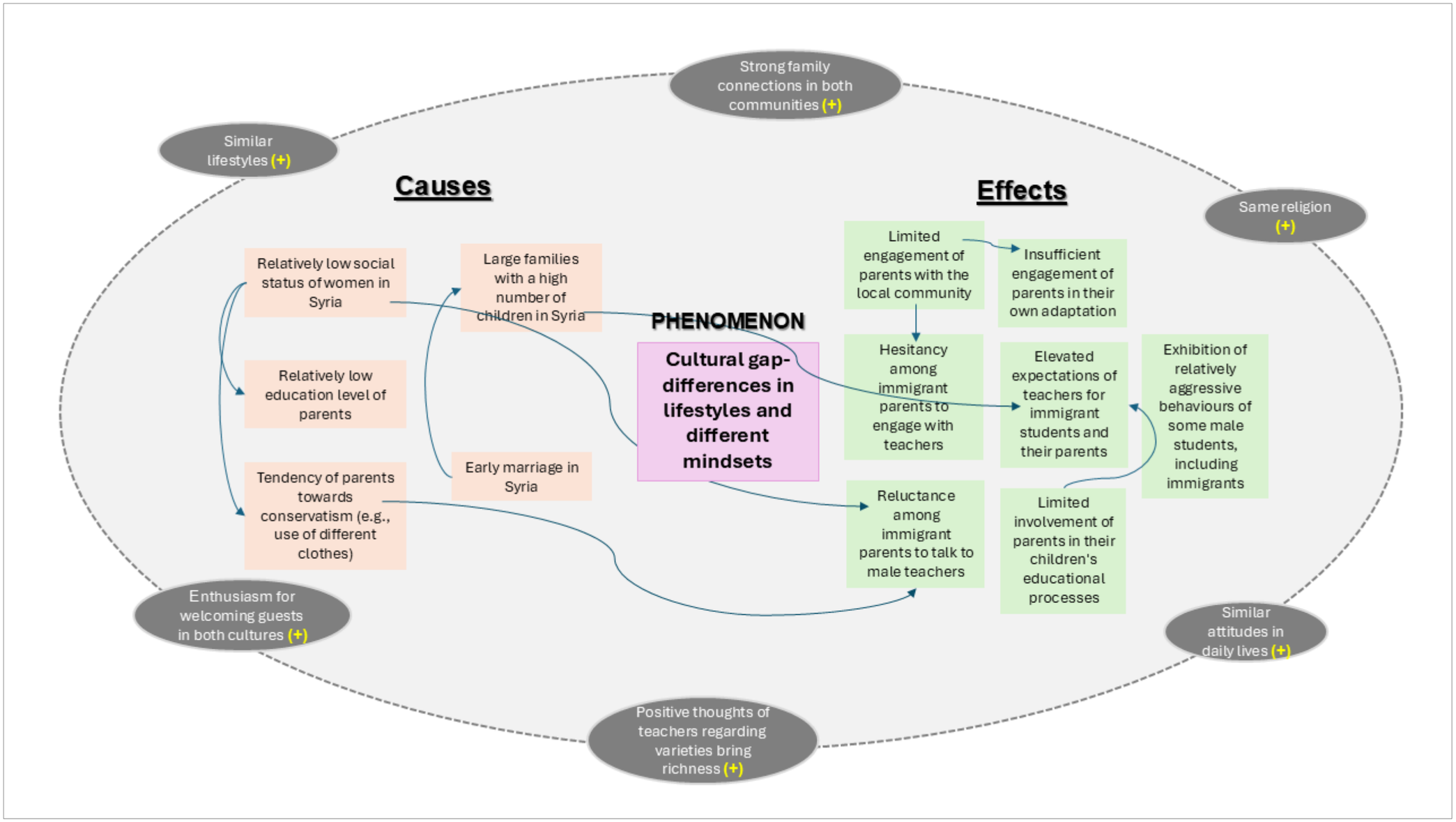


Figure 4. 2. Language Barriers and Their Contribution to Cultural Barriers Between Immigrant Parents and Primary Teachers in Turkish Schools

C) Unfamiliarity Barriers

This section investigates the extent of immigrant parents' knowledge regarding the Turkish education system from diverse groups.

C1) Unfamiliarity Barriers from Turkish the Primary Teachers' Point of View

Several primary school teachers observed that immigrant parents generally possessed insufficient information regarding the Turkish education system. As T1 stated, "Parents have no information," with T7 adding, "They are completely foreign to our education system," and T9 concluding, "I think they struggle." Teachers identified several potential reasons for this lack of familiarity:

- The majority of teachers believed **language** was the primary impediment. T4 noted, "Parents don't understand what we are talking about because of the language."
- Many teachers reported that parents' **limited adaptation to the host country** contributed to their unfamiliarity with the education system. T6 explained, "They are not familiar with the education contexts as they are disconnected."
- **Limited effort** to attend teacher-parent meetings or proactively reach out to teachers was interpreted as parents **undervaluing their children's education**. Immigrant parents usually did not have any specific plans for their children's future (T6), leading several teachers to believe that education was not a high priority for them.
- Teachers also observed that parents' **relatively low education levels** might contribute to their unfamiliarity with the system. T7 remarked, "The education level of parents in this region is relatively low; some of them also cannot read and write Arabic."

Conversely, teachers noted that **previous experiences,** such as having an older child already in the same school, and **basic Turkish language skills** helped increase parents' familiarity with the local educational system. For instance, T6 reported that while immigrant parents might initially be unfamiliar, they could become more accustomed to the system over time. The same teacher also emphasised that even a basic level of Turkish could significantly reduce language barriers*:* "In the 1st

grade, at the entrance, there is a wall between us and students and their parents - a language wall. If a parent knows a little Turkish, that wall is less."

C2) Unfamiliarity Barriers from the Heads of Year's Point of View

Heads of years consistently observed that immigrant parents were generally unfamiliar with the Turkish education system, primarily due to their limited adaptation to the host country. They noted that parents' restricted contact with local residents contributed to their lack of familiarity with various local systems, including education. As H1 stated, "Although parents do not engage with local people sufficiently, they often are not familiar with the education system."

C3) Unfamiliarity Barriers from the Immigrant Parents' Point of View

The majority of interviewed parents (six out of nine) reported a significant lack of comprehensive information regarding the Turkish education system, with only a few possessing a rudimentary understanding. Several potential reasons for this unfamiliarity were identified:

- Most parents cited **language** as the primary obstacle to understanding the Turkish education system. For instance, P1 stated, "I do not know anything because I do not know Turkish," a sentiment echoed by P2: "I don't know anything as I don't understand Turkish."

The majority of the parents (six out of eight) could not provide sufficient information regarding the Turkish education system. Only a few of them had a rough idea about it. They identified potential reasons as following:

- Most parents believed that the unfamiliarity with the Turkish education system was caused by **language problem** (P1 detailed that: "I do not know anything because I do not know Turkish"; P2 said that: "I don't know anything as I don't understand Turkish").
- Parents highlighted numerous procedural and structural **disparities between the Syrian and Turkish education systems** as a source of their unfamiliarity.
- However, **differences between Turkish and Syrian education systems** could also be a reason for the unfamiliarity. Based on the interviews with parents, there are differences in school procedures – see examples below:

- **Year repetition** - (P3 mentioned that: “Students do not repeat the same grade level in Türkiye if they are unsuccessful; however, they have to repeat the same level in Syria”).
- **Teacher Continuity** - (P4 clarified that: “Having the same teacher from Grade 1 to Grade 4 is great here. In Syria, primary school teachers change every year”).
- **Co-education** (P8 observed that: “In Syria, boys and girls go to separate schools after the 4th grade whereas they study together in Türkiye”).
- **Curriculum content** - (P3 explained that: “Traffic lesson in 4th grade here, not in Syria”).
- **Teaching materials** - (P3 remarked that: “There are many books here, the books are big, the children's bags are heavy”).
- **Hierarchy between parents and teachers** - (P5 conveyed that: “In Syria, parents cannot see the teacher; they can only meet with school managers. Therefore, parental meetings were not prevalent there”).
- **Parental expectations** - Immigrant parents expressed uncertainty regarding appropriate ways to approach teachers, indicating a need for clear guidance from the school concerning parental roles and expectations.

- Parents reported that **prior experiences**, such as having an older child already enrolled in the same school, significantly aided their understanding of the system (P4 revealed that: "I could not understand the system when my child was in the first grade, but now I can"). Furthermore, active **engagement with local residents** was identified as a valuable source of information, helping to reduce unfamiliarity (P9 elaborated: "My neighbours are Turks, so I learn from them. Therefore, I do not have a problem").
- **Positive attitudes of school staff towards students** and **positive personal experiences of parents** were found to contribute constructively to the situation. These factors were perceived to foster parents' inclusion and enhance their knowledge of the Turkish education system (P2 claimed that: "Teachers are very interested in children"; P4 expressed that: "Here, children are not afraid of the teachers; Turkish teachers treat children very well"; P3:

noted that: "Students have freedom. There is no pressure on children in they are flexible in here"; P4 reported that: "Here, children are not afraid of the teachers and managers").

C4) Unfamiliarity Barriers from the School Management Team's Perspective

From the school management team's perspective, unfamiliarity barriers were not perceived as a significant issue. While the school manager did not provide extensive details on specific contributing factors, she indicated that the school's established system and procedures were effective in preventing major problems. In her words, "As far as I am aware, having a structured system in the school helps parents avoid encountering too many difficulties. From the school's perspective, we are not experiencing significant disorganisation."

C5) Synthesis of the Unfamiliarity Barriers

On one hand, the collective findings unequivocally demonstrate the existence of barriers largely stemming from immigrant parents' unfamiliarity with the nuances of the Turkish education system as shown in Table 4.9. On the other hand, the interviews also revealed several positive elements that could effectively mitigate these unfamiliarity barriers as summarised in Table 4.10.

Table 4. 9. Factors Contributing to Unfamiliarity with the Turkish Education System

Themes	Codes	Sources
Unfamiliarity with Turkish education system	• Unfamiliarity with schools' expectations regarding parents' involvements • Unfamiliarity with how to approach/communicate with teachers • Unfamiliar with Turkish educational materials, content, and exams • Unfamiliarity with teacher allocation system in Turkish schools • Relatively low education among Syrian parents	T1, T2, T3, T4, T5, T6, T7, T8, T9, P4, P5, P6, P7
Limited adaptation to the host country	• Limited engagement with local people/parents	T8, T1, T3, T6, T8, P1, P6

Table 4. 10. Positive Factors Mitigating Unfamiliarity Barriers

Themes	Codes	Sources
Positive views of Syrian parents toward Turkish education system	• High quality education in Turkish schools • More freedom and less pressure on students • Approachable teachers and members of staff	P2, P3, P4, P5, P6, P7, P8, T5
Opportunities to become familiar with Turkish education system	• Through exposure – being in a school for a certain period of time • Through experience – having an older child who went to the school before	P4, P5, P9, T2

Ultimately, Figure 4.3 below provides a visual synthesis of the elements identified in these tables. The central phenomenon, limited adaptation of parents to the local education system in the host country, is positioned at the centre of the figure, with both negative and positive factors influencing unfamiliarity-related barriers arranged around it. For example, the approachability of Turkish teachers may facilitate parents' gradual familiarisation with the education system, whereas limited engagement with the local community may intensify these barriers.

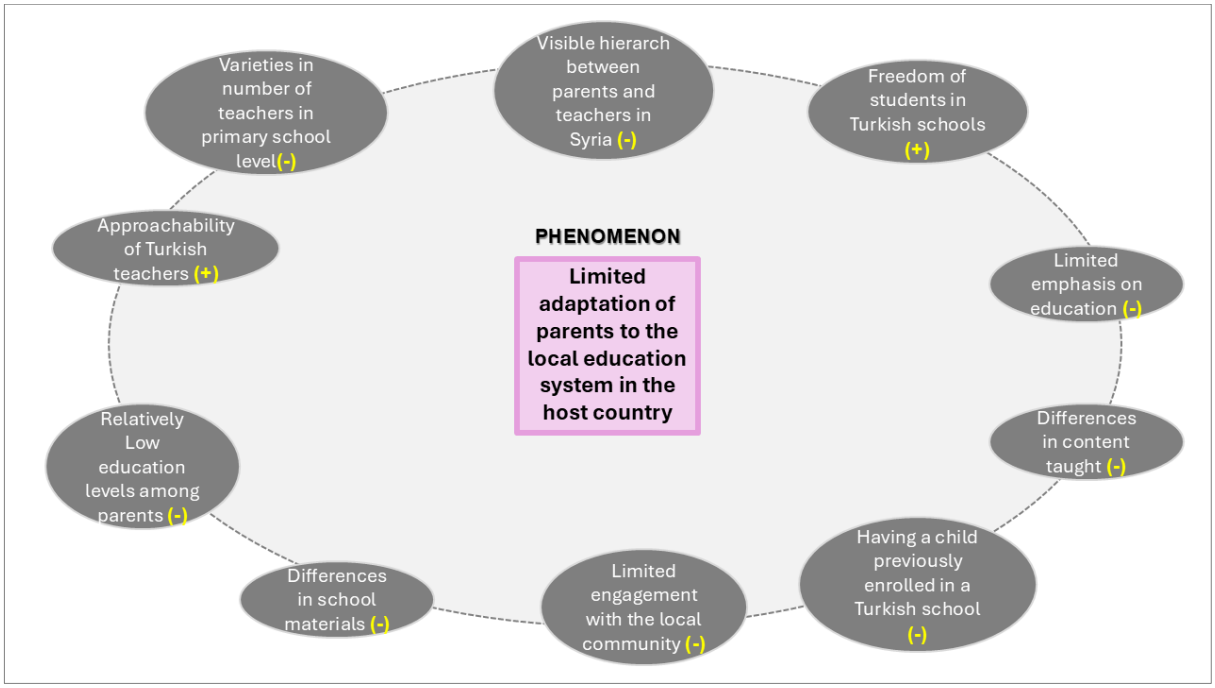


Figure 4. 3. Language Barriers and Their Contribution to Unfamiliarity Barriers Between İmmigrant Parents and Primary Teachers in Turkish schools

4.1.5 Suggestions from the Key Stakeholders

Participants provided various solutions that could help reduce barriers between parents and teachers, as follows:

A) Suggestions from the Primary Teachers

Teachers' suggestions for addressing challenges with immigrant parents can be summarised into two main categories: 1) enhancing interactions through appropriate communication tools and the availability of Turkish language courses, and 2) facilitating parents' adaptation to the local culture and education system by providing essential information and opportunities for cultural exposure. Additionally, teachers outlined expectations for government support.

A1) Enhancing Interactions Through Language Courses and Communication Tools

Nearly half of the teachers recommended Turkish language courses for parents during the interviews and also provided comments on tools that could help reduce language barriers, based on the card-sorting method, as presented in Table 4.1.

- **Attending language courses:** Teachers consistently emphasized the importance of parents attending Turkish language courses to acquire proficiency in the local language (T2 expressed that: "Initially, the parents should learn Turkish"). Several teachers believed that this initiative required governmental intervention, with one suggesting that immigrant parents should be mandated to learn the local language (T5 maintained that: "Immigrant parents should be obliged to learn the local language").
- **Use of appropriate communication channels:** Teachers discussed the utility of various tools, including interpreter services, WhatsApp, specific translation apps and pictorial booklets, as illustrated in Table 4.11 and elaborated below.
    - **Interpreter services:** Most teachers identified interpreter services as the preferred option, primarily due to their capacity to facilitate **richer interactions** between teachers and parents. They believed that the **inclusion of gestures and facial expressions in verbal communication** significantly enhances effectiveness (T4 highlighted that: "I would like to see the expression of the parents, their facial expressions, and their behaviour"). Furthermore, verbal communication was deemed more suitable for parents with lower literacy levels, as some may not be able to read or write in their native language (T3

stated: "The level of education in the Syrian families I encountered is low. That's why…"). Two teachers (T1 and T7) exclusively endorsed interpreter services, expressing scepticism about the efficacy of other tools like WhatsApp. Teachers underscored the necessity for interpreters to possess both cultural awareness and linguistic fluency, being familiar with both cultures to effectively bridge communication gaps (T1 claimed that: "There should be a translator who is from their country, who speaks both languages, and is aware of their culture as well"; T6 expressed that: "The person should be a bridge between the two parties"). Crucially, teachers expected these services to be readily available during school hours.

- **WhatsApp:** Several teachers proposed WhatsApp as a viable alternative communication channel (see Table 4.8). Its primary advantage was cited as flexibility, enabling information exchange outside of regular school hours (T2 detailed that: "WhatsApp ensures communication with parents at any time"). Additionally, it facilitated the simultaneous dissemination of various types of information, such as homework assignments and school trip details, to all parents (T2 explained that: "I provide general information via this channel"). Conversely, one teacher expressed concern that children might access messages intended for their parents, while another noted the impracticality of both parties needing to rely on external translation tools (e.g., Google Translate) for communication via WhatsApp.
- **Specific Translation App:** While some teachers proposed using a dedicated translation app for **quick translations**, they were unsure about parents' ability to manage such technology-embedded solutions. Generally, teachers recommended an in-school app that could translate their statements for immigrant parents, particularly during face-to-face meetings when an interpreter was unavailable (T8 elaborated that: "When there is no interpreter, a translation program can be used face to face when parents and teachers meet in person"). Concerns were raised about its suitability for distant communication, as stated: "These parents cannot use technology effectively" (T5).

- **Pictorial Booklet:** Most teachers largely dismissed pictorial booklets as effective communication tools due to their **inflexibility**. They doubted the practicality of such booklets for immigrant parents, many of whom had relatively low education levels, as expanded: "The education level of the people here is low. Generally, those with a higher level of education tend to read a poster or a text when you send it to them" (T3). Teachers also felt that fixed statements in a pictorial booklet would hinder effective dialogue (T4 reflected that: "We were supposed to use only the phrases in it, which is very limited"). Only one teacher (T8) saw limited potential, suggesting its use for specific issues to encourage parents to visit the school: "When we invite parents for a specific issue, we get the booklet appropriate to the subject, and we can communicate through the booklet via images and phrases. At least they would come to the school. I don't know if it works, it needs to be tried." However, this idea lacked broad support among the teaching staff.

Table 4. 11. Teachers' Preferred Communication Channels

Part.	*The most preferable*			*The least preferable*
	First priority	**Second priority**	**Third priority**	**Last priority**
T1*	Interpreter services	-	-	-
T2	WhatsApp	Interpreter service	-	-
T3	Interpreter services	Pictorial booklets	Apps	WhatsApp
T4	Interpreter services	Apps	Pictorial booklets	WhatsApp
T5**	-	-	-	-
T6*	Interpreter services	-	-	-
T7*	Interpreter services	-	-	-
T8	Interpreter services	Apps	Pictorial booklets	WhatsApp
T9	Interpreter services	Apps	-	-

** The teachers who only pointed out the interpreter services.*

***The teacher who did not believe any of the solutions could work.*

Ultimately, the evaluation of potential communication tools, conducted through a card sorting methodology, consistently indicated that **verbal communication** should be prioritized. This necessitates the consistent availability of a qualified translator during school operating hours to facilitate direct spoken interactions. In addition, complementary tools, such as **translation apps**, were identified as potentially useful in supporting and enhancing verbal communication. A small number of teachers (two out of nine) suggested that **pictorial booklets** could also be considered; however,

these were assigned the lowest level of priority. Communication via **WhatsApp** was generally not regarded as an appropriate channel by most teachers, although a small number of exceptions were noted.

A2) Supporting parents in navigating local cultural and educational contexts

Several teachers suggested organising cultural and historical trips for parents. T7 highlighted the shared historical background between Syrians and Turks, believing that acknowledging this commonality could cultivate a sense of belonging to Türkiye - he provided a compelling example:

> "I took parents to Çanakkale, the martyrs' area. An interpreter who spoke Arabic explained the place to the parents. This initiative aimed to help them embrace Turkish culture, particularly by highlighting the historical cooperation between their ancestors and Turks in protecting the host country, as evidenced by the names of Syrian martyrs on the gravestones in the area. It is crucial that they develop an appreciation for this shared history. For example, a person typically does not litter in their hometown but might do so elsewhere. Therefore, it is profoundly important for them to embrace the place they now reside."

Furthermore, teachers also advocated for Syrian parents to adjust their lifestyles to increase exposure to the local culture. They suggested that this could be achieved through minor shifts in daily habits, such as watching Turkish television channels instead of Arabic programs, which would facilitate both cultural understanding and language acquisition. Teachers underscored that these changes would yield benefits not only for the parents but also significantly aid their children's integration and academic success. As T3 noted, "When Syrian children watch Turkish channels, it becomes easier for them to learn how to read and write Turkish. It also helps parents to learn Turkish."

A3) Synthesis of the Teachers' Recommendations

Finally, several teachers emphasised the critical need for **government support** to achieve better outcomes, particularly in promoting the acquisition of the local language among Syrian immigrant parents. Most teachers believed that without clear government policies and, if necessary, mandating language acquisition, other proposed solutions would prove insufficient. T5 articulated this sentiment, stating: "I do not think any external intervention can help unless there is a government support.

Initially, immigrant parents should be obliged to learn the local language. Otherwise, any other solutions can be effective only with teachers' dedication and effort."

B) Suggestions from the Immigrant Parents

The majority of parents expressed a **strong desire** for solutions that would enhance their communication with teachers. While a few exceptions existed (e.g., P2, who felt her child's teacher already managed communication effectively), most parents were **keen to attend Turkish language courses** and offered several suggestions regarding communication tools, whose advantages and disadvantages were explored through a card sorting activity (see Table 4.12 for full details).

- **Attending Turkish courses:** More than half of the interviewed parents expressed a keen interest in attending Turkish language courses (P4 emphasised that*:* "If there is a Turkish course, I would like to attend"; P9 specified that: "I would like to be able to talk face to face properly"). A few parents specifically suggested that these courses be held at their children's school for convenience (P5 expressed that: "If it was in the children's school, I would love to go"). Parents also articulated reasons for their current non-attendance despite their interest. Firstly, some were unaware of the availability of such courses (P1 stated that*:* "I want to go to the public education centre to learn Turkish, but I don't know if there is such a course nearby"). Secondly, personal commitments, such as childcare responsibilities, or health issues, prevented others from enrolling.
- **Use of communication tools:** The insights gathered from key stakeholders regarding the use of communication tools are presented in Table 4.12 and are further elaborated upon in this part.
    - **Interpreter services:** Most parents selected interpreter services as their first choice, primarily due to their practicality and existing familiarity. Parents generally found communication via an interpreter straightforward, enabling them to express themselves more comprehensively and comfortably (P9 conveyed that: "I can talk about everything when we are face to face, there are no restrictions"). Two parents (P4 and P8) specifically noted their comfort with interpreter

services due to prior experience, such as their use in healthcare settings (P4 noted that: "I already use a translator at the hospital").

- **WhatsApp:** A significant number of parents recommended WhatsApp, citing its **ease of use and flexibility**. Most parents were already familiar with the application (P4 notified that: "It's already installed on my phone"; P8 expressed that: "I use it a lot"), which facilitated managing conversations with teachers (P1 affirmed that: "I copy what I want to write to the teacher, translate them into Turkish via Google Translate"; P7 underlined that: "My daughter is helping"). Furthermore, WhatsApp offered the convenience of contacting teachers outside school hours or when parents could not physically be at school (P9 stated that: "When I don't go to school, I can contact teachers via WhatsApp").
- **Specific Translation Apps:** Most parents expressed uncertainty about their ability to use a new, dedicated application designed for teacher–parent communication effectively. This hesitation stemmed from several factors: 1) unfamiliarity with the concept of such an app (P1: "I don't know about this"), 2) **concerns about the accuracy of translation for their local dialect** (Ammiyya) (P4: "I like the idea of an online translation program, but Ammiyya, our local language, is not translated properly"), and 3) potential **reliance on internet connectivity and data**, which could limit accessibility. Although this idea was not perceived as generally useful, they acknowledged the appeal of the quick translation feature an app could offer (P1 articulated that: "It seems good for translating and might be better than WhatsApp"; P9 expressed that: "Good to have a translation feature").
- **Pictorial booklets:** They were largely deemed **impractical** from the parents' perspective. They expressed disfavour for communicating through such booklets, finding them **complex and difficult to navigate**. Many parents reported difficulties in reading even formal Arabic (Fusha), let alone a mixture of pictures and text (P7 specified that: "It is difficult to read in Arabic and Turkish for me"; P6 noted that: "I don't understand what it says, it's confusing"; P4 explained that: "I may

not understand what is being said with pictures. It will also be difficult for me to read Fusha, official Arabic").

Table 4. 12. Evaluation of the Communication Tools from the Parents' Perspectives

Part.	*The most preferable*			*The least preferable*
	First priority	**Second priority**	**Third priority**	**Last priority**
P1	Interpreter service	WhatsApp	Apps	Pictorial booklets
P2*	-	-	-	-
P3	Interpreter service	WhatsApp	Pictorial booklets	Apps
P4	WhatsApp	Interpreter service	Apps	Pictorial booklets
P5	Interpreter service	WhatsApp	Apps	Pictorial booklets
P6	Interpreter service	Apps	WhatsApp	Pictorial booklets
P7	WhatsApp	Interpreter service	Apps	Pictorial booklets
P8	WhatsApp	Interpreter service	Apps	Pictorial booklets
P9	Interpreter service	WhatsApp	Apps	Pictorial booklets

**The parent who did not necessitate any of these interventions.*

In summary, an evaluation of potential communication tools, conducted via a card sorting methodology, consistently demonstrated that participants prioritized verbal communication, while also indicating a preference for supplementation with familiar digital platforms, such as WhatsApp. However, acknowledging the inherent limitations of WhatsApp and the expressed willingness of parents to use similar tools, the findings highlight a need for a purpose-built digital tool designed to meet their specific requirements, along with the regular provision of a translator in school settings.

D) Suggestions from the Heads of Year

Based on the findings from the interviews with the heads of year, the recommendations can be summarised as enhancing interactions with the prevalence language courses (see C1) and enhancing sense of belonging with physical arrangements at the school (see C2). The suggestions from heads of year were summarised at the end (see C3).

C1) Enhancing Interactions Through Language Courses and Supportive Tools

Heads of years strongly advocated for immigrant parents to learn Turkish, recommending the **widespread availability and active promotion of Turkish language** courses to enable parents to attend. As H2 stated, "The most important thing is to actively promote and ensure availability of Turkish courses so that they can learn Turkish to communicate with teachers at least at a basic level."

Regarding tools to mitigate language barriers, heads of years **prioritised the use of an interpreter**, followed by a translation app, and then a pictorial booklet. H2 considered communication through an interpreter to be the most effective method. H1 suggested that a specific translation app could be beneficial during the initial stages of parent-teacher communication (H1 shared that: "If there is an app that directs the parent-teacher conversation, it may be easier for the parents in the first stage"). Lastly, a pictorial booklet was envisioned as a potential tool for conveying fundamental information (H1 communicated that: "A booklet may include the process of the school, its operation, entry and exit times, how to contact the guidance service, how to communicate with the teacher").

C2) Enhancing Sense of Belonging with Physical and Visual Modifications at the School

Heads of years also recommended implementing **physical arrangements within the school environment** to cultivate a greater sense of belonging among immigrant families. H1 provided an example from a previous school: "At the previous school I worked at, we prepared a bilingual board. Moreover, we wrote the word 'welcome' on the door of the guidance unit in different languages, including Arabic. When they arrived, we said 'welcome' in their own language. That way **they can understand that they are accepted**." This highlights the importance of visible signs of inclusivity and welcoming gestures.

C3) Summary of Heads of Years' Suggestions

Beyond the aforementioned recommendations, the Heads of Year collectively underscored the critical role of governmental support in achieving improved outcomes. They specifically highlighted the necessity for **policy level interventions**, with H1 explicitly advocating for authorities to mandate Turkish language acquisition for immigrant populations.

E) Suggestions from the School Management Team

The school manager highlighted the crucial need for immigrant parents to **attend Turkish language courses**, detailing the initiatives that were then in progress. She explained that they were actively developing new methods to help parents participate in these courses. Recently, they had received a letter from the Turkish Ministry of National Education as a part of SUYE (referred to as the "Social Adaptation and Life

Education Program," a Turkish Education Ministry initiative), requesting a list of foreign national parents who did not speak Turkish. She confirmed that they had already registered information such as names, ID numbers, phone numbers, and preferred class times for interested parents, and upon receipt of a directive from the Directorate, parents would be guided through the subsequent steps.

She further elaborated on potential challenges: "While some parents were keen to join, consistent attendance might be a challenge for some, especially mothers, due to having many children, including young ones, at home." To address this, a potential solution she personally suggested was offering **home-based courses** for parents who could not come to the school, stating, "This would bring the education directly to them."

E) Synthesis of the Key Stakeholder Suggestions

The key stakeholders proposed several solutions, but the suggestion for the use of appropriate communication channels was central to their recommendations. For this reason, a summary was compiled detailing the advantages and disadvantages of each tool to reduce language barriers from the viewpoints of different groups of stakeholders (see Table 4.13), which could help develop design requirements for the guidelines.

Table 4. 13. Overview of the Suggested Communication Channels by Key Stakeholders

Communication channels	Potential advantages	Potential disadvantages
Interpreter services	Enhanced direct contact, Assured privacy, Enhanced communication precision, Streamlined Communication, High user adoption	Restricted access to the interpreter
WhatsApp	Expedited communication, Efficient mass dissemination, Practical information exchange, Relatively enhanced ease of use, Increased familiarity	Compromised confidentiality, Translation inaccuracies
Specific apps	Expedited translation	Complicated (usability challenges for parents), Digital access barriers (reliance on internet connectivity imposes a significant financial burden, Translation inaccuracies
Pictorial booklets	Carriable, Long time use	Restricted communication flexibility, Readability challenges for parents

4.1.6 Synthesis of Key Stakeholder Interview Findings

This summary section includes: 1) all codes and themes extracted from key stakeholder interviews (A); 2) other potential reasons behind the limited involvement of parents (B); and 3) positive factors which could enhance parent-teacher interactions. Finally, the requirements are briefly summarised at the end of the section.

A) Key Issues Identified

The findings revealed that while the **language barrier** was central to communication problems between parents and teachers, its pervasive influence also deeply intertwined with other factors. This interconnectedness means that, for example, when immigrant parents are unable to comprehend the local language and are unfamiliar with discussion topics, their ability to engage with others and participate in the community is significantly hindered, often leading directly to the development of emotional barriers. The outcomes further elucidated the distinct effects of each identified element.

Emotional barriers were fundamentally driven by "high expectations of both parties and limited empathy towards each other"; for instance, immigrant parents expected the school and teachers to take full responsibility for their children's education, while teachers expected immigrant parents to be involved in the same way that local parents were. Moreover, "differences in lifestyles and mindsets" emerged as the main reasons for cultural barriers. A clear example of this is how having a large family and spending most of their time at home made it difficult for Syrian mothers to be more involved in their children's education and attend meetings. Furthermore, unfamiliarity with the Turkish education system was caused by "limited engagement with local people/parents," which consequently impeded their ability to adapt to the host country. Ultimately, the codes and themes extracted from key stakeholder interviews are presented in Table 4.14, with their interconnections further illustrated in Figure 4.4.

Table 4. 14. Synthesis of Thematic Codes from Key Stakeholder Interviews

Theme	Codes
Lack of official school procedures	• Teachers' personal strategies • Different practices • Reliance of personal relationships
Imbalanced effort	• Extra responsibilities for teachers • Limited parental interactions with teachers
Communication problems due to lack of proper translation support	• Limited support of the interpreter service • Lack of privacy due to the presence of a translator • Mistranslation when using WhatsApp
Emotional barriers	• Language barriers • Limited responsibility for children's education • High expectations of teachers • Limited empathy towards immigrant parents • Unfamiliarity with the local culture and the Turkish education system • Different experiences with each teacher
Cultural barriers	• Language barriers • Differences in lifestyles (e.g., large families) • Differences in mindset (e.g., having high expectation of teachers and taking limited responsibility for their children's education)

Unfamiliarity with Turkish education system	• Unfamiliarity with
	  ○ schools' expectations regarding parents' involvements
	  ○ how to approach/communicate with teachers
	  ○ Turkish educational materials, content, and exams
	  ○ teacher allocation system in Turkish schools
	• Relatively low education among Syrian parents

Limited adaptation to the host country	• Limited engagement with local people/parents
Positive elements that could reduce barriers between parents and teachers	• Positive views of parents towards the Turkish education system and staff members at the school environment • Similarities in lifestyles between Turks and Syrians • Opportunities to become familiar with Turkish education system through exposure and experience

Based on the information presented in Table 4.14, it is evident that several themes share overlapping or closely related codes, indicating that the issues should be approached holistically in order to develop effective solutions. For instance, certain codes associated with the theme of 'Imbalanced effort' are closely linked to codes under the 'Cultural barriers' theme, such as the presence of diverse mindsets. While analysing each theme separately can be useful for examining specific details during the solution-development stage, it is essential to simultaneously maintain a holistic perspective that acknowledges the interconnections among these issues, thereby

enabling a more comprehensive understanding of the problem and supporting the development of more robust and sustainable solutions.

B) Further Contributing Factors to Limited Parental Engagement

Limited parental involvement appears to stem primarily from a combination of ongoing adaptation challenges within the host country and absence of a clear school protocol. Immigrant parents frequently contend with significant socio-economic and personal difficulties, including health issues, precarious financial stability, increased familial responsibilities, and inadequate housing, which potentially limit the time and capacity for school-related engagement. The adaptation problems are further exacerbated by limited interaction with the local community, as explained by T3:

> "Syrians who have communication problems are generally those who do not communicate with Turks and live in regions where Syrians are densely populated. They also watch Arabic TV channels at home. They cannot learn Turkish because they live outside of society and in isolated areas".

Additionally, the absence of a clear school protocol for one-on-one meetings created significant challenges. Without a standardized system, teachers were forced to rely on their own methods, which increased their workload. For instance, this often led to them using inappropriate communication tools, such as WhatsApp, which created privacy concerns and the potential for mistranslation in parent-teacher interactions. Ultimately, these additional factors must also be taken into consideration for a comprehensive evaluation of the overall situation

C) Positive Determinants in Reducing Language Barriers

Positive factors identified as conducive to reducing barriers between parents and teachers include cultural similarities (e.g., shared religious practices, analogous values, and comparable lifestyles), prior experience with the Turkish educational system (such as having an older child already enrolled in the school), and the presence of a positive school environment in which immigrant parents feel welcomed, respected, and supported. Elaborating on the last element, a positive school environment encompasses aspects like a less rigid hierarchy between parents and teachers/school managers, approachable staff, an absence of

discrimination, support from local parents, and additional support from teachers and the school itself.

D) Overall Synthesis of Key Stakeholder Interviews

Interviews with key stakeholders offered the researcher a comprehensive understanding of the existing challenges and the current approaches to addressing them. The insights drawn from stakeholder perspectives will be integrated with expert recommendations in the following section. A summary of the combined requirements is presented below:

- Clear meeting protocol regarding teacher-parent communication with suitable translation support (e.g., interpreter services).
- Empathy-building activities that help both parties better understand their differences and set realistic, achievable expectations of each other
- More opportunities for immigrant parents to engage with local people and teachers in order to familiarise themselves with the local cultures and Turkish educational system in which their children are educated.
- Language courses to address language barriers and use of appropriate communication channels – additional support (government funding) might be needed.

In conclusion, the synthesis of findings from the key stakeholder interviews, summarized in Figure 4.4, provides a foundational understanding to inform the expert interviews. This synthesis indicates that cultural, emotional, and unfamiliarity barriers are closely interrelated, with cultural barriers appearing to be the most prominent and strongly connected to both emotional and unfamiliarity barriers. Given the interconnection among these barriers, a holistic understanding is necessary to identify factors that exacerbate them, such as parents' limited knowledge of the local education system, as well as elements that may help mitigate them, for example, the presence of a positive school environment.

As this assessment was primarily confined to the school domain, as visualized in Figure 4.4, it is important to consider broader contexts. For instance, in the out-of-school domain, there is a need for further engagement by higher authorities to address challenges such as parents' limited adaptation to the host country and their

varied priorities. Although this area may not fall directly within the scope of the current study, it provides valuable insights for future research that could extend beyond the school context to inform policymaking at higher administrative levels.

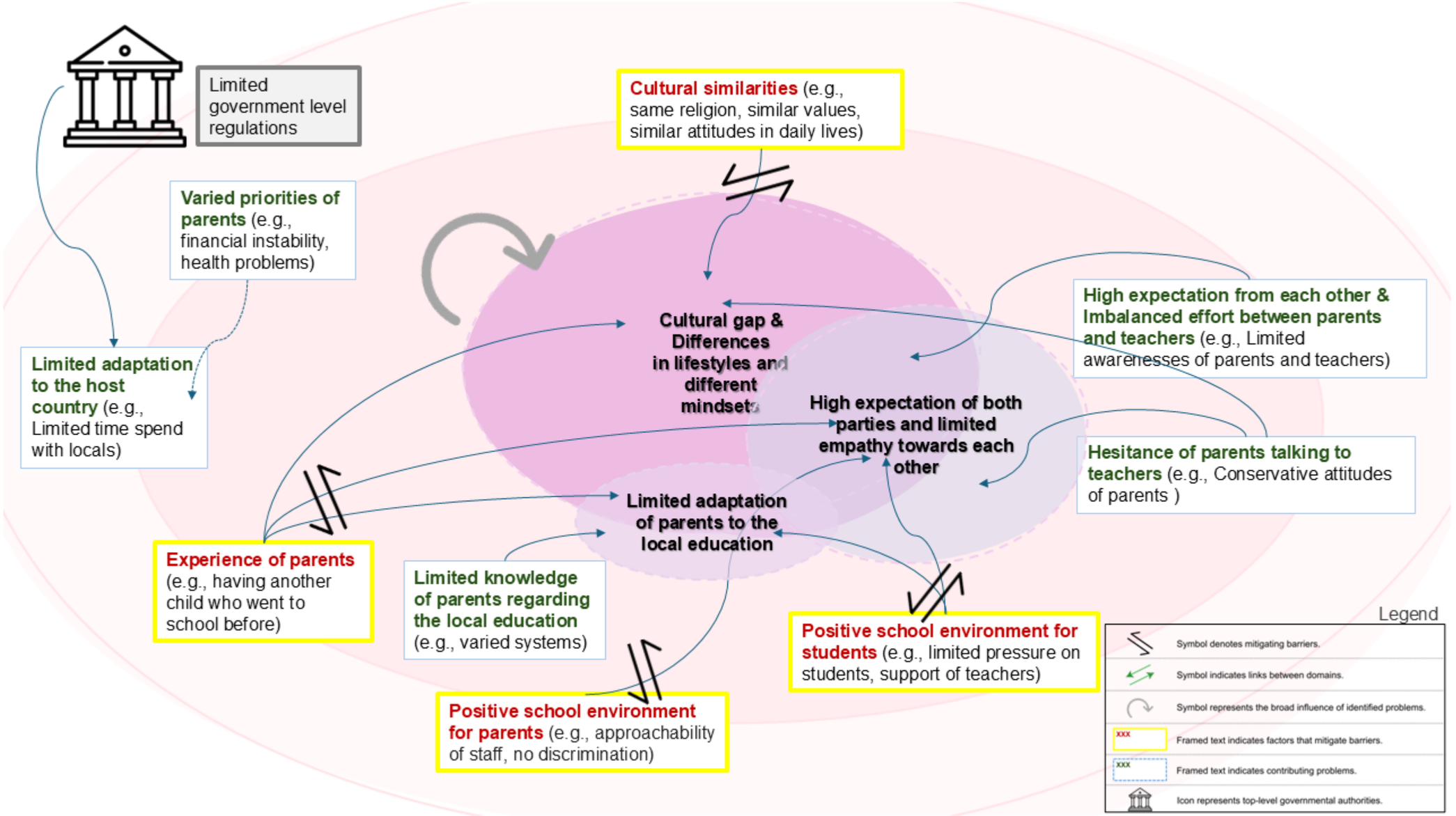


Figure 4. 4. The Overall Landscape within the Turkish School Context, the influence of the Dimensions of the Language Barriers, Informed by Key Stakeholder Perspectives

4.2 PRINCIPAL FINDINGS FROM EXPERT INTERVIEWS

This section presents the analysis of data obtained from interviews with experts. For each expert, a brief introductory explanation is provided. The interview questions and corresponding answers are then analysed comprehensively within a single paragraph. Finally, the key points derived from each expert's insights are extracted and summarized.

4.2.1 Analysis of Expert Interviews

This section presents the detailed analysis of interviews conducted with 16 experts. Each expert's insights are examined to identify key themes and recommendations.

Expert 1 (E1)

- The expert has been working in Türkiye as a lecturer. His research areas are design theories, design philosophy and basic design principles. His master's project focused on kitchen design for disabled people, so he has a good understanding of how vulnerable people struggle in their daily lives. His PhD research topic was based on interaction between users and objects.

E1 believed that **semantic** and **syntactic** could provide a clear guidance in terms of information design. In regard to reducing the language barrier, he recommended **Dieter Rams's design principles** as the way forward, since it could be applied to various types of design challenges. To address cultural issues, he advised that the researcher should develop a good understanding of **behavioural patterns** of key stakeholders. Undertaking **deep research** was also recommended as a suitable method to tackle cultural issues. To avoid any potential bias, it is important to conduct the study from an **impartial perspective**. The keyword that he emphasized several times is *'**justice**'*, which in this case refers to fairness, for instance, sharing information openly– *'You open yourself, I open myself; equalize myself with the other; I want to talk on the same base'* (a level playing field). E1 stressed that in order to do this effectively, there is a need for **clarity** of information, e.g., use of appropriate **images** that are **easy to understand** by all groups. It is also crucial to be clear about **benefits** of proposed solution(s). He also emphasized the **systemic approach** – looking at the situation as a whole rather than dividing it into different parts.

The key message is **justice**, which refers to **making the playing field level** for everyone through the use of appropriate design principles and **clarity of communication**.

Expert 2 (E2)

- The expert is a lecturer in the Department of Architecture in Türkiye. She has engaged with a large number of international students, especially within the scope of yearly exchange summer school programs between Japanese and Turkish universities.

E2 offered a clear approach on how to tackle cultural differences. She stressed that **preparation** is essential for people who come to a new area. She gave an example of a summer school program for Turkish students in Japan. Turkish students were given lectures regarding Japanese culture and education in advance to minimise problems causing by cultural and educational differences. Based on her another work experience in a European country, she observed that minority groups often experienced prejudice. E2 believed that **to break prejudice**, there is a need for **adaptation** which means newcomers should be aware of **social dynamics and formal/informal rules of the society**. In this case, immigrants should be given basic information and prepared to adapt to the local community. E2 also suggested that to reduce cultural barriers between different groups, there is a need for **friendly communication** when engaging with others (e.g., positive facial expressions, gestures, small gifts). Subsequently, E2 recommended that **required information should be delivered in advance**, stating: *"*It is necessary to understand why people do that behaviour in that culture. People can learn such things while they are living in that area, however, it takes a long time. Therefore, required information should be delivered in advance.". Regarding this project, the expert believed parents and teachers need to be offered **orientation courses** in *advance "*We should not confront two different groups so quickly. It is necessary **to bring both sides together by softening** with the help of training courses.*"*. This was because there is a need for empathy from both sides and understanding of each other's expectations. In this case, the expert suggested **compulsory series of seminars** to teach parents how to engage with teachers. Similarly, teachers should learn about minority psychology or a war psychology. To reduce language barriers, the expert suggested the use of an app for immigrant parent-teacher communication, articulating: *"*Parents

may feel insecure if they miss something. If another language is spoken all the time, people may worry that they do not understand what is being said when others are speaking enthusiastically nearby. Maybe an app can help with this.". She also highlighted that there is a need for a **government support** for effective outcomes.

To summarise, the key message is to **break the prejudice** by **levelling the playing field** for both parties. There is a need to help immigrants adapt to the host country by **providing essential information** in advance through **orientation courses**. Suitable communication tools (e.g., App) and softening approaches (e.g., gifts and social events) could also help build empathy and integrate immigrant parents into the community.

Expert 3 (E3)

- The professor works at the department of architecture at a university in Türkiye. She worked in Europe and the Middle East as an architect and a lecturer. Currently, she has been carrying out multicultural workshops between Türkiye and Catalonia Technical University.

E3 believed that **environmental psychology** could help their engagements with others in an area. Moreover, **cognitive design theory** could provide a clear guidance in terms of information design, elaborating: "It is more permanent to explain a topic that you can tell for pages with a 3-5-minute video". To reduce cultural barriers, she suggested a **hub** where immigrant adults and children are educated about the local language and culture. She also emphasised the importance of **exposing** the culture and gave an EU project that she was involved in as an example. This project enabled children to be guest in families from different countries so children could learn about different cultures. E3 also recommended a **workshop** as another idea for introducing new cultures and delivering required information to each other. Lastly, she stressed the **need for time** to become familiar with the new culture.

To summarise, the key message is to create an environment (e.g., a **hub** or a **workshop**) that promotes engagement and encourages people to learn about each other's cultures. Immigrant parents should be given sufficient time and opportunities to be exposed to the new culture

Expert 4 (E4)

- The expert has a PhD degree from the department of product design. Currently, he has been working at a UK-based global company as a global R&D operations leader. His area of expertise is human-machine relationships. He considers various elements which ensure human-machine interactions, such as gesture recognition, mission, voice recognition, vision, smell sense, etc. Furthermore, working in a global company as a designer gives him a chance to discover the needs of users from different backgrounds. Besides his experiences in industry, he has been working as a guest lecturer in multicultural universities in the UK.

E4 often runs **workshops** to communicate complicated technology to different group of staff in a clear manner. He highlighted the benefit of using **stories, scenarios, personas, story board and typing** simultaneously in such workshops. The expert believed that a design-led perspective can be useful, as its principles are rooted in **empathy**. He also believed that **semantic** and appropriate use **visual language** could provide a clear guidance in terms of information design. To understand communities, he suggested contextual inquiry ("To really understand the groups you design for, you need to understand logic of their behaviours"). The key issue is indicated as to understand their **lifestyles**, **reasons behind their attitudes, prejudice and the bias**. To ensure people understanding each other, he suggested the use of **metaphor** and **morphological connections**, which can help people to explain topics to others who are not familiar with the issues. Finally, he believed that there is a need for **communication tool** to help immigrant parent-teacher communication which is generated based on **ethnographic research**.

The key message is to use **research** to develop in-depth understanding of people (especially reasons behind their attitudes, prejudice and the bias) that could lead toward **empathy**. Theories related to **meaning**, e.g., semantics, metaphors and morphological connections, were recommended to support the development for appropriate **visual language**.

Expert 5 (E5)

- The participant is a well-known professor specialising in HCD. Previously, he mostly worked with car companies and focused on ergonomics and human factors. Besides this, he focused on conceptual issues of meaning, user experience, user journeys, emotional engagement and triggers of emotions to contribute to his projects. Currently, he has been working at a UK university as a professor of HCD. He also has a large number of publications in this field.

E5 believed that the term, **frictionless interactions,** could provide a clear guidance in bringing suitable solutions to the problems ("To be frictionless, have a good

experience, usability, and inclusivity are needed*"*). He emphasised that *"*projects should be developed based on all factors which affect humans' comfort". Furthermore, he believed that **'Design for meaning'** can be the core of the solutions, stating: *"*People should be convinced about the benefits of the interventions. The result of the solutions should be meaningful for them*"*. He noted that there is a need for **specific research** for each project, emphasising: *"*Rather than engaging with a small group of people, comprehensive research is needed for accurate data. Be selective on sources; omit sources which are not in your scope". Overall parameters including the economic aspect, traditional aspects demographics should be considered. He stressed that*: "*You should be familiar with the lifestyles of other people". He believed that **psychosocial inclusivity** could be the starting point of the project. He also recommended that **the reasons behind parents' attitudes** should be examined. He noted that reasons for avoiding their participation in their children's scholarly activities/engagement with teachers as well as priorities of parents in their life and the importance level of parental meetings also need to be defined. Based on his experiences, he believed that **illustrations supported via texts** can be beneficial for such projects as well, as elaborated: "We try to use international illustrations-little symbols inside cars such as on a dashboard, central console, and doors. Besides this, there are also words written in local languages". E5 highlighted the importance of prototyping and testing, as clarified: "We improve our design according to users' feelings towards prototypes".

His key messages emphasised making interactions between teachers and parents as frictionless as possible, meaning that **all factors should be considered** to reduce barriers. Reasons for parents' attitudes should be properly investigated to make engagements meaningful to them.

Expert 6 (E6)

- The expert is a lecturer in the Department of Architecture and works in industry simultaneously in İstanbul, Türkiye. Her expertise areas are universal and barrier-free design and architectural accessibility. She also carried out projects with some minority groups.

E6 brought her knowledge and experience in architectural accessibility and barrier-free design to propose solutions for this study. She believed that **interpersonal communication** could provide clear guidance in terms of in-person communication.

In regard to reducing language barriers, she suggested that **verbal expressions need to be supported via drawings** (She stated that: *"*In my project, drawing was also a tool for us to understand and convey information to each other"). To address cultural barriers, she advised considering **language barriers within emotional barriers**. She explained that: "Emotional barriers mix with culture a bit, they are not separated by anything sharp"*.* Following this, she believed that **physical environments** also play a key role in people's interactions. She gave an example that: "There is a context called **'deaf space'** where a number of design criteria exist to facilitate the communication of spaces"*.* The keywords that she emphasized several times are ***'approachability'*** and ***'predictability'***, which in this case refers to an arrangement of comfortable communication areas. Her answer must be linked to behavioural design, where *'cues'* are given to guide people's behaviours. For example, she leaves her office door open at school, which can be seen as a cue that makes it easier for students to approach her. In addition, **active listening, eye contact, brief and clear communication, and even the colour tone of the background** (e.g. there should be no light coming from the back) were recommended as means to make these approachable. Regarding predictability, she highlighted the need for **universal drawings** for illiterate or foreign people, underlining: "When you enter a place, you need to be able to describe the location of the elevator".

To summarise, the key message is that the school should be ***'approachable'***, which could be achieved through both the design of the **built environment** and the **behaviour of the staff.** By using design that most people can understand (e.g. universal icons and common layouts), they can ***'predict'*** how to engage with the place and other people.

Expert 7 (E7)

- The participant is a project manager in a UK university which often requires linking design school to business with student projects. Students from different countries are asked to provide solutions via the double-diamond method for the problems given to them by companies. Since he often connects students from different backgrounds and works with global companies, he offered useful suggestions mostly regarding the engagement of various groups and design principles, which could help such problems.

This expert believed that the **double diamonds model** could be applied to various types of design challenges. He elaborated that: *"*You could be out-of-the-box via this method: Come up with an idea, broaden that idea out, find a solution, come up with a different version of the solution, and finalise it*".* To tackle cultural barriers, he emphasised the importance **of carrying out research objectively** to develop an in-depth understanding, stating: 'What works in one case may not be applied to another.". He also noted that people should be open and willing to learn about other groups' cultures. To tackle emotional barriers, the advice was that the researcher should consider **ice-breakers**. He believed that mutual goals often create bonds between people. After establishing a mutual goal, individuals should be given an opportunity to communicate with each other (e.g., introducing themselves to each other and talking about their backgrounds, generating WhatsApp groups, being friends on social media, and meeting in person). He also suggested **meeting points** to ensure people can engage each other, and gave an example of hugging points in Finland. To tackle unfamiliarity issues, he suggested instruction videos for parents – he emphasised that these videos should not be text-heavy and make a good use of illustrations. Furthermore, he suggested online **universally understandable platforms** where each people can post (e.g., Miro boards) to share information with each other. Regarding this project, he believed that the majority of problems may stem from a lack of knowledge about the Turkish education system. Therefore, he suggested a **simple document** that outlines what each person would go through (e.g., a journey map, similar to IKEA instruction booklets).

The key message is **to encourage people** to communicate with each other through various techniques (e.g., icebreakers, meeting points, and group chats). Simple documents containing essential information that are **universally understandable** could also be useful.

Expert 8 (E8)

- The professor is head of Department of Design at a university in the UK. Her research expertise is inclusive design which is philosophically related to this project. She has been involved in various international design projects and worked in a number of countries.

E8 believed that **cultural adaptation theories** could provide a clear guidance in terms of their adaptation to new environment (e.g., ensuring that they feel

comfortable and can talk to others freely). To tackle cultural barriers, she proposed two options: 1) introducing people to the new system and making them familiar with it; and 2) being inclusive and accommodating (*"*We serve various types of meals, such as halal and vegan options, to ensure everyone can eat and drink.")*.* The key word that she emphasized several times was ***'fairness'***, which in this case refers to removing bias. To carry out an effective dialogue, she suggested that people should **speak slowly** *("*Everybody would appreciate it if you speak slower.")*,* **listen attentively**, and **explain terms clearly** ("When you explain terms, people get a big picture. Don't assume everybody knows.")*.* She also added that instead of directly delivering information to people, there is a need for initial verbal explanation that match people's level of knowledge, understanding, and language capacity ("I think a lot of people tend to think others think similar to them, but it's not the case")*.* Lastly, she highlighted the importance of ***'love'*** in such social relationships. She used the garden as a metaphor that: "If you want a wonderful garden, you need to allow different flowers to flourish and grass as well."*.*

The key message is **fairness**, which means that biases and barriers should be removed through simple actions (e.g., speaking slowly and listening attentively) so that everyone feels included.

Expert 9 (E9)

- The background of this Turkish design lecturer covers a wide range of aspects. She combined her sociology knowledge from her bachelor's degree with PhD projects in design. Her research interests include human-centred design, interaction design, learning technologies and technology-supported collaborative learning. In this case, she often combines her knowledge of sociology and design in her projects. For example, her postdoctoral research in Denmark was based on developing a game to support children's mental rotation skills.

E9 brought her experiences with immigrant children to contribute to this study. She explained that the **Zone of Proximal Development (ZDP)** principles can help transfer information from someone to another according to the level of knowledge and understanding level. Furthermore, she stated that **Reflexive Practice-Reflective Thinking** (which encouraged reflection on oneself and/or feedback) can support the design processes. Moreover, **Empathic Design** and **Value Sensitive Design** can help address problems of vulnerable groups. She elaborated that: 'They allow doing something by taking into account the values of different stakeholders.'

Additionally, she expressed that **Participatory Design** and **Co-Design** can also help as they ensure others can be part of the process and describe their needs effectively. To tackle barriers between people, she believed that stakeholders should be allowed to **express themselves**. She explained about her project which was carried out with Syrian immigrant children as follows: *'*I asked them to lie on the ground and draw their bodies in the same size and asked them some questions as follows: Who is the person you feel closest to? To whom have you been angry lately? I first made them think about all these, had a meditative session, and then got up and asked them to draw what they were thinking on their whole body*'.* She explained about another project to develop **emotional awareness** of immigrant children ("Children were asked to describe their challenges like a newspaper reporter through **animated characters/mascots** because we know that children feel closer to more animated characters."). In this project, children were asked to answer some questions (e.g., There is a hippo who is very hungry or he is experiencing an emotional void? How can we help him?) and disclose their feelings. With regard to tackling the unfamiliarity of people with systems, the expert suggested the use of **game design principles** and **customised design method cards** (e.g., IDEO design cards) as they can ensure communication of different groups.

This expert recommended various theories (e.g., ZPD) and tools that could be used to develop a **deeper understanding** of the target audience and assist them in **expressing themselves**.

Expert 10 (E10)

- This expert works at a university in the UK as a lecturer in the design department. Her research interests encompass the role of design in improving the quality of people's lives and sustainable development. She has a wide range of design research interests, such as design policy, innovation in new product development and social innovation. She has been involved in many design research projects including social values of design and design strategy.

The expert brought her experiences based on cultural barriers and language problems to contribute to this study. She believed that the **design thinking approach** can help (Initially, we try to understand and identify the main problems. After, we try to come up with alternative solutions."). Regarding her work experiences with staff from different backgrounds, she observed that the **language** is the main

problem. However, there were also other problems, which stem from **cultural differences**, as exemplified:

> "In the UK, we use e-mails to communicate on projects and expect our e-mails to be replied to within two days whereas others prefer social media and phone calls. They do not really consider the e-mail method very seriously. Regarding meetings, we are usually on time here. If are we delayed, we let others know in advance. However, they are not familiar enough with such virtual meetings. Sometimes, they do not attend meetings, and they do not say anything about it".

She underlined the effects of the **variety of expectations**. In this case, she indicated the **need for time, empathy, being respectful, being open-minded, being a good listener, being clear** and **using simple language.** With regard to emotional barriers, she indicated the **need for time** and **patience**. She elaborated that: 'I defined some differences between Western and Asian cultures. For example, when you see someone who does not look okay, it is appropriate to say directly here. However, for Asian people, this is quite usual. In this case, you should give time yourself to have a better understanding of local issues'. Regarding this research project, she suggested **workshops** or **round table discussions** to hear from stakeholders ("You should understand their **motivations and pain points** in the communication process."). She believed that **visual materials** (e.g., diagrams) and the use of technology, such as apps, can help parent-teacher communication.

To summarise, the key message is to develop **empathy** and an understanding of cultural differences. Accordingly, she recommended using appropriate communication techniques (e.g., **visual materials** and **roundtable discussions**) as well as cultivating positive attitudes (e.g., being respectful and open-minded) when engaging with others. A design thinking approach could also be beneficial.

Expert 11 (E11)

- The lecturer from the UK who has researched the integration between technology development and user-centred design to facilitate the achievement of positive societal impact, mostly in healthcare and immersive environments.

E11 believed that **Co-design** and **Co-creation** principles can help to tackle cultural barriers in terms of ensuring different people can create useful solutions together. Regarding emotional barriers, **Inclusive design** was indicated as a potentially appropriate method for such projects ("It ensures people are empowered to influence

the design decision."). Following this, he indicated a need for **understanding target groups' specific features and requirements** by means of appropriate data collection methods (e.g., **interviews** and **surveys**) to ensure the solution works effectively. With regard to overcoming the unfamiliarity of people, he gave an example based on his experience which focused on virtual reality in the filmmaking industry. Filmmaking experts had very limited knowledge of immersive technologies. Hence, they often struggled to understand them. In this case, the expert facilitated their issue through a **combination of text information, verbal explanations, face-to-face interactions, and simple demonstrations**. Regarding this research project, he recommended starting with initial research to understand **the internal dynamics** and **lifestyles** of the research group. He believed that there is a need for making a **level playing field** for parents and teachers ("They should be at the same place as a starting point"). In addition to in-person meetings, he suggested **other supporting meeting channels** as well. He also recommended generating another **platform, which ensures parents help each other**. He also suggested clearly informing parents about **expectations** from them and tasks to be completed until the next meeting. Finally, he emphasised the importance of **piloting** ("You should **test** the product before coming up with the actual solution").

The key message is to develop an in-depth **understanding of the target groups**' characteristics and needs. This can be achieved through various design research methods and design principles, such as co-design and inclusive design. E11 also emphasised the importance of creating a **level playing field** and providing channels for both Turkish and Syrian parents to support one another.

Expert 12 (E12)

- The professor is head of Industrial Design department at a Turkish university. She has a number of experiences with different groups, from different fields and/or from different countries. Therefore, she has a good understanding of how to approach different groups and ensure they engage and co-operate with each other.

E12 explained that **drawing** and **model-making** can help people to communicate with each other regardless of language. Meanwhile, **body language** including **facial expressions** was noted as another factor accompanying communication. To tackle cultural barriers, she gave an example of a cooking workshop based on food cultures of two different countries, Türkiye and Austria. The students prepared common

meals, which reflected the food cultures of both groups. In this case, a **common activity** (e.g., cooking) enabled people to spend time and get to know each other. E12 gave another example of a workshop carrying out with newly-arrived Syrian immigrants and Romans who live in Austria. In this case, Romans taught Syrians their basket knitting techniques. She believed that such workshops could help people build **empathy** towards each other by means of **sharing knowledge** and carrying out a **common activity**. Regarding emotional barriers, she advised designing tools, which can bring people face to face and ensure their interactions by means of suitable design methods (e.g., **co-design** and **gaming**). This kind of tools can help people identify commonalities, differences, and reasons behind conflicts. To overcome unfamiliarity with local issues, she suggested that people should **spend time together** (*"*When people from different cultures and languages gather in a group, the flow of information circulates"*).* She also stressed that **a common aim** of generating a synergy between people. With regard to this project, she advised creating an **interface** for stakeholders. This was because people feel safe within **structures which they are familiar with**. This structure should have clear rules and well-defined goals.

The key point is to **use common activities** as a means to build **empathy** and encourage people to **spend time together**, which could help them communicate and share knowledge.

Expert 13 (E13)

- The expert is an innovation coach from the UK. He carries out workshops with students from different countries to develop solutions for problems set by companies. Hence, he understands how to approach different groups and how to develop solutions for social problems.

Based on his experiences, E13 believed that: "researchers need to try to understand what the problem is, hypothesize some approaches to address the problem, generate a prototype, and evaluate the final solution*".* Based on his experiences of running workshops with students from different countries, he experienced cultural barriers beyond language problems (*"*We assume that there are challenges because of cultural problems. However, the problems are usually **based on limited knowledge** of students. They are **not familiar with the system**; they do not know t what they should do"). To tackle emotional barriers, he believed that **interactions**

could be encouraged through environments, e.g., a place where people are allowed to engage and **spend time with each other** can bring positive results (e.g., social events for parents at school). From his experience, he noticed that students were often very quiet when they did not know what to expect from the activities. Hence, there is a **need to provide information in advance** ("We should tell them about the teaching model and about the project so they can be involved more*"*). Regarding this research project, E13 suggested school management teams should **provide basic information for parents. He elaborated that**: *'*we need to teach people what to do, what not to do, and how to ask a question*'.* He also stressed that: "Since education is not the parents' priority, you should provide very practical solutions for them." He also recommended **testing** the product before launching it, suggesting: "You can create **storyboards** and provide **scenarios** to parents, and ask which one would be most useful for them."

The **limited knowledge** was considered the main problem. Thus, **basic information should be provided in advance** to help people become **familiar** with the system and what is expected of them. In this way, they could **engage** more. Since education is not their top priority, practical solutions that require minimal effort are likely to be more effective.

Expert 14 (E14)

- The expert is a lecturer in the Department of Graphic Design in the UK. She works in industry as well. Her recent client work has been publicity for theatres and promotional materials. The theatre work has been printing and social media/digital ads and program booklets. She has also designed the interiors of several businesses. She has carried out many social projects. Hence, her practical and theoretical knowledge can contribute to this research.

E14 believed that **Human-Centred Design** can help reduce the challenges of interacting with other people, as it requires **empathy** (*"*For example, the meaning of colour can differ from one culture to another. Knowing your target audience is central to human-centred design*"*). In relation to her experiences, she observed that **universal illustration/drawing** is a beneficial way to deliver information. For instance, she designed a curriculum to improve parenting skills which involved **detailed drawings** of activities, such as how to hold a newborn baby. To be **inclusive**, she avoided certain things in drawings, such as no wedding rings on anyone's fingers, as exemplified: *"…*because I could subconsciously be voicing

cultural stigmatism concerning marriage and having children.". As another example, she gave an option to students who did not celebrate Christmas (due to cultural or religious reasons) to make a generic card for any occasion at school. She believed that this kind of consideration can carry a vibe of **inclusion and positivity**. To tackle emotional barriers, she believed that activities which can ensure people **put themselves in others' shoes** can help develop empathy. She also highlighted the need for **educating and informing authorities** regarding the challenges of some groups in a more empathetic way. To ensure quick interventions when needed, she suggested **meditation** (e.g., stress relief and emergency calm down apps) which may help humans to feel emotionally better. To tackle unfamiliarity, she suggested **delivering information regularly** in the **simplest way** ("Rather than fielding fifty emails, I knew the most common questions and developed the term handbook with topics such as how to access Adobe, how to add a major, and many more FAQs").

The key point is to apply **Human-Centred Design** principles into communication (e.g., using **universal illustration** or **simple language**) to ensure the **inclusivity** and **empathy**.

Expert 15 (E15)

- The academic is a lecturer in the field of architecture in Istanbul. She carried out a number of studies regarding humans' problems including disabled people and other vulnerable groups. Hence, she has a good understanding on how to approach this kind of social problems, and could recommend what kind of interventions would be useful.

E15 shared her relevant experiences, which could contribute to this research from different aspects. For example, she carried out a project with students to ensure that disabled students could move easily in student dormitories. In this case, the students **interviewed** disabled people and **spent time** in the environment to understand issues and develop solutions accordingly. To tackle cultural barriers in industry-based projects, she tried to **understand the expectations** of customers via **meetings** when designing properties. She gave an example that: "the places where Iranians will reside may be different from us. In terms of culture, I attach great importance to family privacy in housing projects". To tackle cultural barriers, she believed that **spending time** and **sharing common aims** can ensure individuals get to know each other and generate strong connections. E15 gave an example from her

lectures: *"*I often choose project locations outdoors. When students travel together and spend time outside of school, they **bond more together**. They compensate for each other's shortcomings. For example, one helps cut the model, the other helps paint the model, which increases their success. Therefore, it makes my job easier*".* She also believed that such interventions could **decrease emotional barriers** at the same time. Besides this, she recommended **face-to-face communication** rather than written communication. Her rationale was that*: "*In this way, there is a livelier communication in which emotions flow". Apart from the interventions explained above, she noted that immigrants should learn local languages eventually. In this case, she suggested **intensive compelling**, which she explained that: 'In Japan, there is a free program given to those who come to the country from abroad. In this program, Japanese culture is explained. Japanese is taught at a certain level, and the program is free. Those who complete the program receive a certificate, which ensures they earn higher salaries in the workplace than those without the certificate."

To summarise, encouraging **more interaction and communication** by establishing a **mutual goal** can help different groups of people develop a better understanding of one another.

Expert 16 (E16)

- The associate lecturer has been working in the Department of Visual Communication Design in Istanbul. Her expertise areas are social media literacy, marketing and new media communication environments. Her PhD research investigated how information is received by users on specific platforms. She used information design principles. Currently, she has been providing interaction design and user experience lectures.

E16 gave a number of examples from her previous research projects and explained the application of various design principles to develop solutions. To design information, she used **gestalt perception psychology,** which was supported by **experimental observation** and **ISO / international usability criteria** in the perception process and completed with a scenario model. Participants were asked to offer their opinions on various elements (for example, navigation/redirection, feedback, screen resolution, and typography), which contributed to the final product. She also suggested **'distributed cognition' and learning theories in psychology,** which could help to understand **how people receive, process, and classify information**. To overcome cultural barriers, she pointed out that there are a number

of projects regarding cultural shock and the inability to adapt to a new region, which could be applied to this research group. To tackle emotional barriers, she emphasised that there is a need to break **prejudice,** which (in the case) was referred to **turning negative attitudes into positive** ones. Regarding this research project, she maintained that **the benefit of society** should be at the centre, and awareness of this should be adopted by teachers. Furthermore, she recommended **the gamification** method in journalism as it ensures explanations with **storytelling** by means of **visuals** to increase the level of **empathy** of others. She gave an example from the BBC animation:

> *"*Syrian refugees are put on boats and you, as the reader, choose the steps there. For example, let him ride the paper. In the second step, it tells you which way to go. You choose the road. You choose the ocean. People capsize as a result of what you choose, it happens. You experience it in animation".

She recommended that this example can be applied to this research project as follows: *"*You can show the child to teachers as a tree. You can have the teacher play such a game. There are two ways. He can be a bad person. He may harm someone in the future. Or he can be a good person and benefit society. After all, the teacher will see this as he does it*'.* To overcome unfamiliarity, the expert suggested the use of **infographics,** which ensures fast learning and **caps,** which are known as **entertaining/humour content** ("They make you think while making you laugh")*.* Regarding this research project, the expert suggested a short **orientation** for parents to overcome cultural barriers. Moreover, she recommended generating an **information package,** which may involve items such as brochures and short videos. Besides this, she suggested defining the most appropriate **methods to deliver information**. She elaborated that: *"*Are they using a mobile phone or watching television? Accordingly, these contents can be distributed to them through those channels". Furthermore, she highlighted the need for government support to reduce such problems.

To summarise, several principles (e.g., gestalt perception psychology), research tools (e.g., experimental observation) and communication techniques (e.g. storytelling) could be used to help people develop **empathy** and **positive attitude** toward each other. It is also important to break **prejudice** and focus on long-terms benefits for the society.

4.2.2 Synthesis of Expert Interview Findings

The thematic analysis of expert interviews yielded several key categories: ensuring fairness, fostering empathy, comprehending target demographics, and securing governmental support, as detailed in Table 4.15. This table presents the comprehensive findings, encompassing: 1) design principles and tools to foster in-depth understanding and collaborative goal setting between school management/teachers and immigrant parents, and 2) practical suggestions applicable within Turkish schools (e.g., strategies for building empathy and ensuring fairness). Subsequently, Table 4.16 provides practical suggestions for school staff and parents, aligned with the themes presented in Table 4.15.

Beyond the themes identified, the expert findings can be synthesised as emphasising the combined use of multiple strategies to enhance interactions between parents and teachers. These strategies include addressing emotional, cultural, and unfamiliarity-related barriers, thereby progressively mitigating language-related challenges. The recommendations should be considered holistically, as each approach complements the others; for example, the use of appropriate communication tools should be supported by indirect supports, such as fostering an inclusive school environment through visual and contextual cues that help parents feel welcomed. In summary, the expert interviews underscore the value of integrating both direct and indirect approaches and collectively applying expert recommendations to effectively address the identified challenges.

Table 4. 15. Emergent Themes and Associated Codes from Expert Interviews

Themes	Codes	Sources
Understand target groups	• User research to develop in-depth understanding of target groups and reduce prejudice • Apply co-design/co-creation to develop mutual goals and solutions with the target groups	E1, E2, E4, E5, E7, E9, E10, E11, E14, E15, E16
Ensure fairness	Creating a level playing field by: • Using universal illustrations to minimise language barriers and ensure clarity/predictability • Providing basic information in advance • Offering an orientation for all parents	E1, E2, E4, E5, E8, E10, E14, E16
Build empathy	Encouraging people to spend time together by: • Bonding through simple activities • Creating places/channels for interactions • Reducing *'friction'* through *'softening approach'* (e.g., speaking slowly, listening attentively, being friendly, organising social activities, etc.)	E3, E4, E5, E6, E7, E8, E9, E10, E11, E12, E13, E14, E15, E16

Get government support	• Get government support regarding language and orientation courses	E2, E16

Table 4. 16. Practical Suggestions for Parents, Teachers and School Management

Practical recommendations	**Potential Users**
Creating a level playing field by:	
• Using universal illustrations to minimise language barriers and ensure clarity/predictability • Providing basic information in advance • Offering an orientation for all parents	• Schools could apply these suggestions to create a basic information pack for Turkish and immigrant parents
Encouraging people to spend time together by:	
• Bonding through simple activities (e.g., cooking and cultural trips)	• Schools could use this suggestion when planning social activities • Teachers and parents are expected to actively take part in these activities
• Creating places/channels (e.g., hubs and workshops) for interactions	• Schools could use this suggestion when planning their social spaces and/or extracurricular activities • Teachers and parents are expected to actively take part in these activities
• Reducing *'friction'* through *'softening approach'* (e.g., speaking slowly, listening attentively, being friendly, organising social activities, etc.)	• Teachers and parents could use this suggestion when reach out to each other

4.3 SUMMARY OF THE CHAPTER

This section synthesises the requirements elicited from key stakeholders (see Section 4.3.1) and the advice provided by experts (see Section 4.3.2); all framed within the principles of Human-Centred Design (HCD). Giacomin's HCD pyramid was employed as a systematic framework to illustrate these findings below, as elaborated:

- 'Who': Utilised to identify key stakeholders.
- 'What': Employed to categorize stakeholder requirements.
- 'When': Defines the temporal parameters for the application of identified requirements.
- 'How': Applied to align solutions suggested.
- 'Why*'*: Serves to justify the utility of the proposed solutions.

4.3.1 Key Stakeholder Requirements

When embedding the stakeholder interview findings, it became evident that for school managers, the most important requirements included developing a comprehensive understanding of existing challenges and identifying viable solutions, thereby enabling the effective communication of this information to other staff members.

Primary teachers necessitated a clearly defined protocol for communicating with parents outside scheduled annual meetings, along with additional support from Heads of Year or other pertinent experts. Both primary teachers and Heads of Year articulated a need for enhanced comprehension of the challenges confronting immigrant parents and children, as well as linguistic support from the school. Parents' requirements were multifaceted, including the cultivation of a sense of belonging; a deeper understanding of the significance of parental involvement in children's education; clear information about the Turkish education system; timely updates on school activities (e.g., school trips, parent-teacher meetings, and national holiday celebrations); guidance on social norms and rules; consistent communication with teachers; psychological support, ideally provided by both the local government and the school; and financial and linguistic support from the local government and/or the school. The translator, in turn, emphasised the importance of maintaining regular communication with school managers. These suggestions warrant continuous consideration throughout the academic terms.

Ultimately, while the requirements of school staff primarily focused on practical considerations, parental requirements also included psychological support, which should be incorporated into the forthcoming guidelines to address these diverse needs. The findings presented herein predominantly address the [Who] requires [What] in which situations [When], and to a lesser extent, the [Why] components, aligning with the Human-Centred Design (HCD) pyramid framework. This analysis will be further enriched through the integration of insights from expert interviews.

4.3.2 Expert Suggestions

The expert suggestions are categorized according to the specific needs of various stakeholder groups. These recommendations are comprehensively summarized at the conclusion of this section.

A) Recommendations Pertaining to School Management Requirements

- Awareness of problems: The school managers should set regular meetings with teachers and heads of year to discuss problems in a timely manner. The meetings should be on a solution-oriented basis, where potential solutions are discussed and actions are taken.
- Government support: School managers should consider enhancing collaboration with state representatives (e.g., municipalities) to obtain relevant information (e.g., language courses, financial assistance, and welfare support) and share it with immigrant parents.

B) Recommendations Pertaining to Teacher and Head of Year Requirements

The suggestions were grouped into 2 groups: the first group is applicable to teachers only and another one is relevant to both teachers and heads of year.

Suggestions in regard to teachers' requirements:

- Clear meeting protocol: The school manager should develop a protocol for one-to-one meetings between parents and teachers and ensure it is communicated to all key stakeholders (such as sending texts on WhatsApp) throughout the whole academic year.
- Expert support: The school manager should collaborate with Heads of Year to enhance the support provided to teachers when addressing issues raised by immigrant children and their parents. Further expert support from outside of school could also be offered.

Suggestions in regard to teachers and heads of year's requirements:

- Empathy development: The school manager should create and disseminate essential information via orientation courses (such as seminars) to teachers and heads of year to help them develop empathy for immigrant children and parents. The orientation courses should include information about key challenges facing immigrant children and parents (e.g., immigrant or refugee psychology, financial problems, psychological problems and adaptation

problems). To enhance interaction between immigrant and local parents as well as teachers/heads of year, the school could offer social activities that encourage interaction among all parties and foster empathy towards one another.

- Language support: The school should provide a translator on-site and explore ways to further enhance the quality and effectiveness of this service. Moreover, the school managers should provide guidance to teachers on how to utilise other appropriate communication channels when talking about non-private issues, for example, requesting essential materials, approval letters from parents for school trips (such as sending texts on WhatsApp – parents and teachers can utilise Google Translate for translation, phone calls – relatives or friends of parents can utilise parent-teacher communication) when needed.

C) Recommendations Pertaining to Parental Requirements

The parental requirements can be summarized as follows:

- Sense of belonging: Social activities that encourage immigrant parents to engage with local parents and teachers could help foster a greater sense of belonging. The school managers could help reduce barriers and enhance accessibility for parents in various ways (e.g., having dual language signage and organising cultural and historical trips based on common interests of all parties during the academic year).
- Clear information: School managers should develop and disseminate essential information to parents through orientation courses (such as a series of seminars). At the beginning of each year, parents should be invited to attend to seminars where the educational system as well as expectations in terms of parental support were explained. Members of staff should be involved. For example, heads of year could help prepare bilingual information boards and posters, and display them to visible areas. Teachers could help disseminate required information about social events (e.g., school trips) during the academic year via appropriate communication channels.
- Being updated: Parents should be regularly updated on school activities and on expectations for their involvement throughout the academic year, using various

communication channel (e.g., seminars and information/notice boards). Parents should also be encouraged to interact with other people and actively take part in formal and social activities.

- Social rules: The parents should be offered: 1) orientation courses, 2) designated social spaces in the school and 3) social activities. The orientation courses could involve information about the culture of the host country. The social space could enable parents spend more time at school and have an opportunity to interact with local parents. Social activities based on common interests (e.g., historical trips) could also be organised to promote interactions among all parties.
- Regular communication with teachers: The parents should be informed about the availability of the translation service for one-to-one meetings, and also encouraged to attend group meetings. For the group meetings, a translator should be available at the meeting to translate the statements for parents. Parents should also be advised to make a good use of other supportive channels, such as WhatsApp, phone calls, bringing a relative or a friend to school for non-private issues.
- Psychological support: Heads of year should take a key role in supporting parents. For example, parents should be given an opportunity to consult and share their difficulties with them. Additional external support (such as psychologists, heads of year, consultations) could also be outsourced.
- Financial support: The school may indirectly help parents from a financial perspective. For example, school managers should consider financial situations of parents when planning any programs or activities for parents/children. For example, low-cost activities, which do not require parents' financial contribution, could be prioritised. School managers should consider working with local authorities and direct parents to suitable financial support provided by the local government if needed.
- Language support: The school should raise an awarenesses regarding language barriers and promote positive mindset among staff. School managers should take actions to decrease language barriers at the school during the semester terms, e.g., offering a translation service and/or enhance the existing translation service (e.g., ensure that a translator is available to attend meeting by matching the meeting dates and time with the availability of the translator). Moreover, school

managers could direct them to appropriate language courses provided by the local governments.

D) Recommendations Pertaining to Translator Requirements

Teachers expressed a desire to utilize translation services more effectively, while school managers anticipated a more proactive service with enhanced contact with the management team. Concurrently, experts recommended the broader availability of school-based translators who possess familiarity with the lifestyles of both cultural groups involved.

4.3.3 Consolidated Synthesis of the Section

Finally, the solutions proposed by experts to address school needs—particularly those of primary teachers and parents—are summarized in Table 4.17. For instance, the development of empathy among educators and parents is identified as essential and may be supported through tailored orientation courses, collaborative activities, and increased interaction in shared spaces. Among the stakeholder needs, a sense of belonging is particularly salient for Syrian parents and may be fostered through appropriate communication channels, dedicated orientation programmes, extended engagement within the school environment, inclusive spatial arrangements in visible areas, and governmental initiatives. These findings are subsequently integrated into Table 4.18 through the lens of the Human-Centred Design (HCD) pyramid to inform school management.

Table 4. 17. Summary of Solutions Proposed by Experts to Address Schools' and Parents' Needs

Expert insights	**Stakeholder requirements**						
	Language supp.	Clear info.	Regular comm.	Empathy dev.	Expert guid.	Financial asst.	Sense of belg.*
Communication channels & Tools	X	X	X				X
Orientations		X		X	X		X
School activities		X		X			X
Common areas		X		X			X
Spatial arrangements		X					X
Government involvement					X	X	X

**Mainly intended for parents.*

As the overall information is intended for school managers, the primary focus is presented in the top row of Table 4.18, supplemented by relevant information concerning other school staff and parents for managerial consideration. As indicated in the table, school managers should prioritise awareness of communication challenges between parents and teachers, improved knowledge of external support services, and timely engagement with external experts when necessary. These measures should be implemented throughout the academic year and can be supported through regular meetings with school staff and ongoing communication with relevant authorities. Such practices are essential for mobilizing both internal and external support and for providing adequate assistance to parents and teachers in order to enhance their interactions.

With regard to parents, teachers, heads of year, and school translators, it is particularly important that translators possess familiarity with both cultures and educational terminology, accurately convey information between parties, and have their schedules and performance regularly monitored by school managers throughout the academic year. This can be ensured through professional orientation and systematic feedback mechanisms. The anticipated outcome is increased service efficiency, thereby contributing to more effective communication between parents and teachers. All of this information is organized under the relevant sections of the guideline.

It should also be noted that some of the elements may not directly within school managers' area of responsibility, such as collaborating with state representatives, providing language support, or seeking financial assistance. However, considering these actions could help reduce their workload by easing certain challenges within schools. Therefore, rather than focusing solely on the areas directly under their responsibility, all suggestions are presented together, as some school managers may view them as outside their domain, which could ultimately help address existing issues more effectively.

Table 4. 18. Synthesis of Chapter Findings through the HCD Pyramid Framework

WHO?	WHAT?	WHEN?	HOW?	WHY?
School managers	Awareness of communication problems, further government support, further expert support	Throughout the whole academic year	Regular meetings with teachers, heads of year and the interpreter service team, regular communication with local authorities	To gain financial support and expert support and provide sufficient help to parents and teachers
Parents	Clear information, social rules, sense of belonging, being updated, regular communication with teachers, psychological support, financial support, language support	Throughout the whole lifespan of their children's education (some information should be given at the beginning of the academic year and several reminders throughout the year)	Orientations, common areas, social activities, cultural activities, physical arrangements, communication channels-tools, government support	To increase the involvement of parents at the school, to enhance parental support and increase the success of immigrant students
Teachers	Clear protocol, further expert support, empathy development, language support	Throughout the whole academic year (some information should be given at the beginning of the academic year)	Orientations, communication channels-tools, support of heads of year and experts	To enhance co-operation between parents and teachers and help reduce students' problems.
Heads of year	Empathy development, language support	Throughout the whole academic year (some information should be given at the beginning of the academic year)	Orientations, communication channels-tools	To enhance support of heads of year and help reduce students' problems.
Translator	Familiarity with both cultures and educational terms, effective translation, to be inspected by the school managers	Throughout the whole academic year (some information should be given at the beginning of the academic year and several reminders throughout the year)	Orientations, regular feedback given to school managers	To enhance effectivity of the service and ensure efficient communication between parents and teachers

The overarching requirements identified for consideration are delineated by the following key areas: **Language Support** (encompassing the provision of translation services within the school and directing parents and teachers to utilize other supportive communication channels), **Clear Meeting Protocols** (specifying structured periods for teacher-parent interactions and clarifying the procedural aspects), **Orientation Courses** (ensuring tailored induction programs for both school staff members and immigrant parents), **Social Activities** (facilitating events, including cultural and historical trips, to foster interaction and cultivate a sense of belonging), **Common Spaces** (designating a dedicated area within the school environment where parents can spend time and engage with others), and **Visual and Physical Modifications** (implementing visual arrangements to enhance accessibility for parents within the school environment). It is also important to recognize that, while each suggestion holds considerable significance, a hierarchy of importance may exist, which should be leveraged to guide the development of the guidelines.

Specifically, the sections pertaining to 'Language support' and 'Clear meeting protocol' are directly linked to the core problem, thereby necessitating their placement at the apex of the prioritised list. Furthermore, 'Orientation courses' and 'Social activities' are identified as underpinning essential barriers, positioning them within the medium-priority category. Orientation courses mitigate barriers stemming from unfamiliarity with terminology and, if comprehensive, can also contribute to reducing emotional and cultural barriers (as evidenced by findings from T2, E2, E8, E13, E14). Social activities address emotional and cultural barriers; consequently, both in-school and extracurricular social engagements warrant significant consideration (supported by findings from T7, E3, E7, E9, E10, E12, E13, E14, E15, E16). Conversely, the sections 'Common space' and 'Visual-physical modifications' serve a supportive function within the overall context, thus placing them relatively lower in the prioritisation. Exposing the physical area can directly assist in barrier reduction, contingent upon the level and method of exposure (see findings from E3, E4, E7, E12, E13). Similarly, visual arrangements indirectly contribute to barrier reduction, with the overarching objective being the general elimination of impediments (refer to findings from H1, H2, E5, E6, E14). This differentiated impact

suggests categorizing these six practical suggestions into 'Essential support,' 'Recommended Support,' and 'Extra support.'

Finally, Table 4.20 synthesises primary and secondary research findings, augmented by direct insights gleaned throughout this study. For instance, acknowledging the prevalent challenge of limited resources within educational institutions, the 'Common Spaces' section incorporates a discretionary recommendation to repurpose underutilized areas for communal benefit. Similarly, recognizing the socio-economic challenges often faced by immigrant parents, the ‘Social Activities’ section recommends considering activities that provide direct and tangible benefits. This integrated information is intended for dissemination to school managers, with specific strategies for enhancing its effectiveness detailed in the subsequent Chapter (Chapter 5).

Table 4. 19. Synthesis of Primary and Secondary Research Findings, Forming the Basis for the Proposed Guidelines Directed at School Managers.

	Core Concepts	Supplementary Suggestions for School Managers
Essential support	<u>Language support</u> • Ensuring the constant availability of a translator within the school to reduce language barriers, thereby enhancing in-person parent-teacher interactions and overall communication.	- Ensuring that translations are effectively utilised during in-person immigrant parent-teacher meetings if needed. - Ensuring that school staff and parents use alternative communication channels, such as WhatsApp, for non-sensitive topics when in-person meetings are not feasible. - Ensuring that the overall effectiveness of the translator is increased (e.g., by scheduling regular meetings with translators to gather written feedback) - Ensuring that parents learn Turkish, which can be achieved by directing parents to Turkish language courses, encouraging them to watch Turkish TV channels, and offering language courses at the school. - Ensuring that all school staff and parents are informed about the availability and working hours of translators at the school, through the dissemination of relevant information and multiple reminders throughout the year.
		These can be categorized into three main areas: the effectiveness of translators, the use of alternative tools, and the availability of language courses at the school. Each section can be expanded upon to provide further clarity. This structure could help school administrators pinpoint key areas needing attention and develop effective strategies to address language barriers.
	<u>Clear meeting protocol</u> • Ensuring that a clear protocol is established for one-on-one meetings at the school, and that this information is effectively disseminated to all, thereby minimizing parental uncertainty about the parent-teacher engagement process.	- Ensuring that teachers and parents meet regularly, with suggested topics for discussion, such as the child's overall well-being, social behaviours (e.g., interactions with other students), future goals, and ways to support student success. - Ensuring that teachers maintain written records of meetings for easy follow-up, while encouraging heads of year and teachers to collaborate more effectively to address and reduce issues. - Disseminating information about the meeting processes to all parents and teachers, with several reminders throughout the year.
		These topics can be categorized under framed meeting periods, enhanced collaboration between school staff, and the use of translators. Further details can be expanded under each subheading. This structure could assist school management teams in identifying key focus areas and developing effective strategies for addressing this issue.
Recommended support	<u>Orientation courses</u> • Ensuring that tailored orientation courses for both school personnel and immigrant parents are offered multiple times throughout the year, aimed at reducing mutual biases and helping parents become familiar with the school system.	- Ensuring that key topics are covered in parent orientations, including the impact of education and parental support on children's future outcomes, clear information about the local education system and parental expectations, social norms in the community, school-provided support services, opportunities available from local authorities, and advice to support their adaptation - Ensuring that key topics are covered in school staff orientations, including the challenges faced by immigrant parents, strategies for effective communication, available supports offered by the school, and suggestions for reducing issues related to immigrant children and their parents.
		All this comprehensive information can be provided as separate suggested orientation topics for immigrant parents and school staff.
	<u>Social activities</u> • Ensuring that social activities are organised throughout the year, both within and beyond the school premises, to foster interpersonal interactions and cultivate empathy.	- Ensuring the availability of courses for parents within schools, with the suggestion that school staff (e.g., art teachers, music teachers) be involved in implementing these activities, prioritising low-cost, practical courses (e.g., sewing). - Ensuring the organization of cultural and historical excursions. - Ensuring that parents are informed about free external course offerings.
		All the information in the section on social activities can be categorized into three main areas: cultural and historical activities, parent-focused school activities, and public course information dissemination, with detailed explanations provided under each subheading.
Extra support	<u>Common space</u> • Ensuring the creation of a designated common space at the school that provides parents with the opportunity to engage with Turkish culture, thereby supporting their socio-cultural integration.	- Ensuring that the common space includes materials that help immigrant parents learn more about Turkish culture and the Turkish education system, such as newspapers, books, and other resources. - Ensuring that refreshments are available in the space to make it more welcoming and encourage parents to spend more time at the school (e.g., biscuits, coffee, tea, etc).
		Supplementary information regarding the common space concept can be provided under subtopics such as availability of certain materials and existence of intensive environment with further details elaborated within these subsections. This structure would support school management teams in pinpointing critical focus areas for the common space.
	<u>Visual and physical modifications</u> • Ensuring the implementation of physical and visual modifications within the school building to enhance accessibility and inclusivity for diverse groups, thereby reducing overall barriers.	- Ensuring the use of icons and universal symbols throughout the school. - Ensuring the creation of bilingual information boards in visible locations - Ensuring support from relevant school staff (e.g., art teachers, heads of year)
		All supplementary information regarding visual and physical arrangements can be expanded under the subheadings of use of certain illustrations and use of additional elements, with broad explanation that would help school managers concentrate on key areas for school-wide modifications.

Chapter 5. GUIDELINE DEVELOPMENT

This chapter provides a detailed account of the systematic development of a guideline specifically designed for Turkish primary school managers. The development process was informed by a synthesis of expert recommendations, best practices identified from relevant case studies, findings from the extant literature, and insights generated through the present research. The comprehensive process of guideline development is presented across five sections, which are further elaborated in the subsequent section.

5.1 INTRODUCTION TO GUIDELINE DEVELOPMENT

A comprehensive review of the extant literature consistently indicates that a **guideline format** is optimally suited for this project. Empirical evidence demonstrates the instrumental role of guidelines in enhancing outcomes across diverse sectors. In the healthcare domain, for example, guidelines have been shown to enhance service users' health, prevent disease, empower staff to confidently address patient concerns, and contribute to the economic and social well-being of communities by promoting health improvement and reducing inequalities within hospitals (NICE, 2023). The successful impact of utilizing guidelines is also evident in education, as demonstrated by a guideline for school staff members (see Dennis and Stockall, 2015 as an example). Given these findings, there is a strong likelihood that providing school managers in Turkish schools with clear guidelines can offer valuable direction and contribute to positive improvements in their specific context. The development process of the guideline presented in this chapter is summarised in Table 5.1.

Table 5. 1. Overview of Chapter 5

Sections		Explanation
5.2 Background research for the guideline context		The initial phase entailed a comprehensive literature review conducted to establish a rigorous theoretical framework and to facilitate the systematic organization of pertinent material.
5.3 Reviewed guidelines		The researcher undertook a systematic review of existing guidelines to identify exemplary models that could inform the development of the guideline central to the present research project.
5.4 Information architecture (IA)		This section is dedicated to development of IA, which was essential for systematically organizing the overall structure of the prototype guideline.
5.5 Summary of the Chapter 5	A) Chapter Overview	This section provides a synthesis of the chapter's content.
	B) Presentation of the Prototype Guideline	The prototype guideline is presented herein in a structured layout format, with the complete guideline provided in Appendix E for reference.

5.2 BACKGROUND RESEARCH FOR THE GUIDELINE CONTEXT

A guideline, fundamentally defined as a form of information providing recommendations on how a specific action should be carried out (World Health Organization, 2015), is prominently advantageous for offering swift access to essential information (Shekelle *et al.*, 1999; World Health Organization, 2015). Consequently, significant effort has been dedicated to developing strategies for efficient and effective guideline creation.

Early frameworks for guideline development, as outlined by Shekelle et al. (1999), typically involved seven sequential steps: (1) listing priority topics, (2) searching the relevant literature, (3) drafting potential recommendations, (4) sharpening the focus, (5) formulating specific questions, (6) reviewing, and (7) reconsidering. Subsequently, the World Health Organization (WHO) (2015) redefined this process into five key stages: (1) identifying and refining the subject area of a guideline, (2) convening and managing guideline development groups, (3) identifying and assessing the evidence, (4) translating evidence into a practice guideline, and (5)

reviewing and updating guidelines. This refined process was further elaborated through the identification of crucial considerations for guideline development, including audience targeting, timeline management, budget allocation, identification of necessary resources and skills, impact evaluation, collaboration with external partners, determination of product type, planning for peer review, translation strategies, and overall process management (ibid).

In 2003, the Appraisal of Guidelines for Research and Evaluation (AGREE) framework was introduced (Terrace, 2003). This comprehensive framework and set of tools, designed primarily for evaluating guidelines within healthcare domains, was structured around six distinct domains. Domain 1, "Scope and purpose," assesses the clarity of a guideline's overarching objectives, its specific clinical questions, and its intended patient population. Domain 2, "Stakeholder involvement," scrutinizes the composition of the guideline development group, ensuring representation from all relevant professional perspectives, the integration of patient views, the clear definition of target users, and the prior piloting of the guideline among end-users. Domain 3, "Rigor of development," evaluates the systematic methods employed for evidence searching, the explicit description of selection criteria and recommendation formulation methods, the consideration of health benefits, side effects, and risks, the conduct of external expert review, and the presence of an explicit link between recommendations and their supporting evidence. Domain 4, "Clarity of presentation," assesses the specificity and unambiguous nature of recommendations, the clear exposition of different management options, and the ease with which key recommendations can be identified. Finally, Domain 5, "Applicability," evaluates whether the guideline is supported by practical tools designed to facilitate its implementation. Subsequently, AGREE I was revised and expanded into AGREE II (Brouwers *et al.*, 2010), which maintained the original six core domains but introduced refinements such as the reordering or reassignment of certain items for enhanced logical flow. Notably, while initially conceived for healthcare, the AGREE framework's principles have demonstrated broader applicability across diverse domains requiring systematic guideline development and appraisal.

The World Health Organization (2015) further categorizes guidelines based on their structure and purpose. Rapid advice guidelines are typically produced in response to urgent public health emergencies. Standard guidelines are issued to address

changes in practice or areas of controversy. Full guidelines provide comprehensive coverage of a specific topic. Compilations of guidelines consolidate existing recommendations without introducing new ones, while adaptations of guidelines modify original guidance for use in different contextual settings. Beyond these formal guidelines, the organisation also produces various information products (e.g., standards for manufacturing health technologies) that provide information on a topic but do not contain formal recommendations.

In summary, this literature review highlights the structured evolution of guideline development processes. While certain components of the updated guideline processes (as suggested by WHO, 2015) - specifically, identifying and refining the subject area, convening and managing guideline development groups, and identifying and assessing the evidence - were already foundational to earlier methodologies, the 'translating evidence into a practice guideline' phase constitutes the primary focus of the current chapter. Subsequently, Chapter 6 will concentrate on the 'reviewing and updating guidelines' stage. Furthermore, the majority of the elements highlighted by WHO (ibid), such as target audience, timelines, and budget, were comprehensively considered and integrated into the planning of this research project. Examination of the key domains within the AGREE framework confirmed their inherent coverage within this research, thereby validating the methodological direction of the study. Lastly, the guideline developed for school managers in this project is appropriately classified as a *full guideline* given its comprehensive topical scope and corresponding structural design, with additional insights drawn from the examination of other relevant full guidelines in the subsequent section.

5.3 REVIEWED GUIDELINES

To inform this project, a comparative analysis was employed to evaluate existing guidelines. This systematic approach identifies similarities, differences, strengths, and weaknesses to support evidence-based decision-making (Brouwers *et al.*, 2010; Furnari, Greckhamer and Fiss, 2018). This process involves five phases: defining scope, selecting subjects, establishing rigorous criteria, collecting data, and analysing findings (Basurto and Speer, 2012).

Guideline Selection and Evaluation Framework: The inclusion and exclusion criteria for the reviewed guidelines from diverse contexts was given in Table 5.2. For the

evaluation of the reviewed guidelines, the criteria established for assessing this research project's output was adapted as elaborated in Chapter 3 (see Section 3.2): clarity, comprehensiveness, practically, usefulness.

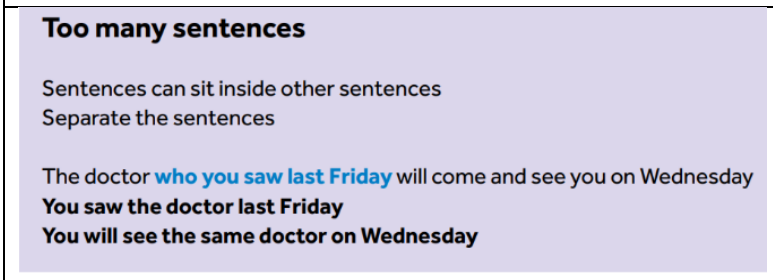
Table 5. 2. Inclusion and Exclusion Criteria for the Reviewed Guidelines.

Inclusion criteria	Exclusion criteria
Guidelines were…	
- developed by official authorities	- developed by unknown authorities
- designated as a full guideline	- incomplete, narrowly focused on specific aspects and/or did not offer new recommendations (e.g., compilations of guideline)
- provided practical suggestions	- lacked practical suggestions
- designed for users with potentially limited knowledge of topics	- specifically intended for experts in related fields

I) Guideline 1: Accessible information guidelines: making information accessible for people with aphasia (Herbert, 2012)

To identify good practices, the guideline aimed to improve communication with individuals with aphasia by focusing on information delivery to those interacting with them. The resource provides a concise explanation of aphasia, its significance, and its intended audience. Communication recommendations are presented in five steps, enhanced by adaptable examples illustrating correct and incorrect approaches (see Figure 5.1). Readers are also directed to a webpage and other resources for further learning. Given its target audience and information delivery, the guideline aligns with the empathic design philosophy (E6).

a



b

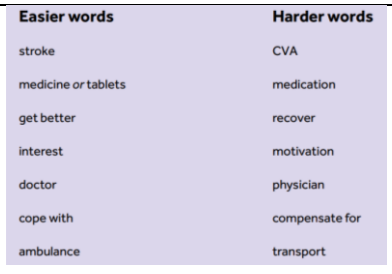


Figure 5. 1. Sample Pages From the Guideline / a: Adaptable Examples Provided, b: Appropriate and Inappropriate Word Use (Herbert, 2012)

II) Guideline 2: Experience based design: using patient and staff experience to design better healthcare services (Baxter, Mugglestone and Maher, 2009)

This guideline targeted to enhance the quality of medical care through experience-based design (EBD) principles, utilizing both patient and staff experiences to design

better healthcare services. It guides healthcare professionals through four key steps, with each section distinguished by different colours (see Figure 5.2-a) and expanded with example scenarios from real-life experiences (see 5.2-b). Users are provided with links to websites where they can download worksheets and watch DVDs for practice throughout the guidelines (see 5.2-c).

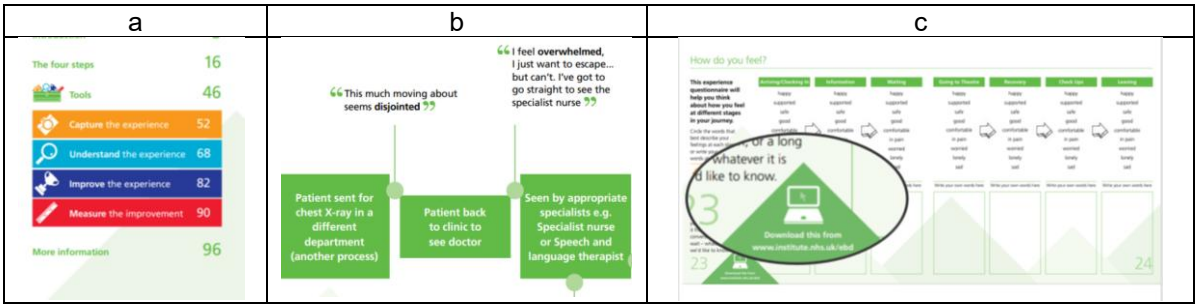


Figure 5. 2. Sample Pages From 'Experience based design: using patient and staff experience to design better healthcare services' / a: The Contents, b: Real Life User Experience scenario, c: A Worksheet to be Downloaded from the Website (Baxter et al., 2009)

III) Guideline 3: Global age-friendly cities: a guide (World Health Organisation, 2007)

The guidelines aimed to inform authorities about the essential necessities for creating age-friendly cities. Several key features stand out in this resource. The primary topic, aging, and its research background are thoroughly elaborated with supporting evidence (see Figure 5.3-a), and it includes a dedicated section for each topic (e.g., outdoor spaces and buildings, transportation, social participation – see Figure 5.3-b). By adopting a holistic approach – considering both the psychological and physical needs of elderly individuals while accounting for the constraints and opportunities of the environment – it could be assessed as a successful example of the environmental psychology approach outlined by E3.

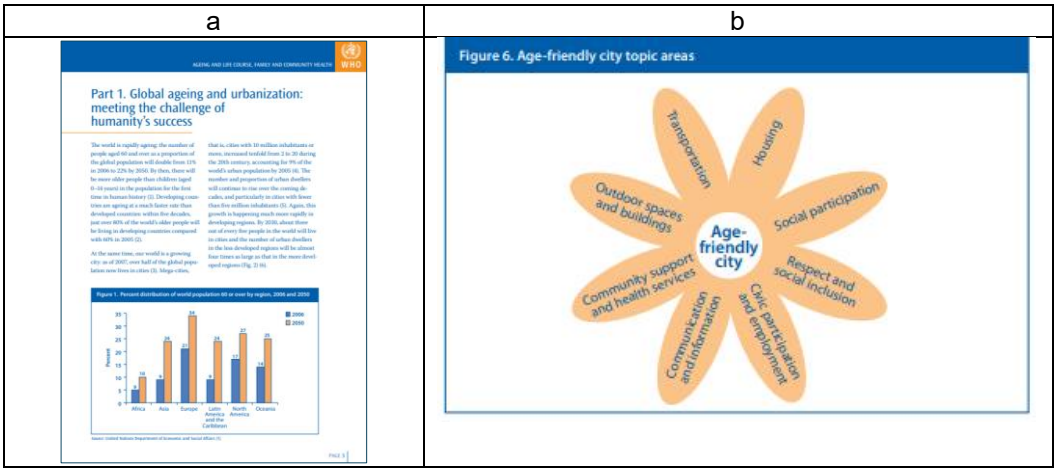


Figure 5. 3. Sample Pages from 'Global age-friendly cities: a guide'. a: Background Research, b: Topics of the Resource (World Health Organisation, 2007)

IV) Guideline 4: Ultimate Guide to a Healthy Lifestyle (Orthoindy ,2020)

The guideline was proposed by a private medical centre to encourage people to maintain a healthy lifestyle through the recommendations included in six sections (e.g., how to start living a healthy lifestyle, how to be mentally healthy and happy, how to exercise). Suggestions are customizable, readers are given multiple suggestions supported by quick tips and external links for further information (e.g., websites, books, blogs, and podcasts) - see 5.4 for the example pages from the guideline. The guideline itself could be an application of the Zone of Proximal Development (ZPD) theory outlined by E9, as it enables users to improve themselves towards a healthier lifestyle.

Figure 5. 4. Sample Pages from the 'Ultimate Guide to a Healthy Lifestyle' Guideline (Orthoindy, 2020)

V) Guideline 5 - A Guide to Co-design (Western Victoria Primary Health Network, 2021)

The guideline was proposed to improve the effectiveness of healthcare services for patients through the application of co-design principles. This resource presents the comprehensive topic of co-design to people from different groups (health staff) in a very simplified and concise manner within just a few pages – see Figure 5.5 for example pages. From this aspect, the guideline could be seen as an example of Dieter Rams' design philosophy, highlighted by E1.

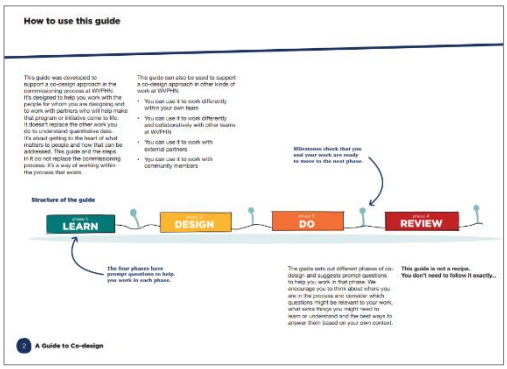
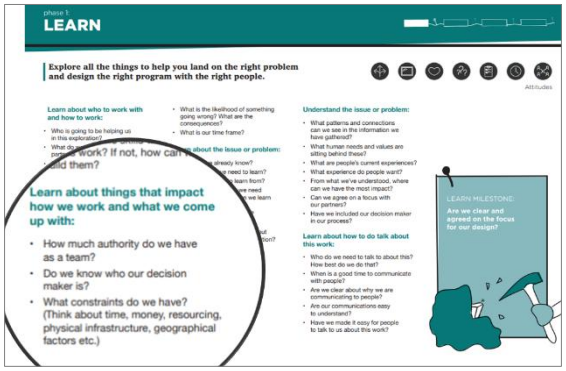
a	b
	

Figure 5. 5. Sample Pages From 'A Guide to Co-design'. a: The description for the resource's intended use, b: An example Page Depicting the Initial Section of the Resource (Western Victoria Primary Health Network, 2021).

Summary of the guidelines reviewed guidelines: The guidelines reviewed were systematically evaluated against four key criteria: clarity, comprehensiveness, practicality, and usefulness, as illustrated in Table 5.3.

Regarding clarity, Guidelines G1, G3, G4, and G5 were identified as exemplary. G1's clarity was enhanced by a variety of examples, while G3 achieved clarity through elaborated information supported by concise bullet-point tips. G4 benefited from extensive supportive information, including illustrative figures and hyperlinks to external resources, collectively facilitating understanding. G5's clarity was ensured by providing information at an appropriate level for users requiring limited detail, further augmented by effective plain graphic design and the application of Gestalt principles (specifically grouping and continuity). Conversely, G2 only partially met clarity requirements due to its complicated and disorganized information presentation.

Concerning comprehensiveness, G2, G3, and G4 fully satisfied the criteria by offering an adequate level of detail. In contrast, G1 and G5 only partially met these requirements, as they appeared to lack some information that individuals without a background in the respective topics might require.

For practicality, G4 and G5 largely met the criteria, G1 and G3 partially, and G2 very limitedly. G4 and G5 were deemed highly practical, allowing users to straightforwardly employ their suggestions. G4, for instance, offered several adaptable options, broadening its applicability, and provided direct hyperlinks to highly relevant further information. G3 was considered partially practical due to

limited technical information, which users might need for direct implementation. G2, however, proved impractical, requiring users to download multiple worksheets and engage with DVD/printed material, which could be confusing for busy professionals.

Lastly, regarding usefulness, G1, G4, and G5 emerged as the best examples, G3 partially met the criteria, and G2 barely did. G5, for example, was designed to facilitate collaboration among health staff, possessing inherent value, utility, and applicability. G3, while potentially beneficial for authorities, required further arrangements, such as providing technical information, to enhance its overall usefulness. G2, despite its valuable intention, lacked straightforward applicability, limiting its practical use.

Table 5. 3. The Comparison for the Reviewed Guidelines

Key elements	G1	G2	G3	G4	G5
○ Clarity					
○ Comprehensiveness					
○ Practically					
○ Usefulness					

Largely meeting the requirements | Partially meeting the requirements | Barely meeting the requirements

**Colour codes for Table 5.3.*

Overall, based on this evaluation, G4 was chosen as a preliminary example for the guideline development stages because it most comprehensively met the established criteria. Other reviewed guidelines also provided valuable insights, serving as further examples for successful element employment or highlighting practices to avoid. Driven by the need for enhanced clarity and a more professional aesthetic, the researcher not only integrated supplementary information like instructive videos, podcasts, and relevant illustrations under each subheading, but also refined the design format by applying lessons from G2, G4, and G5's adherence to Gestalt principles, optimizing the use of information design elements. To ensure comprehensiveness, all information synthesized from the data analysis chapter thoroughly addressed. This included the incorporation of additional participant quotes and literature probes to enrich and expand the content, mirroring the approach taken in Guideline 4. To enhance practicality, the number of adaptable suggestions from primary and secondary findings was increased to benefit a wider

population, and relevant links were added to most sections for immediate access to further implementation information. An action plan was also appended to organize the process, further boosting practicality. Lastly, to maximise usefulness, the guideline was prepared for the most straightforward possible application. Subsequently, the benefit of the reviewed guidelines can be articulated as their contribution to the more effective application of Information Design principles within the school managers' guideline, thereby enhancing its overall utility and impact.

5.4 INFORMATION ARCHITECTURE (IA)

The concept of Information Architecture (IA) pertains to the systematic organization of information to transform raw data into meaningful and usable knowledge for users (Dillon and Turnbull, 2005; Resmini, Rosati and Cootey, 2011). While its foundational principles were originally developed within the context of web design (Dillon and Turnbull, 2005), IA has broader applicability across any domain requiring the structuring of complex information resources. In the present project, the summary of findings presented in Table 4.20 provided a coherent structure for the main content, forming the core of the IA. Furthermore, the review of exemplar guidelines discussed in Section 5.3 significantly informed the development of the IA, particularly regarding the inclusion of background information (e.g., purpose and development methodology), delivery of the main suggestions and concluding elements (e.g., action plans and contact information for further support). The final sitemap, representing the guideline's content structure, is illustrated in Figure 5.6.

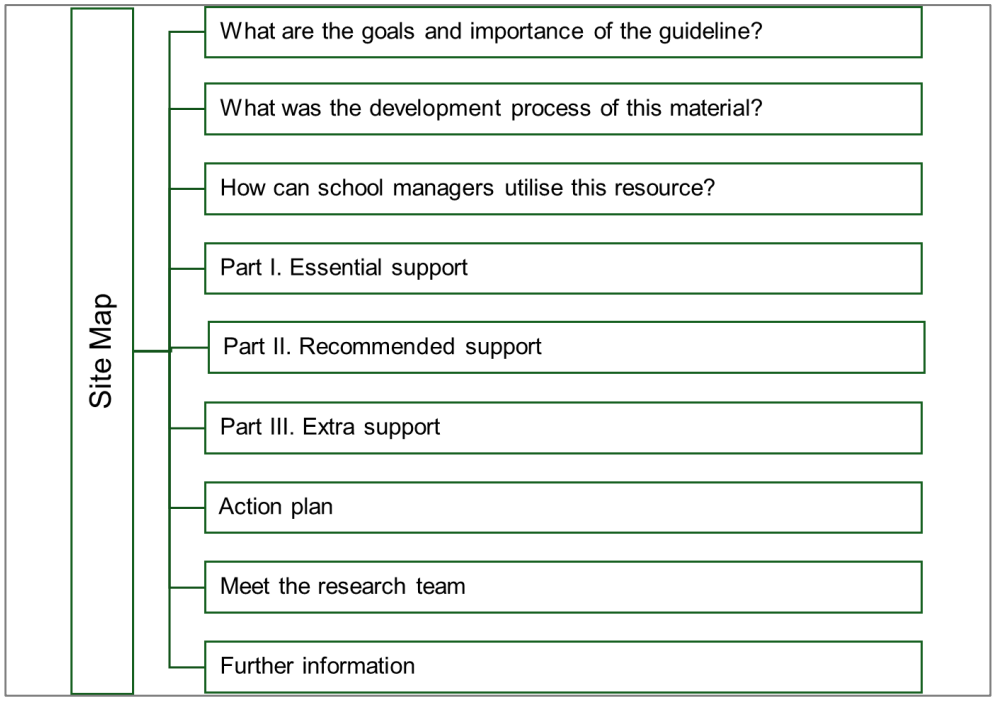


Figure 5. 6. Sitemap of the Prototype Guideline

The full guideline was developed to incorporate all essential components. It begins with an explanation of the objectives and significance of the material, followed by a concise description of the methodology employed in its development. Subsequently, the guideline provides clear instructions on how the target audience can effectively utilise its content. This background information is complemented by practical recommendations, organized into three distinct sections. The **Essential Support** section includes Language Support and Clear Meeting Protocols; the **Recommended Support** section encompasses Orientation Courses and Social Activities; and the **Extra Support** section covers Common Spaces as well as Physical and Visual Modifications. A comprehensive overview of the prototype guideline is presented in the subsequent section (see Section 5.6).

5.5 SUMMARY OF THE CHAPTER 5

The chapter summary is organized into two subsections: Chapter Overview (A) and (B) Presentation of the Prototype Guideline.

A) Chapter Overview

This chapter presented the systematic development of a guideline for Turkish primary school managers. The design and structure of the guideline were informed

by a synthesis of research findings and insights, integrated with principles of Information Design and Information System Design strategies, as illustrated in Figure 5.7. These approaches facilitated the delivery of the material in a format that is both accessible and practical for school managers. Additionally, as discussed throughout this chapter, the review of guideline context literature, analysis of exemplar guidelines, and application of Information Architecture collectively contributed to the development of an appropriate prototype guideline.

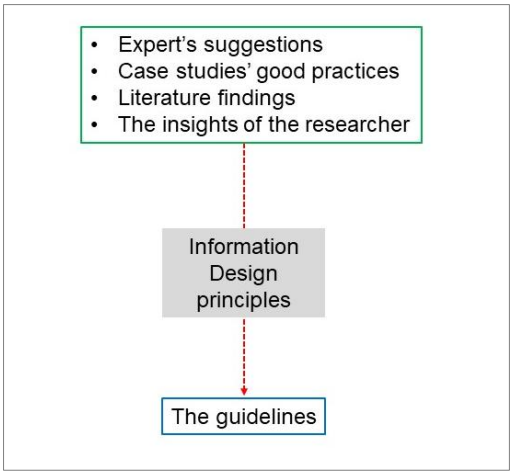


Figure 5. 7. Summary of the Guideline Development Process

The review of background research on the guideline context was particularly instrumental in framing the concept of the intended guideline, ensuring that the prototype adhered to a coherent structure and incorporated all essential components relevant to its intended group. The examination of example guidelines further enhanced the clarity, comprehensiveness, practicality, and applicability of the developed guideline. Multiple strategies were identified through this review, which informed the design choices implemented in the current guideline. Finally, the use of Information Architecture provided a structured overview of the guideline's content, ensuring that the overall organization was clear and logically sequenced prior to finalising the prototype.

B) Presentation of the Prototype Guideline

Prior to presenting the final prototype, a brief overview of its content and delivery approach is provided. As previously noted, the guideline was developed using the Information System Design strategies proposed by Tore-Yargin (2013). A concise

explanation of these strategies, and their application within the guideline, is provided below.

Employment of the content strategies: Consistent with Content Strategy 1 (CS-1) ‘Multidimensionality’, the resource was developed collaboratively, integrating input from a range of stakeholder groups. Furthermore, in developing this material, direct quotes, insightful probes, and real-life examples from participants were embedded throughout the resource, thereby aligning with CS-2 ‘In-depthness. The background information provided was deliberately broad and comprehensive; for instance, the rationale for the guidelines and the inherent importance of each practical suggestion were explicitly articulated, fulfilling CS-3 ‘Persuasiveness’. To ensure robust evidence-based content, all conveyed information was rigorously supported by findings from both the existing literature and primary research conducted, thereby properly implementing CS-4 ‘Credibility’.

Employment of the delivery strategies: In line with Delivery Strategy 1 (DS-1) ‘Representing users and context of use’, the relevant stakeholders targeted by the guideline (primary teachers and immigrant parents) were initially presented to school managers, providing essential contextual information. The concept of 'adjustability' (DS-2) was integrated into the guideline's framework, offering school managers open-ended, adaptable suggestions as supplementary content for diverse situations and groups. ‘Concrete exemplification’ (DS-3) was consistently provided within this supplementary content, drawing from literature, images, participant quotes, and external links. Furthermore, aligning with DS-4 ‘Explanatoriness’, informative explanations were systematically employed; each activity included an explanation of its meaning, and school managers could find answers to 'why', 'how', 'what', 'when', and 'who' questions, directly aligning with the Human-Centred Design (HCD) pyramid, as shown in Section 2.3.1. Lastly, regarding DS-5 ‘Prioritisation’, practical suggestions were presented hierarchically, facilitated by key principles of Information Design.

The structural organisation of the guideline is illustrated in Figures 5.8 and Figure 5.9 provides an overview of the guideline’s overall structure and content. The visual design is guided by Gestalt principles. The principle of *similarity* is applied through consistent formatting of core content, uniform presentation of quotations using

speech bubbles, and the use of images sourced from a single stock website to maintain visual harmony. *Continuity* is ensured by maintaining consistent alignment and structural organisation of headings, labels, and content across pages. The principle of *proximity* is addressed by grouping related elements - such as text, quotations, and images - together, facilitating clarity and ease of navigation. Icons and symbols are incorporated to support navigation, while typography is derived from professionally designed templates to ensure readability. Colour is used to convey information hierarchy in accordance with information design principles, with red indicating essential support, orange representing recommended support, and green denoting additional support.

The complete guideline is made available in Appendix E for reference. As this version represents a preliminary draft, the subsequent chapter (Chapter 6) is dedicated to a systematic and comprehensive evaluation of the guideline, including feedback from relevant stakeholders and considerations for refinement prior to finalisation.

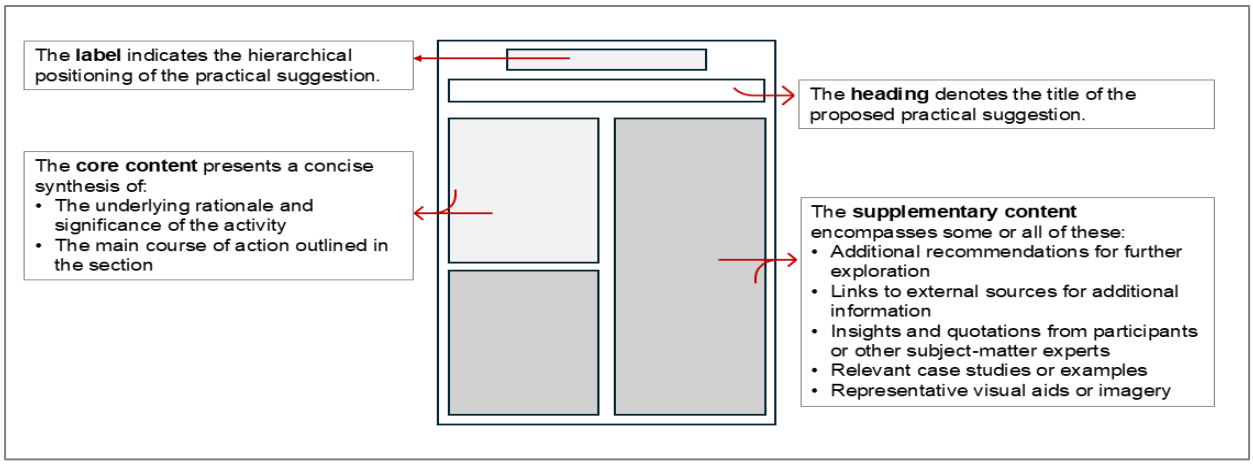


Figure 5. 8. The Structure of the Pages of the Early Guideline Dedicated to Practical Suggestions.

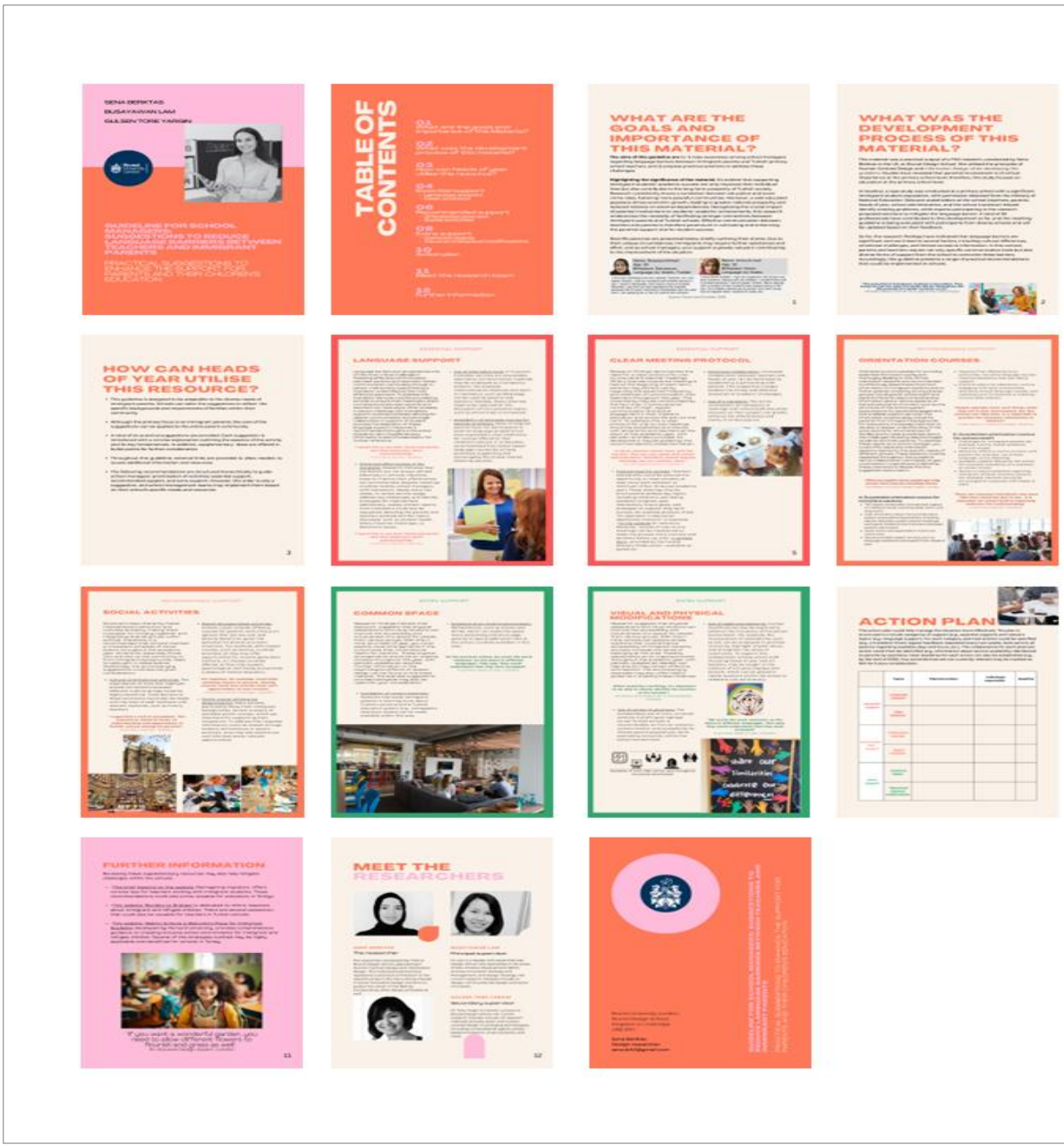


Figure 5. 9. Overall Guideline Layout

Chapter 6. GUIDELINE EVALUATION

This chapter presents the evaluation of the draft guideline developed as a practical outcome of this research. While the preliminary version of the guideline emerged from the findings reported in Chapter 5, it remained limited to the scope and insights generated within this doctoral study. In order to enhance its applicability and ensure its broader relevance, further assessment was required with larger groups of stakeholders. The purpose of this stage was therefore to incorporate external feedback, refine the draft, and strengthen its potential as a more comprehensive and beneficial resource prior to its finalisation. Accordingly, this chapter is dedicated to the systematic evaluation of the guideline – the overview of the content is demonstrated in Table 6.1.

Table 6. 1. Overview of the Content in Chapter 6

Sections	Sub-sections	
6.1 Method	6.1.1 Processes of the Evaluation	A) Development of data collection tools
		B) Sampling strategy
		C) Data collection processes
	6.1.2 Analysis of the Participant Feedback	
	6.1.3 Summary of the Methodology	
	6.2 Assessment of the Guideline and Corresponding Revisions	A) Overall Assessment of the Guideline (Aligned with Q1) and Corresponding Revisions
		B) Assessment of the ‘Language support’ Section (Aligned with Q2) and Corresponding Revisions
		C) Assessment of the ‘Clear meeting protocol’ Section (Aligned with Q3) and Corresponding Revisions
		D) Assessment of the ‘Orientation courses’ section (aligned with Q4) and corresponding revisions
		E) Assessment of the ‘Social activities’ Section (aligned with Q5) and Corresponding revisions
		F) Assessment of the ‘Common space’ section (aligned with Q6) and corresponding revisions

		G) Assessment of the ‘Visual & physical modifications’ section (aligned with Q7) and corresponding revisions
		I) Additional participant feedback from the participants (aligned with Q8) and corresponding revisions
	6.3 Summary of the Guideline Evaluation	A) Variability of the responses B) Key updates C) Further insights D) Future Directions
	6.4 Final Recommendations	A) Extension of the Guidelines to the School Community (Staff and Parents) B) Extension of the Guidelines to relevant officials C) Summary of the Recommendations
	6.5 Concluding Discussion	

6.1 EVALUATION METHOD

This section details the methodology employed in the study, including the evaluation procedures (Section 6.1.1), the analysis of participant feedback (Section 6.1.2), and a summary of the section’s key points (Section 6.1.3).

6.1.1 Processes of the Evaluation

Initially, participants were provided with a mixed-format questionnaire, which they were asked to complete prior to the interviews. The use of the questionnaire served two primary purposes. First, it enabled the collection of quantifiable data, thereby allowing for straightforward comparison across participants and providing a numerical basis for assessing each section. Second, it afforded participants time to reflect on the content of the guideline in advance, encouraging more considered and deliberate responses. Following the completion of the questionnaires, semi-structured interviews were carried out using the questionnaire items as a point of reference. This approach allowed the researcher to explore participants’ responses in greater depth, enabling clarification, elaboration, and the identification of underlying rationales behind their assessments. In this way, the methodological design combined the advantages of both quantitative and qualitative approaches: the questionnaire provided measurable indicators of evaluation, while the interviews enriched these data with contextual insights and nuanced perspectives.

A) Development of Data Collection Tools

As previously explained, a mixed-format questionnaire was administered to participants, followed by semi-structured interviews thorough their answers on this questionnaire. The questionnaire was designed to capture insights on the guideline as a whole, as well as a more detailed evaluation of its individual sections. The overall assessment was primarily important for providing contextual understanding, while the individual assessments were crucial for gathering detailed feedback, from both quantitative and qualitative aspects.

There were eight questions in total. The first question focused on participants' overall impression of the guideline, evaluating aspects such as its design, structure, and perceived potential benefits. Questions 2 through 7 were dedicated to assessing specific practical recommendations presented within the guideline, enabling targeted feedback on individual components. The final item, Question 8, provided an open-ended prompt for participants to offer any additional suggestions or insights that had not been covered in the previous questions, which served as an opportunity for participants to reflect on the guideline in its entirety and contribute further perspectives before the conclusion of the interview process.

Assessment criteria were essential to gain meaningful feedback for the guideline; as highlighted in the literature, the definition of specific and contextually appropriate criteria is essential for obtaining robust and meaningful data (Alison, 2013). The guideline developed for school managers was designed with specific key features in mind, as outlined in Section 3.2, and these features subsequently formed the basis for its evaluation. The assessment focused on four principal criteria: **usefulness**, referring to the relevance of the guideline and its provision of actionable advice for Turkish schools; **comprehensiveness**, indicating the extent to which all critical aspects of school management in Türkiye were adequately addressed; **clarity**, assessing whether the language used was accessible, straightforward, and free from unnecessary complexity; and **practicality**, evaluating the feasibility and applicability of the proposed actions within the operational context of Turkish primary schools. These defined criteria provided a structured framework for participants to assess the guideline systematically and meaningfully.

A 5-point likert scale was employed to receive participants' perceptions in a comparable manner. A score of '1' represented the lowest level of agreement or satisfaction, and a score of '5' represented the highest. Beneath each rating, space was provided for participants to elaborate on their responses through written comments. In particular, participants were prompted to offer explanations, suggestions, or examples when they rated an item below '3'. However, additional feedback was also welcomed for higher-rated items, allowing for a more comprehensive collection of qualitative insights. The questionnaire administered to the participants is presented in Appendix F.

B) Sampling Strategy

The researcher employed a sampling strategy consistent with that used in the earlier data collection phase (see Section 3.6). The participant pool included both experts and key stakeholders from the primary data collection stage, as well as newly recruited participants. The strategy is presented in three parts: expert sampling, key stakeholder sampling, and a summary of the overall approach. The inclusion of returning participants was valuable, as their prior familiarity with the topic enabled them to provide deeper and more informed insights. Conversely, the inclusion of new participants was equally important, as their lack of prior exposure to the research allowed them to contribute fresh perspectives without preconceived associations. The composition of the participant groups is detailed in the following subsections: expert sampling (B1), key stakeholder sampling (B2), and a summary of the overall approach (B3).

B1) Expert Sampling

The researcher employed a purposive sampling strategy consistent with the initial data collection phase, while expanding the participant pool for the evaluation stage to build upon the primary findings. This expansion was guided by the need to capture deeper insights into emotional and cultural dimensions, particularly from individuals with direct experience working with the target population. Consequently, the sample included charity owners with close ties to Syrian immigrants, psychologists experienced in school settings and engagement with immigrant students, and education experts with research expertise specifically involving immigrant students. In total, the expert assessment stage involved ten participants representing diverse

professional backgrounds (see Table 6.2). While education- and practice-based experts were primarily expected to comment on the relevance and adequacy of the included content, design experts were additionally nudged to provide feedback on the visual aspects of the material, such as the application of Gestalt principles, colour selection, and other visual features.

E6: She is an architecture, specialised in universal and barrier-free design and architectural accessibility, provided valuable recommendations especially concerning the design of the school environment at the primary data collection process; hence, I wanted to re-involve her in the evaluation section. She simultaneously works in industry and in academia so she her suggestions could be valuable from practical and theoretical aspect to make schools more accessible.

E11: The insights of a product designer with specialized expertise in user-centred design and a track record of research on technology integration for positive social impact are particularly relevant. His knowledge of human-product interactions could prove valuable in evaluating the usability of the guidelines for school staff.

E16: A graphic designer specializing in Information Design, was re-engaged for her feedback given her valuable contributions during primary data collection. Her assessment provided benefits mainly from the aspect of the design of the guideline itself, and the visual and physical modification arrangements for the school environment.

E17: An interior designer possesses expertise in working with vulnerable groups and understanding the influence of cultural and social contexts on user behaviour. Her UK-based research background includes adapting design (environments, products and services) for diverse user groups with cultural sensitivity, and she has experience with various design principles, as well as teaching diverse groups.

E18: Head of Industrial Design at a Turkish university, bringing perspectives from product and environmental design. His experience teaching both Turkish and international students provides valuable insights from an educational context and interactions with diverse groups.

E19: She is a PhD researcher and research assistant in psychology at a Turkish university, and her personal experience as an immigrant, coupled with research experience with vulnerable groups, offers relevant perspective.

E20: Holds BA and MA in Psychology and has direct experience working with various vulnerable groups, including immigrant students in Turkish schools. Her understanding of the challenges faced by these students and the perspectives of different stakeholders (teachers, local community, school management) was beneficial.

E21: Owner of a long-standing charity association (over 20 years) focused on assisting vulnerable individuals with a wide range of issues, with a significant focus on Syrian immigrants since 2013. Her extensive interaction with both Turkish and Syrian communities, including parents and school staff, provided a holistic and practical understanding.

E22: Owner of a charity association with a strong focus on supporting Syrian immigrants, including providing educational support to students and mothers. Her firsthand experience as a parent of children studying alongside immigrant students and her active engagement with both communities offered valuable insights.

E23: A researcher with a BA in Türkiye and postgraduate education in the UK in education. Her research on diverse student populations in a UK primary school and her experience working in Turkish schools with both immigrant and Turkish students, combined with her current role at the Turkish Ministry of Education, provide a strong understanding of the research area and potential for bringing solutions from the UK context.

Table 6. 2. Expert Profiles for the Guideline Assessment

Part.	Ethnicity and employment setting	Field of bachelor's degree	Field of master's degree	PhD field
E6*	Turkish-Türkiye	Architecture	Architectural Design	Architectural Design
E11*	Italian-UK	Industrial Design	Industrial Design	Physics
E16*	Turkish-Türkiye	Printing Technologies	Education Management and Supervision	Media Studies
E17	Bulgarian-UK	Interior Design	Interior Design	Design
E18	Turkish-Türkiye	Product Design	Product Design	Product Design
E19	Turkish-Türkiye	Psychology	Psychology	Psychology
E20	Turkish-Türkiye	Psychology	Psychology	-
E21	Turkish-Türkiye	*Participants, while not officially credentialed, possess varied practical skills in areas such as charity finance, donated goods logistics, immigrant education, and donor engagement*.		
E22	Turkish / Türkiye			
E23	Turkish-Türkiye and UK	Primary education	Education	Education

**Participants involved in the formative data collection stage.*

B2) Key Stakeholder Sampling

For key stakeholder sampling, the techniques used to recruit school staff mirrored those employed in the primary research. The evaluation's geographical scope was deliberately limited to Istanbul, which served as the project's case study location (this decision was predicated on Istanbul's established status as Türkiye's most diverse and populous city, as further elaborated in Section 3). Given the qualitative nature of the evaluation, concentrating efforts within a single, highly diverse urban centre was deemed more conducive to yielding reliable and in-depth results, as opposed to collecting limited information from disparate regions across the country. Schools within Istanbul were selected through random sampling, utilising Istanbul's immigration map (see Section 3.6, Figure 3.5) as a guiding data source. The researcher maintained contact with schools until a sufficient number for qualitative assessment was achieved, ensuring thematic saturation of feedback.

Participant selection for the key stakeholder groups was guided by their direct relevance to the objectives of the project. School managers were included as

primary stakeholders, given their responsibility for evaluating and ultimately implementing the guideline. In addition, heads of year were included due to their supportive role within the school and their close working relationship with school managers; their involvement was considered valuable, as they are positioned to facilitate the practical implementation of the recommendations. An overview of the participating schools, along with participant and student population details, is provided in Table 6.3 below.

Table 6. 3. Interviewed Schools with Participants and Student Populations

School population		School1	School2	School3	School4	School5
Participants of the research		M1, M8, M9, H1, H2, H9	M3, H5, H3	M7, H4	M4, H6	M2, H7, H8
Number of students in total		1041	703	526	1180	1683
Number of immigrant students	Syrians	93	40	20	122	83
	Others	4	3	4	8	33

B3) Summary of the Participant Sampling

Participant sampling is illustrated in Figure 6.4 below. The expert sample comprised ten participants from diverse professional backgrounds: 50% design experts, 20% psychologists, 20% social workers, and 10% education specialists. The larger proportion of design experts was intentional, as they were uniquely positioned to provide insights across emotional, cultural, educational, and language-related dimensions, in line with the inclusion criteria outlined in Chapter 3. The smaller groups of psychologists, social workers, and education specialists contributed targeted perspectives from their respective areas of expertise, ensuring a comprehensive evaluation of the guideline; this deliberate selection allowed the study to integrate multiple perspectives, capturing both broad and specialized insights relevant to the guideline's applicability and effectiveness. In addition, a larger group of key stakeholders, deliberately selected from different schools based on specific criteria, provided valuable feedback on the guideline's practical relevance – the participant sampling is summarised in Figure 6.1.

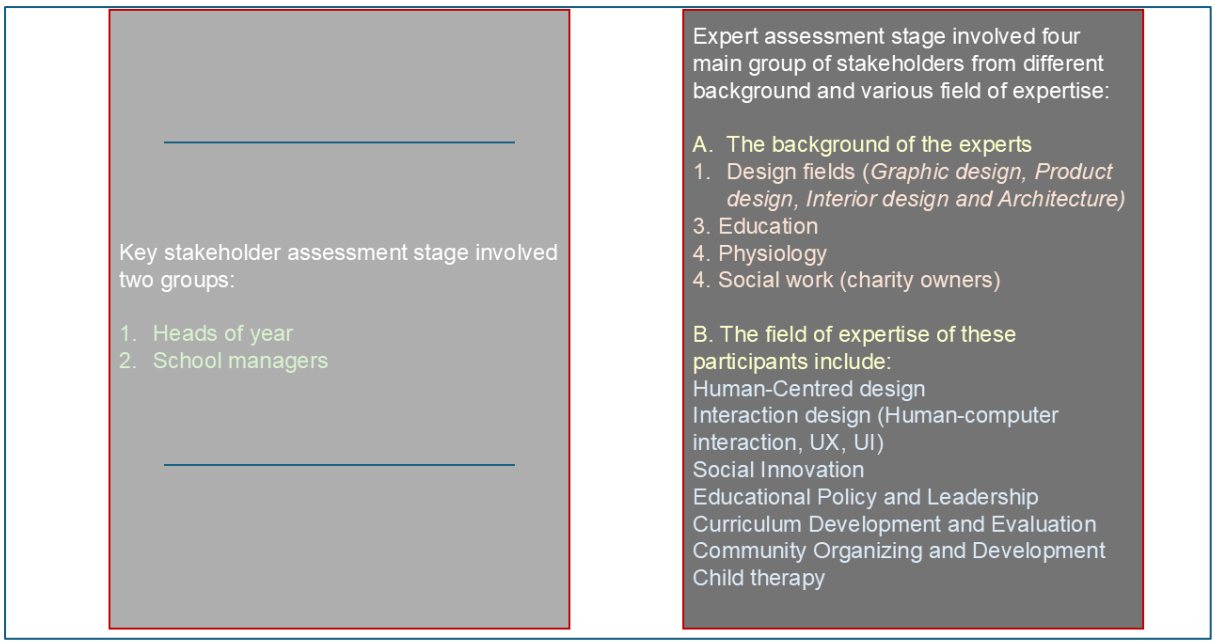


Figure 6. 1. Evaluation Stage Participant Overview

C) Data Collection Processes

The procedures employed for the guideline evaluation can be divided into three main components: ethics applications, participant recruitment, and interview processes, as elaborated below.

C1) Ethic Applications & Participant Recruitment

Initially, for the evaluation process, the researcher formally re-submitted all pertinent documentation, including the Participant Information Sheet (PIS), consent form, recruitment text, interview questions, and the draft guideline, to the University Research Ethics Committee (UREC) at Brunel University of London (these materials are available in Appendix F). This procedural step mirrored the earlier data collection process detailed in the methodology chapter (see Section 3.6). The evaluation phase commenced only after obtaining the requisite ethical approval.

The researcher employed recruitment techniques consistent with those utilised in the earlier primary data collection process. Some individuals from experts and from key stakeholders who had previously participated in the primary data collection confirmed their willingness to be included in the evaluation and were directly approached by the researcher. A sufficient number of participants from each group were included until thematic saturation in their responses became evident.

C2) Iterative Processes

The research employed an iterative methodology, characteristic of Action Research, which is a repetitive, cyclical process of refinement or development in which each cycle builds upon the insights, feedback, or results from previous cycles (Kunst *et al.*, 2024), systematically refining the guidelines through sequential stages of stakeholder feedback. Expert evaluation was prioritised to ensure that the guideline was conceptually sound, aligned with best practices, and addressed potential gaps or inconsistencies. Following this, key stakeholders (initially heads of year) were consulted to assess the guideline's practical relevance and applicability in real-world settings. This sequential approach ensured that the guideline was both theoretically robust and contextually appropriate, maximizing the effectiveness of the iterative evaluation process.

The researcher initiated the data collection by distributing the Participant Information Sheet (PIS), consent forms, questions, and guidelines to participants prior to scheduled meetings. Firstly, they were asked to fill the questionnaire and then send them to the researcher for her pre-review before the meeting. Meetings were arranged based on participant availability, ensuring ample time for material review. Meetings were conducted via Microsoft Teams or Zoom, accommodating participant preferences. The researcher recorded meetings where consent was granted and, alternatively, meticulously noted feedback for those who preferred not to be recorded. The interviews provided an opportunity to clarify and expand on questionnaire responses.

Data collection for each participant group typically spanned approximately 2–4 weeks. After completing data collection with experts, the researcher systematically addressed the identified changes and presented a revised version of the guideline to heads of year for evaluation. Feedback from heads of year was then incorporated into subsequent revisions before submission to school managers. Finally, following data collection from school managers, the guideline was updated once more and finalised.

6.1.2 Analysis of the Participant Feedback

The researcher employed thematic analysis as the primary method in order to identify key patterns and insights, as outlined in Chapter 3, complemented by

quantitative analysis to facilitate comparison of responses. A systematic, question-by-question approach was applied for each participant group, enabling all insights related to a specific area to be examined collectively (for example, all quantitative and qualitative feedback for Q2 from experts was compiled to facilitate comprehensive analysis of 'language support' section feedback).

For the quantitative data, the researcher highlighted all scores below 3 to identify areas requiring additional attention and calculated the average score for each section to gain a broader understanding of participants' evaluations. For the qualitative data, a structured table was created to organize responses by participant group for each relevant question. The first column contained the participant identifier (e.g., E20), the second column included their verbatim feedback (e.g., "The material is solid, though I wonder about its real-life implementation given how busy school managers already are"), and the third column categorized each statement—for example, as an "analytical statement," "practical recommendation," "cautionary statement with practical recommendation," or "supportive statement." This categorisation facilitated the systematic coding and theme development process.

When addressing feedback related to the guideline revision, thematic patterns were initially identified and considered. Structural changes were implemented in response to recurring points raised across multiple submissions. In addition, individual suggestions were addressed only if they fell within the responsibilities of school management or were deemed applicable to the context. An example of this data analysis approach, illustrating the evaluation of expert feedback for Q1, is presented below.

Example: As outlined earlier, Question 1 sought participants' overall opinions regarding the guideline. In Q1/A, experts were asked to score the guideline against specific criteria and to provide written suggestions and/or examples for improvement, particularly in areas where they assigned a score below 3. They were also encouraged to offer comments even when their scores were above 3. Table 6.4 presents the distribution of participants' scores. In relation to Q1/B, as shown in Table 6.5, experts indicated the extent to which they considered the guideline can help reduce language barriers within the Turkish school context.

To facilitate deeper exploration during the interviews, the researcher highlighted scores below 3 (see Table 6.4, aligned with Q1/A) as well as responses other than 'completely helpful' (see Table 6.5, aligned with Q1/B). For instance, in line with the scores in Table 6.4, the researcher followed up with participants E20, E21, and E23 to better understand the reasons behind their score of 2 for the practicality of the guideline, and to elicit potential solutions that could strengthen its applicability. Similarly, drawing on responses in Table 6.5, the researcher posed targeted questions such as, ‘Why do you think it can only partially help? What would be required for it to be fully beneficial?’ (an exception was participant E11, a UK-based design expert, who limited his feedback to the clarity of the guideline, citing his limited familiarity with the Turkish context and, consequently, the restricted relevance of his comments on the other criteria). Illustrative quotations from participants in response to Question 1 are provided in Table 6.6, and codes and themes identified in expert feedback is given in Table 6.7.

Table 6. 4. Expert Ratings for the Overall Guideline (aligned with Q1/A)

Evaluation criteria	Scores assigned by the participants									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
- Usefulness	4	-	4	5	4	4	4	4	4	4
- Comprehensiveness	5	-	4	4	5	4	5	5	4	4
- Clarity	3	3	3	4	5	5	5	5	4	3
- Practicality	3	-	4	5	3	4	2	2	4	2

**Participants involved in the formative data collection stage.*

Table 6. 5. Expert Assessment of the Overall Guideline, Indicating the Extent to Which It Can Reduce Language Barriers Between Parents and Teachers (Aligned with Q1/B).

Participants	Marks assigned by the participants		
	Completely	Partially	Not at all
E6		X	
E11		X	
E16		X	
E17		X	
E18	X		
E19		X	
E20		X	
E21		X	
E22		X	
E23		X	

Table 6. 6. Illustrative Quotations from Participants in Response to Question 1 (Q1)

Part.	Quotes	Notes
E6*	The idea of the focus of this issue is valuable. I also experience relevant problems. For example, there are international postgraduate students registered but their Turkish level is not sufficient. We struggle really.	Positive Appraisal
E11*	-	-
E16*	I like the overall guideline.	Positive Appraisal
E17	It looks great overall, but I scored it as partially effective, because no solution can ever be 100% effective for such issues.	Positive Appraisal + Contextual statement
E18	The guideline is quite clear and simple.	Positive Appraisal
E19	The material itself looks useful, but it makes me wonder—why don't parents adapt more easily and learn the local language, so that we wouldn't even need such a resource?	Positive Appraisal + Analytical statement
E20	The material is solid, though I wonder about its real-life implementation given how busy school managers already are.	Positive Appraisal + Contextual statement
E21	Although the guideline is well-prepared, its impact will likely be limited to 40 percent without top-down directive. We need a refugee ministry. Directives must be given from above. It would be very beneficial if there were a refugee ministry, if problems were identified and solutions were communicated to lower-level units. But it wouldn't work on its own. Furthermore, school managers may not be able to dedicate extra time.	Positive Appraisal + Contextual statement
E22	I believe school managers will appreciate having this material, as I haven't come across any dedicated resources like this before.	Positive Appraisal
E23	It looks useful but there is a need for external actions for permanent solutions. For example, in the UK, there are policies at schools. I think there is a need for nationwide equality, diversity, and inclusion policy for schools. There is also a need for a refugee ministry in Türkiye. We also need to keep in mind the busy schedules of school managers and how they handle them.	Positive Appraisal + Contextual statement

Table 6. 7. Codes and Themes Identified in Expert Feedback (Aligned with Q1).

Themes	Codes	Source
Constraints of schools operating without government interventions	need for a refugee ministry; directives must be given from above; in the UK, there are policies at schools need for nationwide equality, diversity, and inclusion policy for schools; its impact will likely be limited to 40 percent without top-down directive; if problems were identified and solutions were communicated to lower-level units; why don't parents learn the local language; no solution can ever be 100% effective for such issues; it wouldn't work on its own; need for external actions	E17, E20, E21, E23
Time constraints of school managers	given how busy school managers already are; may not be able to dedicate time; busy schedules of school managers; how they handle them.	E20, E21, E23

In relation to Question 1, no explicit suggestions for immediate implementation were identified. Nevertheless, the themes concerning the constraints encountered by schools operating without government intervention and the time limitations experienced by school managers were acknowledged as relevant for subsequent consideration. These themes will be further addressed in the summary of the evaluation and discussion and may also provide a basis for the formulation of recommendations.

This iterative approach was applied consistently in the analysis of feedback for each question. The process involved revising the guideline step by step, with modifications informed directly by expert input. For example, in line with Q2, the guideline was updated to strengthen provisions for 'language support,' reflecting participants' emphasis on accessibility. Once revisions under Q2 were completed, attention shifted to Q3, where feedback focused on the need for a clear meeting protocol. Finally, once the overall guideline is updated, the new version was proposed to other groups.

6.1.3 Summary of the Evaluation Process

The data are presented in a question-by-question format in the following section. This structure was selected to allow readers to clearly trace the progression and refinement of each section of the guideline. For each question, the average score provided by all participants is initially presented to offer an overview of the feedback,

followed by a detailed analysis. Expert feedback is then presented alongside the corresponding revisions, followed by the evaluation of the updated version by heads of year and the associated adjustments. Exceptionally, for Question 1, which assesses the overall guideline, descriptive statistics and the variability of participant responses were analysed using OriginLab software to provide general insights and evaluate response variability. Finally, feedback from school managers and the resulting revisions are reported. At the conclusion, feedback from all participant groups is synthesized to provide a comprehensive summary of the evaluation process.

6.2 ASSESSMENT OF THE GUIDELINE AND CORRESPONDING REVISIONS

This section presents the feedback provided by participants in response to the eight evaluation questions.

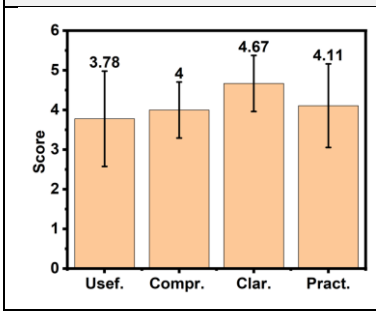
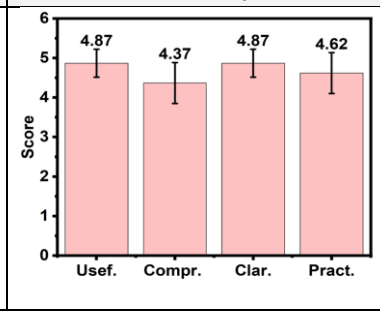
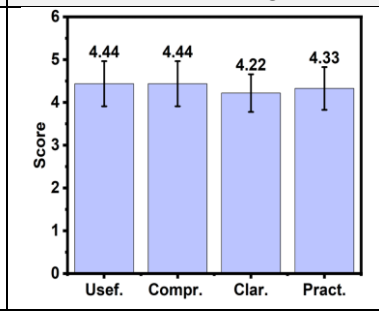
A) Overall Assessment of the Guideline (Aligned with Q1) and Corresponding Revisions

The first question sought to elicit participants' overall perceptions of the guideline. Specifically, they were asked to evaluate the guideline against predetermined criteria and to indicate the extent to which they considered it capable of reducing language barriers between parents and teachers in Turkish schools. Table 6.8 illustrates the average participant ratings, providing insights into the potential beneficiaries of the guideline. The corresponding standard deviations for each group are presented in Table 6.9, reflecting the degree of variability within the data, with all values derived from a 5-point rating scale (complete numerical results are available in the Appendix F). This variability indicates the extent of divergence or consensus in perspectives among participants, experts, and key stakeholders. The data are reported for the evaluation criteria (usefulness, comprehensiveness, clarity, and practicality), with the results discussed in greater detail in Section 6.3 of this chapter.

Table 6. 8. Average Rates of Participants in Response to Q1

Evaluation criteria	Scores assigned by participants		
	Experts	Heads of year	School managers
• Usefulness	3.8	4.9	4.4
• Comprehensiveness	4	4.4	4.4
• Clarity	4.7	4.9	4.2
• Practicality	4.1	4.6	4.3

Table 6. 9. Variability of Participant Responses

Illustration of Standard Deviations Across Diverse Groups		
Experts	Heads of year	School Managers
		

A1) Expert Insights on the Overall Structure of the Guideline

Expert interviews reflected a generally positive perception of the guideline. Seven of the eight experts anticipated that it would provide partial assistance, while one considered it likely to be fully effective in reducing language barriers (see further details in Appendix F). Some feedback, however, pointed to factors beyond the scope of the guideline, including the need for higher-level institutional support. One expert, for instance, cautioned that the impact would remain limited without top-down directives. Concerns were also raised about the limited time available to school managers, which may restrict the guideline's practical implementation in schools (relevant codes and themes are available in Table 6.7, presented in Section 6.1.2).

A2) Head of Year Feedback Insights on the Overall Structure of the Guideline

Overall, the heads of year expressed positive views of the guideline. Of the nine participants, four indicated that it could provide partial support, while five considered it likely to be fully beneficial. For example, H5 stated: "I like it, and I would indeed appreciate such material. I have never encountered a resource focusing on the inclusion of immigrant parents." Similarly, H2 observed: "Even if only one perspective is utilized, it may result in significant benefits." Despite this positive reception, several

concerns were raised, including the workload and limited time of school managers, differing attitudes among school leaders, and the varying levels of motivation among school staff. Codes and themes identified in head of year feedback in response to Q1 is illustrated in Table 6.12.

Table 6. 10. Codes and Themes Identified in Head of Year Feedback (Aligned with Q1)

Themes	Codes	Source
time constraints of school managers	schools receive so many documents even in one day; they deal with paperwork, go to the district office, and attend various meetings	H2, H3, H9
Varied leadership approaches and motivations of school managers	leadership requires a distinct set of skills; those lacking administrative qualifications often prove ineffective; a teacher may consider going into administration because people struggle with teaching; very few people who will step up; they do not undergo any formal training; if we propose a meeting, hardly anyone shows interest	H2, H3, H6, H9
Varied Motivations of School Staff	very few people who will step up; if these tasks are to be done, it will be up to us, not the principal	H2, H3, H6, H9

A3) School Managers Insights on the Overall Structure of the Guideline

Overall, school managers (M) expressed highly positive feedback regarding the proposed guideline. For instance, M6 remarked: “It raises awareness. Having worked at a school with many immigrant students, we had not previously developed specific initiatives. This guide has helped create that awareness.” Likewise, M7 stated: “It is valuable to have such a guide, particularly given the presence of immigrant students and their parents. Even a 10% improvement is significant. Nonetheless, several factors may impede the guideline’s effectiveness in Turkish schools, which include structural constraints faced by schools operating without government-level interventions, the demanding schedules and limited availability of school managers, and parental limitations in supporting educational activities. Codes and themes identified in school manager feedback are illustrated in Table 6.12.

Table 6. 11. Codes and Themes Identified in School Manager Feedback (Aligned with Q1)

Themes	Codes	Source
Constraints of schools operating without government interventions	should have required all migrants to comply with binding obligations; meeting the language requirement could have been made mandatory; was necessary to place migrants in scattered locations; further school material support can be offered for immigrant students by the ministry; providing services in schools in these regions is difficult	M1, M2, M8, M9
time constraints of school managers	our biggest challenge is the lack of time; because we don't have the time; tasks aren't getting done on time; how busy we really are	M1, M2, M3, M8, M9
Parenting constraints in supporting education	education does not always come first; financial difficulties prevented many families from ensuring proper education for their children; these families reside in places with harsh living conditions; their physical conditions are very challenging	M1, M2, M8, M9

B) Assessment of the 'Language Support' Section (Aligned with Q2) and Corresponding Revisions

The key focus of this section was on facilitating in-person interactions between teachers and parents, particularly through the provision of translators at schools wherever possible. Several supportive strategies were identified, including enhanced effectiveness through the use of translators—for example, by requesting regular written feedback from participants and disseminating information about translator availability to all school staff and parents. In addition, alternative communication tools, such as WhatsApp, were suggested for non-sensitive topics, including school trips and homework. The availability of language courses at schools was also highlighted, as parents showed a greater tendency to attend courses offered on-site rather than externally. Average rates of participants in response to Q1 are provided in Table 6.13.

Table 6. 12. Average Rates of Participants in Response to Q1

Evaluation criteria	Scores assigned by participants		
	Experts	Heads of year	School managers
• Usefulness	3.7	4.7	4.2
• Comprehensiveness	4	4.6	4.6
• Clarity	4.5	4.9	4.2
• Practicality	4.1	4.6	4.2

B1) Expert Insights on the ‘Language Support’ Section

Overall, experts expressed appreciation for the ideas and suggestions presented in this section; however, they also raised concerns regarding their practicality, as reflected in the corresponding scores. In general, concerns were raised about economic limitations, nation-wide and school wide, and also approaches of schools and the national education ministry. For instance, participant E21 elaborated:

“There are no translators in most schools. Principals expect parents to learn Turkish since they immigrated 10 years ago; they may not prioritise language support after such a long time. Moreover, given the current economic crisis in the country, allocating resources for translators may not be financially viable.”.

In light of these limitations, several experts instead emphasized the potential of technological solutions, particularly the use of mobile applications. For example, Ex stated that: “Nowadays, everyone uses a smartphone. They can benefit from translation programs.”. Table 6.14 shows Concerns Identified Regarding the Provision of Additional Support for the Language Support Facility Based on Expert Feedback.

Table 6. 13. Codes and Themes Identified in Expert Feedback (Aligned with Q2)

Theme	Sub-themes	Codes	Sources
Institutional and Economic Barriers to Language Support	Effects of Economic Constraints	translator may not be financially efficient; currently, the state is cutting back on everything; additional burden for the national education ministry; required support cannot be provided	E20, E21, E22, E23
	Language and Adaptation Expectations for Long-Term Immigrant Families (School and Ministry Levels)	they expect parents to learn Turkish since they immigrated 10 years ago; normalisation of translation services in educational settings could lead to expectations for similar provisions; there are no translators in most schools	E19, E20, E21, E22, E23

Subsequently, given the very limited availability of translator services in schools and concerns regarding their eligibility and feasibility, the focus of this section required adjustment. In the revised version, while the role of translators continues to be acknowledged, it is no longer presented as the central strategy. Instead, greater

emphasis has been placed on technology-based communication solutions, in line with participant feedback. The updated guideline underscores the importance of maintaining in-person communication between school staff and parents, while structuring the recommendations under three subheadings: ‘use of interpreters’, with particular emphasis on ensuring their availability during key events such as group meetings; ‘effective use of technology’, primarily highlighting the use of translation applications, especially to support face-to-face interactions; and ‘availability of language support within schools’, reflecting the observed tendency of parents to prefer school-based language courses over external programs.

B2) Head of Year Insights on the ‘Language Support’ Section

Overall, participants considered the idea of providing language support to be valuable within this section. Feedback from heads of year across different schools indicated that such support is needed at varying levels. Among the five schools represented, four reported the absence of a translator, with schools largely addressing communication challenges independently when required. As H7 explained:

> “When a translator isn't immediately available, I rely on technology to help. Specifically, I use Google Translate's voice translation for spoken conversations and ChatGPT for two-way text translation. These tools are useful for understanding each other in person. For written messages, platforms like WhatsApp now have built-in translation features as you type, and Google offers a trial tool that lets you translate directly from your keyboard. Because of these convenient and improving technologies, I believe teachers should make using them a priority for communication” (H7).

In addition, heads of year highlighted the importance of school-based Turkish language courses for parents. As one noted: “Parents need to learn Turkish, but they are less likely to attend courses held externally. They would, however, be more willing to participate if the course were offered at the school” (H1). At the same time, concerns were raised regarding the limited impact of such initiatives within certain communities: “Syrians tend to remain socially insular as a community. Even if one individual attends a Turkish course, Arabic will still continue to be spoken at home”.

These insights from the heads of year interviews informed the expansion of the “Effective Use of Technology” subheading within the revised guideline. For instance, the detailed example provided by H7 was integrated to illustrate practical applications of translation technologies, offering school staff clearer guidance on their effective use.

B3) School Manager Insights on the ‘Language Support’ Section

School managers generally welcomed the proposed strategies for strengthening language support, though their accounts demonstrated that practices vary considerably across schools. For instance, in some contexts language barriers were reported to be less significant (M4: “In our school, they know at least some Turkish”), while in others, parents were noted to play a more active role in supporting their children’s education (M8: “They come to school and support their children’s education”). Although managers often regarded professional translation services as the most effective solution, they identified multiple barriers that limited their practicality. These included lengthy hierarchical procedures for requesting translators, irregular working hours, and the unpredictability of external assignments (M8 stated that: “The interpreters were often delayed in starting their duties, and due to their working conditions, they were not consistently available. Their working conditions were irregular, and it was unclear when they would be assigned by UNICEF, the organisation that typically recruits translators for schools and covers most of their payments, particularly in contexts where large numbers of war refugees, such as Syrian parents, are present”). Economic concerns further exacerbated these difficulties, prompting schools to develop their own ad hoc solutions, as exemplified by M4:

> “For the last group meeting, we received assistance from migrant students in class 12A who are fluent in both languages. It was really helpful. In addition to our own students, we can also seek support from neighbouring schools. For instance, the students we graduated last year are now attending nearby high schools and could offer their help. They generally enjoy assisting others. To show our appreciation, we could arrange shopping vouchers or gift cards. In fact, I believe that in such situations, more students than needed would be eager to help.”

Further insights were also provided regarding the implementation of school-based Turkish language courses. As M7 explained: “We can indeed provide courses for parents at the school. Public education initiatives enable us to offer courses for parents at the school for a maximum of ten hours per week. We can request support from professional staff, such as art or English teachers, through municipalities, and they can assign staff for up to 15 hours per week”.

These findings informed the finalisation of this section. Compared with earlier revisions, the focus of language support was extended beyond the use of professional interpreters, with schools also involving other appropriate individuals who could provide translation when required, particularly during key events. The example provided by M4 was incorporated into the guidelines as a practical illustration of this approach.

C) Assessment of the ‘Clear Meeting Protocol’ Section (Aligned with Q3) and Corresponding Revisions

The ‘Clear meeting protocol’ section emphasised the establishment of structured guidelines for one-to-one parent–teacher meetings. This included setting regulations regarding the duration of meetings, specifying appropriate communication channels, and identifying key topics to be addressed. Subheadings were organized to reflect these priorities and were supplemented with additional recommendations. Average rates of participants in response to Q3 are illustrated in 6.15 below.

Table 6. 14. Average Rates of Participants in Response to Q3.

Evaluation criteria	Scores assigned by participants		
	Experts	Head of year	School managers
• Usefulness	4.2	4.2	4.7
• Comprehensiveness	4.5	4	4.6
• Clarity	4.1	3.5	4.6
• Practicality	4	4	4.6

C1) Expert Insights on the ‘Clear Meeting Protocol’ Section

In general, experts supported the idea of establishing clear rules for one-to-one parent–teacher meetings; however, they also noted challenges to its practical

implementation. These included limited availability of school managers for additional responsibilities, varying levels of interest among staff in implementing non-mandatory initiatives, and the diverse dynamics across schools (codes and themes are available in Table 6.16). Despite these constraints, participants emphasised alternative strategies to enhance parent-teacher interactions, particularly the use of home visits and the establishment of dedicated support teams. As exemplified by E23:

> “In the UK, there are pastoral teams who handle serious problems at schools. A similar team can be created. School managers were suggested to form a volunteer group to address serious issues. A team of 5–6 individuals could be formed, including teachers, administrative staff, and heads of year. Furthermore, I believe home visits facilitated by translators are essential. Many immigrant parents face significant barriers to attending school, including caring for young children at home, lacking familiarity with the local area, and feeling hesitant about communicating with others or being in public spaces. My research with Ugandan parents highlighted these very challenges, suggesting that numerous immigrant families likely experience similar difficulties.”

Table 6. 15. Codes and Themes Identified in Expert Feedback (Aligned with Q3)

Themes	Codes	Sources
time constraints of school managers	I do not think schools can find time to do extra things; they are busy	E19, E21, E22, E23
Varied motivations of school staff	each school has diverse dynamics; less likely to adhere to regulations unless directives come from senior authorities	E20, E21, E22, E23

In response to these insights, structural changes were deemed necessary for this section. Given that school managers may not have the capacity to implement additional regulations as suggested, and that school staff are unlikely to adhere to protocols unless directed by the National Education Ministry, it did not appear realistic to expect teachers to follow advice requiring one-to-one meeting protocols. Nevertheless, as the main focus of this section was on enhancing parent–teacher meetings, the objective could still be achieved through more practical suggestions aligned with the expert feedback provided.

Subsequently, the focus shifted from strictly formalising one-to-one meetings to clarifying and simplifying all processes for parents. Accordingly, the subheadings

were updated to reflect these priorities: ‘Regular Communication with Parents’, which included guidance for in-person meetings (e.g., at least twice per semester); ‘Dedicated Support Teams’, where volunteer school staff serve as consistent points of contact for immigrant students and their parents; and ‘Home Visits’, emphasizing their importance for initiating communication and sustaining ongoing engagement with parents. This structural revision also prompted a change in the section title, from ‘Setting Clear Meeting Protocol’ to ‘Refining the Effectiveness of Parent–Teacher Consultations’, reflecting a broader, more practical approach to supporting parent–teacher engagement.

C2) Head of Year Insights on the ‘Clear Meeting Protocol’ Section

Heads of year generally supported the proposed strategies in this section and contributed additional insights regarding operational practices. H5 noted that operational dynamics vary across schools and among teachers. In particular, group meetings organised at the beginning of each semester serve as a platform for teachers to provide essential information, such as available meeting times (e.g., after school hours or during lunch breaks) and communication procedures (e.g., contactable outside of school hours). H5 further highlighted that, although the Turkish Ministry of Education has implemented a system allowing parents to schedule appointments with teachers, it is not being utilised effectively by either educators or parents in their school context. Participants also provided practical examples from their schools to illustrate effective approaches, as exemplified by H7:

> “At the start of each academic year, we collect risk group information forms from teachers to identify vulnerable students. This risk group includes children who have experienced parental loss or have health concerns, among other factors. These students are then referred to the guidance and research centre pool for support. Within our school, we have a crisis intervention team of 5–6 individuals. Immigrant students could either be integrated into this existing risk group or a separate support system specifically tailored to their needs could be established. These students would then be able to access support from the designated group whenever they encounter difficulties.”

Overall, feedback from heads of year did not necessitate major structural changes to the section but provided additional detail. In particular, emphasis was placed on the

importance of group meetings, highlighting the need to prioritize these interactions in accordance with immigrant parents' informational needs. Additionally, H7's example regarding the service catalogue was incorporated under the dedicated support teams subtopic, reinforcing the practical mechanisms through which immigrant families can access targeted support.

C3) School Manager Insights on the 'Clear Meeting Protocol' Section

School managers generally endorsed the proposed strategies in this section. For example, M6 noted: "I like the idea of framing parent–teacher meetings. Random interviews reduce efficiency. Planning them is definitely beneficial." However, they also raised concerns regarding practical implementation. M3 emphasized the voluntary nature of certain practices: "The practice of teachers conducting home visits to observe the child's familial environment is of significant importance. However, this is a matter that can only be undertaken on a voluntary basis." Similarly, M1 highlighted logistical constraints, particularly for first-grade teachers: "First-grade teachers have no vacant lesson periods. In this case, a potential solution to consider might be to allocate options for first-grade teachers, such as remaining at school for an additional 20 minutes once per month or dedicating their lunch break."

Ultimately, while the feedback from school managers did not necessitate structural changes to the section, it provided valuable input for expanding its content. Suggestions regarding feasible solutions were included as illustrative quotes under the subheading Preliminary Standardisation of Parent–Teacher Interactions, enhancing the guidelines' practical relevance.

D) Assessment of the 'Orientation Courses' Section (aligned with Q4) and Corresponding Revisions

The orientation courses section emphasized the proposal of separate programs for school staff and school managers, with a particular focus on their anticipated impact in reducing prejudice among diverse groups and ensuring the effective delivery of essential information to parents. Subheadings were organized to reflect these priorities, incorporating supplementary suggestions to support their implementation. Average rates of participants in response to Q4 are presented in Table 6.16.

Table 6. 16. Average Rates of Participants in Response to Q4.

Evaluation Criteria	Scores Assigned by Participants		
	Experts	Heads of year	School managers
• Usefulness	4.2	4.6	4.6
• Comprehensiveness	4.5	4.4	4.2
• Clarity	4.6	4.6	4.2
• Practicality	4.2	4.4	4.6

D1) Expert Insights on the 'Orientation Courses' Section

Experts expressed support for the ideas presented in this section, with one participant noting: "All suggestions here seem very beneficial" (E21). However, several concerns were also raised. These considerations included the potential reactions of other stakeholders to activities designed for specific groups, the possibility that immigrant parents might perceive such initiatives as discriminatory or segregating, and the varying levels of interest and limited availability of school managers to engage with such programmes – codes and themes identified in expert feedback are delivered in Table 6.18. At the same time, experts provided suggestions that could strengthen the section.

Feedback emphasised the need to include students and to expand the scope of the orientation courses. Firstly, there was widespread agreement that students should also be involved, as they require training to develop awareness of inclusion and to learn appropriate ways of interacting with peers. As E23 stated: "I think students should also be included in this guideline, since they need to build awareness about inclusion and learn how to treat others. Since parents are connected to students, their inclusion is key to improving parent–teacher communication". Secondly, participants emphasised the need to expand parent orientation programmes to include all parents, rather than targeting only immigrant families. E23 recommended that such courses should be framed as initiatives for "newcomers": "Such orientation courses should not be limited to first-grade students; they should be offered at the beginning of each academic year to the parents of all newly enrolled students, both Turkish and international".

Table 6. 17. Codes and Themes Identified in Expert Feedback (Aligned with Q4)

Themes	Codes	Sources
Potential Reactions to Activities Targeting Specific Groups	targeting only Syrians might elicit criticism; should be framed as for 'newcomers' rather than highlighting only immigrants	E19, E20, E21, E22, E23
Potential Misinterpretations Concerning Immigrants	there's a risk they would feel discriminated against; should be framed as for 'newcomers' rather than highlighting only immigrants	E21, E23
Time constraints of school managers	nobody would get involved; wouldn't make the effort; have no time; they are busy	E19, E20, E21, E22,
Varied motivations of school staff	nobody would get involved; wouldn't make the effort	E19, E21, E22

In light of these insights, the updated guideline maintained a focus on orientation programmes for both immigrant parents and school staff, while adopting a broader, more inclusive approach. The revised approach positioned orientation courses as relevant for all parents, while still addressing the specific information needs of immigrant families. In addition, orientations for schools themselves were incorporated into the recommendations, with their importance explicitly highlighted.

D2) Head of Year Insights on the 'Orientation Courses' Section

Overall, heads of year supported the suggestions in this section. H7 noted: "The unknown is scary; suggestions to reduce the unknown provide an environment that increases empathy, understanding, and learning from each other." Similarly, H9 described a successful experience: "At my previous school, we convened a group and, with the assistance of a translator, provided a comprehensive explanation. This proved highly effective, as they readily attended subsequent invitations, and their engagement with our department significantly increased." Heads of year also highlighted that schools already conduct monthly parent seminars on topics such as technology addiction or substance use, typically delivered by heads of year in seminar rooms.

However, participants also highlighted challenges, particularly low parental engagement. H2 observed: "For the latest seminar, we invited 1,200 people, and only three Turkish parents attended. Given this situation, how can we possibly get the immigrant parents to come?" Furthermore, contextual considerations were raised regarding the timing of student enrolment. H5 noted that some local and immigrant

students begin their education mid-term rather than at the start of the academic year, suggesting that orientations should also target these students and their parents to facilitate integration.

Based on these insights, the guideline was revised. Since monthly seminars were already in place, the focus shifted from organising separate orientation sessions to integrating the recommended topics into existing seminars. H5's recommendation regarding mid-term entrants was included as a highlighted quotation, emphasising the need to provide orientation to students and parents who join mid-year to support smoother integration.

D3) School Manager Insights on the 'Orientation Courses' Section

Overall, school managers expressed support for the proposed initiatives. One participant noted: "We regularly provide seminars on many topics, such as technology addiction and career choices. In fact, parents of immigrant students need this more than anyone else. I wish they would join us." Additional contextual information was provided by M4, who highlighted that the Ministry of National Education already offers online and in-person seminars for school staff. However, participation in these programs remains limited, as attendance is voluntary. While this information does not directly pertain to the responsibilities of school managers, it offers valuable insight into the broader policy context.

Ultimately, the key revisions in this section involve directing school staff to utilise existing Ministry of National Education seminars, supporting heads of year in prioritising specific topics in their monthly school-based seminars, and planning parent orientation sessions collectively for all parents, with translation support provided for immigrant families. Advice for school managers was provided within this framework.

E) Assessment of the 'Social activities' Section (aligned with Q5) and Corresponding revisions

The social activities section emphasised organising events that bring together individuals from different cultural backgrounds, fostering interaction and promoting empathy. The subheadings were designed to support this aim. Specifically, cultural

and historical activities focused on shared heritages, while ‘Parent-Focused School Activities’ included initiatives such as art, music, and sewing classes, facilitated either by school staff or external experts. Average rates of participants in response to Q1 are supplemented in Table 6.19.

Table 6. 18. Average Rates of Participants in Response to Q1

Evaluation criteria	Scores assigned by participants		
	Experts	Heads of year	School managers
• Usefulness	4.6	4.7	4.2
• Comprehensiveness	4.5	4.5	4.2
• Clarity	4.4	4.7	4.2
• Practicality	4.4	4.5	4.2

E1) Expert Insights on the ‘Social activities’ Section

Experts generally supported the inclusion of social activities. For example, one participant noted: “The activity is a great idea. Syrians are participating in such activities, for example, bag making” (E21). However, concerns were raised regarding the feasibility of implementing these suggestions. Key challenges included limited knowledge among school managers about external support for activities (e.g., twin schools, city councils, and local school area councils), the workload of school managers, and lengthy official procedures. As E23 explained: “Planning trips is difficult. For example, will the Ministry of Education grant permission? The Ministry of Education and the school administration have difficulty granting permission.”. In response, experts suggested simpler alternatives. For instance, E20 proposed: “I think a picnic could be suggested to schools, as it is simple and applicable.”. Codes and themes identified in expert feedback are illustrated in Table 6.20.

Table 6. 19. Codes and Themes Identified in Expert Feedback (Aligned with Q4)

Themes	Codes	Source
Knowledge Gaps Among School Managers Regarding External Resources	Need for additional information on how school managers can seek support from external sources; information should be provided to reassure the principal	E20, E21, E23
Demanding procedures	Planning trips is difficult; Schools potentially need further support from outside; a picnic suggestion could be suggested as it is simple and applicable	E16, E20, E21, E23
Time constraints of school managers	Planning trips is difficult; they don't have the extra time	E20, E21, E23

Subsequently, the social activities section of the guideline was updated to reflect this feedback. While the core objective, organizing social activities to bring together different cultural groups and foster interaction and empathy, remained unchanged; the recommendations were streamlined to improve feasibility. In particular, the 'Cultural and Historical Activities subsection was removed, and examples under the Parent-Focused School Activities' subsection were replaced with more practical suggestions, such as picnics instead of structured courses. Representative images were also updated accordingly. In the revised guideline, information about available support facilities, as highlighted by experts, was placed at the forefront of the section. Concrete examples of feasible activities, such as organising a picnic, were provided to demonstrate practical options. These revisions enhanced the clarity of the section by outlining how school managers can access external support, while also improving its practicality through the inclusion of tangible and easily implementable activities.

E2) Head of Year Insights on the 'Social activities' Section

Overall, heads of year considered the proposed suggestions to be reasonable. For example, H7 emphasized: "The main point is to ensure parents interact with each other. Meanwhile, activities should be low cost and sustainable, as suggested examples here". Beyond this, participants elaborated on potential activities that could be implemented within schools. H8 suggested: "Activities could be organized in which each child, together with their parents, presents their country. For example, they could participate in a 'Domestic Goods Week' and prepare traditional foods, such as falafel, to share with others.". H6 added that simple initiatives, such as a tea

activity, could be implemented: “It is not something that cannot be done.” H1 highlighted language support, noting: “It should support them in learning Turkish, for example, through activities such as watching films” and H4 recommended joint classroom activities for parents and students: “Classroom activities where parents and students can participate together would be very beneficial. For example, expressive arts-based activities strengthen interpersonal communication.”

Participants also raised contextual considerations and cautionary points regarding implementation. Highlights regarding school-level considerations included H8’s observation: “The responsibility rests primarily with classroom teachers rather than the administration, and given that only few immigrant parents express concerns about integration, existing efforts should be recognized and supported.” H6 further emphasized the importance of institutional culture: “It is essential to cultivate a school culture and deliberately address these issues in practice.” Regarding parent-level concerns, H1 noted: “They are willing to participate in activities, but they are reluctant to attend because they cannot communicate effectively.”

Based on these insights, suggestions from heads of year regarding social activities were incorporated into the guideline. Additional contextual considerations and recommendations were recorded for future consideration.

E3) School Manager Insights on the ‘Social activities’ Section

Overall, school managers expressed support for the suggestions provided in the social activities section. For instance, M8 emphasized the importance of parental engagement, noting: “Parental support, a vital aspect of education, is often limited. Ensuring that parents participate adequately in such activities is crucial, as it enables them to gain insight into classroom and school culture, understand the school’s functioning, observe challenges that arise in classrooms, and become aware of the solutions implemented to address these issues.”. M1 further elaborated practical examples, stating: “In this school, kindergarten parent days involve joint activities, such as painting cloth bags, which foster interactions without requiring additional space. We could consider similar activities in primary school.”

Based on the interviews with school managers, the guideline was updated to incorporate M1’s suggested activities. Furthermore, drawing on M1’s contextual

information that the Parent–Teacher Association plays a central role in organizing school activities and events (for example, by conveying essential information to all parents via WhatsApp groups), the guideline emphasised that this team should actively ensure the inclusion of immigrant parents to promote participation and inclusivity in these activities.

F) Assessment of the 'Common Space' Section (aligned with Q6) and Corresponding Revisions

The primary recommendation was to establish a dedicated common area within the school, offering parents a space to socialise and engage with one another. Additional recommendations included the availability of specific materials, such as newspapers, television, and books, to facilitate interaction within the Turkish community, as well as the creation of a welcoming environment (e.g., through the provision of refreshments) to encourage parents to spend more time in the space. Table 6.21 presents the average scores provided by participants for this section. Average rates of participants in response to Q6 are furnished in Table 6.21.

Table 6. 20. Average Rates of Participants in Response to Q6

Evaluation criteria	Scores Assigned by Participants	
	Experts	Heads of year
• Usefulness	4.3	4.1
• Comprehensiveness	4.2	4.1
• Clarity	4.4	4.7
• Practicality	4.2	4

F1) Expert Insights on the 'Common Space' Section

In general, experts regarded the concept of a shared space in a positive light. For example, E16 noted: "A shared space helps cultivate a sense of belonging, and incorporating foods from parents' own cultures, such as traditional sweets or cookies, can further strengthen this sense of inclusion". Additional suggestion was provided to enhance this section, about emphasising raising awareness, stated as by E17: "People should better understand how a common space contributes to inclusion and integration. Insert a relevant link so people can appreciate its importance".

However, concerns were raised regarding the implementation of this idea, particularly in the Turkish context. The most frequently cited concern related to formality within schools. E20 commented: “I think this idea could be applicable in some other countries very well, but maybe not in Türkiye. As an idea, it is great, but I am not sure about its suitability in Turkish schools.” Similarly, E21 noted: “There is a need for a certain level of formality at schools. This space should remain an official area accessible to everyone, and unrestricted access may not be appropriate.”. Besides this, one expert (E23), noted physical limitations, stating: “Schools do not have extra space for this in Türkiye”. The codes and themes derived from participants' responses to Question 6 are presented in Table 6.22 below.

Table 6. 21. Codes and Themes Identified in Expert Feedback (Aligned with Q6)

Theme	Codes	Source
Formality concerns	could be very applicable in some other countries, but perhaps not in Türkiye ; not sure for suitability in Turkish school; rather than ensuring they stay in that area all day, they could be allotted a limited amount of time; this space should remain an official area; should not be possible for anyone to access the area freely; need for a certain level of formality in schools	E19, E20, E21

Based on expert feedback, it was concluded that while the concept of a shared space holds theoretical value, its practical implementation in Turkish schools may be limited. Nevertheless, rather than removing the section at this stage, the final decision will be deferred pending feedback from key stakeholders. The only modification made at this stage was the inclusion of a relevant hyperlink, in line with E17’s suggestion. Subsequently, this section was presented to heads of year for assessment and further input.

F2) Head of Year Insights on the ‘Common space’ Section

Heads of year supported the concept but opposed establishing a dedicated parent space in schools. H8 noted: “The suggestion is excellent; however, it may not be feasible for our school.” Concerns mirrored those of experts, including physical limitations, formality, and security. H7 stated: “School managers prefer parents to limit their time at the school for security reasons,” while H8 added: “might be applicable only in small group scenarios, in which visits are clearly monitored”. The

concerns of the heads of year can be summarized as ‘security concerns,’ ‘formality concerns,’ and ‘space concerns,’ as illustrated in Table 6.23 below.

Table 6. 22. Codes and Themes Identified in Head of Year Feedback (Aligned with Q6)

Themes	Codes	Source
Security concerns	to limit their time at the school for security reasons; might be applicable only in small-group scenarios, in which visits are clearly monitored; do not regard the constant presence of parents at school positively	H6, H7, H8
Formality concerns	may disrupt the child's development of secure attachment bonds and symbiotic relatedness; do not regard the constant presence of parents at school positively	H1, H6, H5, H7, H8
Space constraints	this office is already shared by three people; a shortage of rooms in the school; even cognitive games take place in the prayer room	H1, H2, H7, H8

Ultimately, as heads of year are directly involved in school operations and hold detailed knowledge of contextual realities, their perspectives were particularly influential in shaping the decision-making process. Among the matters raised, security was considered the foremost concern. As a result, the proposal for a dedicated parent space was excluded from the guideline, and additional consultation with school managers on this issue was deemed unnecessary.

G) Assessment of the ‘Visual & Physical Modifications’ Section (aligned with Q7) and Corresponding Revisions

The primary concern within the category of visual and physical modifications was on enhancing ease of access for parents and the fostering of a sense of belonging through strategic adjustments within the school environment. Two supplementary dimensions were identified. The first concerned the use of specific illustrations, wherein the incorporation of icons, symbols, and bilingual signage was proposed to facilitate inclusivity and comprehension. The second related to the use of additional elements, encouraging the exploration of further culturally relevant features to be displayed in shared spaces. Examples included the incorporation of common cultural practices and celebrations (e.g., Eid), which could serve as reference points for strengthening representation and fostering inclusivity. These suggestions were subsequently presented to participants for assessment and feedback. Average rates of participants in response to Q7 are supplied in Table 6.24.

Table 6. 23. Average Rates of Participants in Response to Q7.

Evaluation criteria	Scores Assigned by Participants		
	Experts	Heads of year	School managers
• Usefulness	4.5	4.7	4.3
• Comprehensiveness	4.2	4.2	4.2
• Clarity	4.4	5	4.6
• Practicality	4.5	4.5	4.3

G1) Expert Insights on the 'Visual & Physical Modifications' Section

Expert responses to this section were predominantly positive, with several participants offering confirmatory remarks. For instance, E21 observed that the proposal was "a very good suggestion," drawing parallels to hospitals where bilingual services enable individuals to navigate independently. Similarly, E16 emphasised the importance of clarity upon first entry to the school environment, noting that newcomers should be able to locate essential facilities—such as the principal's office, cafeteria, waiting area, and restrooms—without difficulty. In addition to these supportive perspectives, experts provided constructive recommendations, including the suggestion to incorporate written text alongside icons to enhance accessibility.

Nevertheless, some reservations were raised, particularly regarding the potential reactions of different stakeholders to the visibility of certain languages at schools. Concerns were expressed that the inclusion of languages other than English, the widely recognised language, might provoke negative perceptions. For example, E20 cautioned against the use of Arabic signage, arguing that Turkish parents might question the rationale for displaying Arabic in a Turkish school context and therefore recommended that no information be presented in Arabic. Echoing this sentiment, E16 suggested restricting informational materials to Turkish and English, in order to prevent possible tensions or misunderstandings – codes and themes identified in expert feedback is illustrated in Table 6.25.

Table 6. 24. Codes and Themes Identified in Expert Feedback (Aligned with Q7)

Theme	Codes	Source
Potential reacts of locals	parents may object, wondering why Arabic materials are used in a Turkish school; no Arabic content should be displayed; use Turkish and English only; do not include Arabic text; no need to draw attention or criticism	E16, E19, E20, E21, E22

In light of this feedback, reflecting the consensus among experts, the proposal for bilingual signage was removed, and text-based information was limited to Turkish and English. Moreover, specifically, following E16's direct recommendation, a minor note was added advising the inclusion of English text beneath icons within schools. Although this measure may not fully address the needs of Syrian parents, it was considered a modest yet positive step towards improving overall school accessibility. The revised guideline was subsequently circulated to heads of year for consideration and implementation.

G2) Head of Year Insights on the 'Visual & Physical Modifications' Section

The proposals outlined in this section were received positively by the heads of year. For example, H3 highlighted the welcoming icons, remarking that "Using icons to imply *welcome* is a lovely touch that can immediately put people at ease.". Drawing on personal experience, H3 further noted that: "While living abroad, the presence of familiar visual cues had provided a strong sense of comfort". Similarly, H7 emphasised the practicality and accessibility of icons, describing them as "Something that makes life much easier, economical, and easy to implement," while also underlining their feasibility, noting that "…you can create them with just an A4 printer". Subsequently, no modifications to the section were suggested by the heads of year during the interview process

G3) School Manager Insights on the 'Visual & Physical Modifications' Section

Feedback from school managers also indicated strong support for the proposed ideas. M9 described the visual suggestions as 'simple and useful', while M7 stressed their role in creating a sense of inclusion, stating that "When students and parents come to school, it would be good if they feel that they are embraced.". In line with these affirmations, no amendments to this section were deemed necessary following consultation with school managers.

I) Additional Participant Feedback from the participants (aligned with Q8) and Corresponding Revisions

Participants provided further suggestions that were not section-specific and did not require contextual revisions but informed improvements to the overall guideline. These are summarised below:

I1) Clarification of the Titles

An expert with a background in design emphasized the lack of clarity in the current titles, stating:

> “There is a need to update the titles, as their meaning is not currently clear. For example, the term 'social activities' is ambiguous—does it refer to participating in or organizing such activities? A more precise phrasing, such as 'organizing social activities,' would enhance clarity. Similarly, 'orientation courses' lacks context—specifying it such as 'organizing orientation courses' would make the intent clearer. This approach should be applied consistently across all topics.” (E11).

In response to his feedback, the researcher revised the titles, which enhanced the overall clarity.

I2) Clarification of the Content

A design expert (E11) highlighted the potential confusion among school managers regarding the presentation of the Practical Recommendations and the use of the guideline. The expert noted: “I would like to see a list or table of the recommendations prior to viewing the practical suggestions and their associated priority levels presented together.” In response to this feedback, the researcher added a summary table to the background section—specifically on the page titled “How can school managers utilise this material?”—to enhance overall clarity and improve the navigability of the content.

I3) Clarification of the Hyperlinks

Expert E16 emphasised the necessity of improving the visibility of hyperlinks. In response to this recommendation, icons were incorporated alongside the relevant

links throughout the guideline to enhance their prominent. This adjustment was made to enhance the visibility and clarity of web-based references for users.

I4) Replacement of the Action Plan

E23 suggested providing a checklist rather than an action plan, stating, “It is more realistic to use a checklist in such studies. In England, participants at the school where I conducted my research project likewise recommended a checklist. They were very busy and did not have time to fill in detailed information”. Given the limited time available to school managers, the interviews suggested that a checklist would be more practical. Consequently, the action plan initially developed was replaced with a checklist following expert interviews, which likely increased the usefulness of the material for the target audience.

6.3. SUMMARY OF THE GUIDELINE EVALUATION

This summary section presents the guideline evaluation and is structured around four subsections, which address the variability of responses (A), key updates to the guideline (B), additional insights from participants (C), and future directions (D) (notably, average ratings of the key stakeholders are presented as a full table to illustrate diverse perspectives on the sections of the guideline in Appendix F6.4).

A) Variability of the Responses

As reported in Section 6.2, the responses of experts exhibited greater diversity, whereas those of key stakeholders—including heads of year and school managers—were largely consistent. The higher variability among experts can be attributed to differences in experience across the groups, with each having distinct levels of familiarity with the research topic (see Figure 6.9-a). This diversity was particularly valuable, as it provided a wide range of perspectives that contributed to the effective updating of the guideline. Expert feedback appeared especially beneficial, as key stakeholders subsequently provided consistently high scores for the updated guideline, with few new themes or specific suggestions emerging from their responses. Finally, based on the variencity data (see Figure 6.9), it can be inferred that initiating the iterative process with expert interviews and incorporating a diverse group of experts was meaningful, as evidenced by the high scores and consensus among key stakeholders (see Figure 6.9 b and c), which suggest that the guideline

evaluation process successfully ensured its relevance and practical utility for finalisation.

B) Key Updates

The key revisions informed by the guideline evaluation are outlined below (a comparison of the initial prototype and revised guideline can be found in Appendix F 7.1):

1. **Broadening the Target Audience**

   The guideline was revised to extend beyond a sole focus on immigrant parents and instead to address all parents. While the specific needs of immigrant students and their families remain highlighted, they are now framed as supplementary considerations rather than the exclusive emphasis. For instance, background information sections were updated to clarify that the recommendations apply universally to all parents, with additional notes provided to reflect the experiences of immigrant families. Each section was accordingly adapted to balance inclusivity, ensuring that immigrant parents were recognised within the broader context.

2. **Emphasising Student Inclusion**

   Student involvement was explicitly incorporated throughout the guideline. This update ensures that students are not only acknowledged but also actively considered in suggested activities. Examples include encouraging student participation in orientations and in parent-related activities. The background information was revised accordingly, underscoring the importance of student inclusion alongside parental engagement. Although joint parent–student activities may not always be feasible, schools may incorporate them when appropriate since raising students' awareness of relevant processes and expectations may support their ability to act accordingly within the school context.

3. **Simplification of Recommendations**

   The guideline was further refined to account for the practical constraints faced by school administrators, including limited time, financial restrictions, and the complexity of official procedures. To address these realities, recommendations were simplified and adapted to encourage activities that schools can implement independently. For example, large-scale citywide events were

replaced with more feasible alternatives, such as classroom-based parent–student activities or school picnics. Similarly, instead of proposing entirely new and comprehensive orientation programs, the revised guideline suggests embedding essential topics into existing seminars.

F) Further Insights

Several participants recommended disseminating the guideline to a broader audience, thereby increasing its potential applicability. Regarding school staff, E23 emphasised that the guideline should be accessible to all school personnel to enhance implementation, noting that school managers may not have sufficient time to oversee all suggested actions. Similar views were expressed by heads of year and school managers, who agreed that the information should not be limited to school managers alone. With respect to parents, H3 highlighted the need for a separate parent-oriented guideline that clearly outlines their responsibilities, stating: "You should consider creating a concise guideline of a few pages for parents.". M1 further maintained that: "In general, localities with a high concentration of immigrant populations often exhibit relatively lower educational levels among local parents as well. This necessitates the use of simplified materials, such as dialogue speech bubbles, images, and concise sentences formatted with bullet points.".

G) Future Directions

Finally, the feedback gathered during the evaluation process significantly informed the development of the guidelines, and the advice of participants for separate guidelines was noted to be negotiated in the next section. Furthermore, insights from the interviews revealed a broader need for systemic, higher-level interventions that extend beyond the immediate school and family environments, which also needed attention for this chapter.

6.4 FINAL RECOMMENDATIONS

This section extends beyond the updates made to the guideline and addresses additional considerations. The recommendations are centred on the broader dissemination of the material across diverse groups, which is divided into two parts.

Part A focuses on the expansion of the guideline within the school community, while Part B examines its extension to relevant officials. The processes involved in tailoring the guidelines for these distinct groups are outlined within the scope of this section. Finally, the final recommendations section is summarised at the end (Part C).

A) Extension of the Guidelines to the School Community (Staff and Parents)

This section focuses on the expansion of the guidelines within the school community, specifically targeting school staff (A1) and parents (A2).

A1) Guidelines for School Staff

Based on the interview feedback, one of the key findings was the perceived applicability of the information among different groups of school staff. This indicates that the proposed guidelines should not be limited to school managers but should also be extended to a broader audience. Importantly, the content of the existing guideline, which was originally developed for school managers, already encompasses sufficient and relevant information that can be applied across all groups; hence, substantial modifications to the main content were not required. What becomes necessary, however, is the adaptation of the mode of presentation to suit the varying responsibilities, levels of authority, and contexts of use among school staff. In practice, this means providing all staff members with the same material, while highlighting sections or suggesting applications most pertinent to their specific roles.

To address this need, the management pyramid model, which delineates hierarchical levels of management (Frické, 2019), serves as a useful framework for assigning school staff roles. In this model, as shown in Figure 6.2, the top level establishes the strategic vision and organisational goals; the middle level translates these into departmental or functional plans; and the lower level manages day-to-day operational activities. For example, in practice, top-level managers develop the overall framework for organisational processes, including the formulation of institutional goals and the strategies required to achieve them. Middle-level managers act as facilitators by operationalising these strategies, defining

departmental objectives, and allocating responsibilities and tasks accordingly. Operational-level staff then implement these plans through routine activities, thereby ensuring that institutional aims are effectively realised. In line with this approach, school managers occupy the top level, ensuring that the school environment is conducive to the implementation of the proposed activities. Heads of year are positioned primarily in a supportive capacity, facilitating the organisation and coordination of activities. Primary teachers represent the practitioner level, directly responsible for carrying out the suggested practices within classrooms. For each group, the researcher prepared tailored guidance on how best to utilise the material, thereby aligning responsibilities with the hierarchical framework.

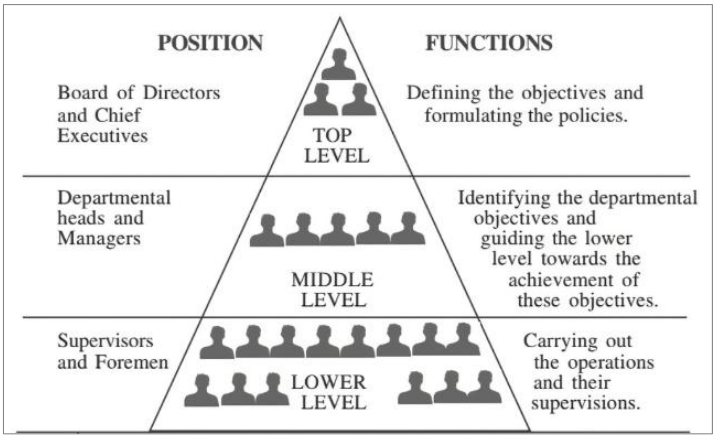


Figure 6. 2. Management Pyramid Concept (University of London, no date)

Finally, the site map of the updated material is outlined as follows – see Figure 6.3. The document begins with background information, including the goals and significance of the guideline, the development process, and tailored instructions on its use. This is followed by a hierarchical set of practical suggestions. At the essential level, the focus is on ‘Improving Language Accommodation and Refining Effectiveness’. The recommended level includes ‘Enhancing the Focus of Orientation Courses and Expanding Social Activities’. At the additional level, emphasis is placed on ‘Improving Visual and Physical Modifications’. Following the practical suggestions, the document provides a checklist to support implementation, a dedicated page offering guidance for guideline developers, and a final section containing further information and resources.

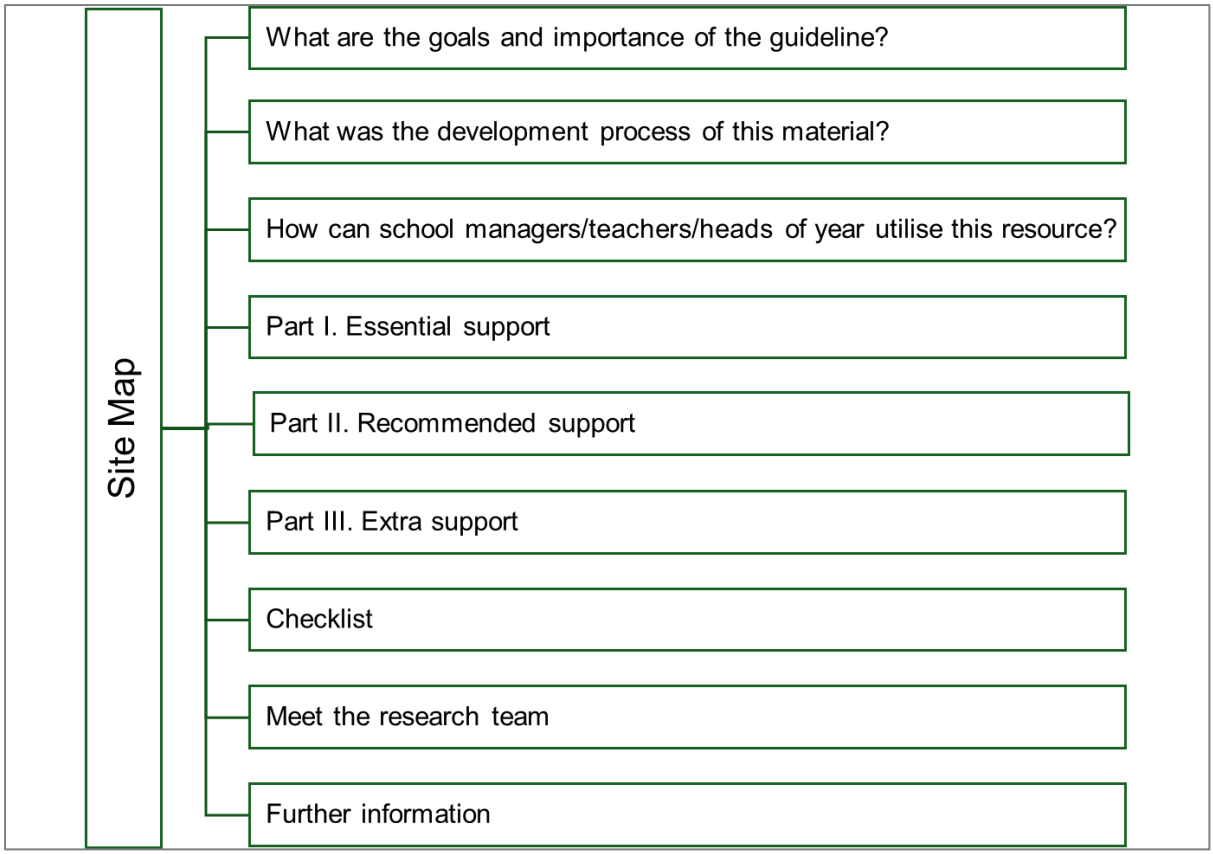


Figure 6. 3. Sitemap of the School Staff Guideline

A2) Guidelines for Parents

The availability of a parental guideline was widely requested by participants during the evaluation stage, and its structure was developed in accordance with their feedback. In generating the content, material from the school staff guideline was adapted based on the identified needs of parents, with relevant elements from each section extracted for this purpose, as illustrated in Table 6.11. The delivery format was also shaped by participants' recommendations, with an emphasis on simplicity. Features included very short sentences, concise explanations, illustrative images, and relatively larger font sizes to accommodate parents with limited literacy.

Table 6. 25. Overview of Information Tailored for the Parents' Guideline

Sections of the School Staff Guideline	Relevant Advice Extracted for Parents
Improving language accommodation (with the highlight of for immigrant parents)	› Attend school seminars accompanied by a translator, to utilise available technology, and to make efforts to learn Turkish.
Refining the effectiveness of parent-teacher consultations	› Participate in group meetings, which are typically held at the beginning of each semester. › Meet with teachers regularly, preferably in person, throughout the academic term. › Take teachers' requests seriously, including fulfilling material-related requirements, as this supports student learning and engagement.
Enhancing orientation course focus	› Attend monthly parent seminars.
Wide spreading social activities	› Participate in all school-related activities, both on and off school grounds. › Engage with out-of-school opportunities, such as public courses in sewing, painting, or cooking, which may be beneficial (parents are also advised to consult school managers regarding external facilities that offer free public courses and social support).
Improving visual and physical modifications	**There was no need to address visual and physical modifications, as this was not relevant to parents; hence this element was omitted.*

The final parental guideline consisted of two sheets. The first sheet served as a cover page, providing a brief introduction to the guideline, including its purpose and significance. The second sheet presented all recommendations in a consolidated format. Notably, language support recommendations, specific to immigrant parents, were placed in a separate mini-subsection to avoid confusion. Furthermore, Information design principles were carefully considered throughout the evaluation process of the parental guideline. The parental guideline is available in Appendix F.

B) Extension of the Guidelines to Relevant Officials

A prominent theme that emerged from the interviews was the constraints faced by schools operating without government intervention, particularly in response to questions regarding the potential effectiveness of the proposed guideline (mostly in line with Q1). Participants consistently highlighted that the successful implementation of the guideline would require support extending beyond the school level. Based on the findings, the necessary support can be described as intervention at the national Ministry of Education level to enhance the guideline's efficiency, addressing language barriers between parents and teachers. Additionally, support from other

relevant governmental bodies would be required to establish the foundational infrastructure for effective and sustainable interventions across the country. Consequently, this sub-section elaborates on these two key areas.

Ministry of National Education Level Implementations: The availability of tailored guidelines for representatives of the Ministry of Education could prove beneficial in two key areas: 1) standardizing and regularizing specific recommendations, and 2) ensuring adequate support for schools.

Firstly, themes emerged suggesting that school staff have diverse motivations and approaches, and that school managers have limited time due to their workloads, which may result in suggestions being less prioritised. However, some of the advice may require special attention to resolve the identified problems. In this case, Ministry-level officials could consider issuing official requests for some of the suggestions to be implemented in schools. This requires delivery of the suggestions within the guideline to them, thereby they can decide which or how to process them in official level.

Secondly, the themes of ‘economic constraints’ and ‘diverse leadership approaches’ (e.g., varying levels of leadership capabilities and school-based technical expertise) suggest that schools may require additional support to implement these recommendations, even if they are willing to do so. In addition to tangible support—such as material, expert, and financial assistance—there is a clear need for informational support, including guidance on accessing external resources and optimizing school operations. Moreover, ministries should be attuned to these needs in order to guide and assist school managers more effectively. Strengthening two-way communication between school leaders and ministries is essential to addressing these challenges.

Other Relevant Ministry-Level Implementations: The availability of the tailored guidelines for relevant policymakers could garner support in two key areas: 1) aiding immigrant parents in adapting to the host country (e.g., through language acquisition) and assuming parental responsibilities, and 2) cultivating a more inclusive and welcoming environment for immigrants within the community.

Firstly, the themes of ‘Language and Adaptation Expectations for Long-Term Immigrant Families’ and ‘Parenting Constraints in Supporting Education’ highlight the need for clear policies outlining expectations for immigrants in the host country. Schools often assume that long-term immigrants (e.g., those residing for 10 years) have adapted, including acquiring proficiency in the local language and integrating into school life. However, many immigrant students and parents fall short of these assumptions. Moreover, financial constraints often prevent immigrant parents from prioritizing education. To address these issues, policy interventions should establish clear benchmarks for immigrant adaptation and offer targeted support, including financial assistance, to enable better focus on educational and integration goals.

Secondly, the theme of ‘Potential Reactions to Activities Targeting Specific Groups’ highlights the importance of policies that promote a welcoming atmosphere within the host community. The findings suggest that local parents exhibit varying levels of acceptance of immigrants. However, there is a general tendency toward increased openness within the community, which can facilitate stronger connections between immigrant and local groups within schools. This can be further supported through targeted initiatives that foster empathy among the local population, enhancing mutual understanding and collaboration between both groups.

Summary of the Need for Policy-Level Interventions: Ultimately, the development of two distinct sets of guidelines was deemed necessary. The rationale for producing separate materials was to draw the attention of relevant stakeholders to specific domains in which they can contribute effectively. For the Turkish Ministry of National Education, emphasis is required on strengthening collaboration with schools and on institutionalizing certain activities that should be regularized, standardized, and systematically supported within educational settings. For other key authorities, such as the Ministry of Interior and the Ministry of Family and Social Services, there is a need to formulate policies that clearly articulate expectations for immigrants in the host country, alongside measures designed to foster a welcoming and inclusive environment within the host community.

With respect to the content of these guidelines, their development followed a process similar to that employed for the school staff guidelines. Themes identified during the evaluation phase informed the structure and topics of these materials. Furthermore,

suggestions and examples provided by participants, drawing on both primary data collection and evaluation, were incorporated to enhance their breadth and applicability. Notably, expert participants contributed valuable examples, which were selectively integrated into these sections. For instance, the use of gaming methods was proposed as a strategy to reduce emotional barriers in primary schools. While initially suggested in the context of school-level challenges, this approach is equally applicable at the national level. Consequently, such insights were embedded within this study as integral components of the policy-level guideline development.

B1) Guideline for Turkish National Ministry of Education

This section is primarily directed at the Turkish Ministry of National Education. While it is encouraged that all relevant departments within the Ministry engage with the contents of this guideline, particular attention is drawn to the Provincial and District Education Directorates, the General Directorate of Primary Education, and the General Directorate for Special Education and Guidance; these entities maintain frequent and direct interaction with school administrators and are therefore strategically positioned to implement or support the recommendations outlined herein. Furthermore, other departments, namely the General Directorate of Lifelong Learning, in addition to those listed above—are closely linked to employment-related initiatives or educational activities within schools. Consequently, individuals affiliated with these directorates are strongly encouraged to review the guideline in detail. The guideline is structured around two principal domains of focus:

Part I, entitled **‘Enhancing the Effectiveness of Communication with School Managers’**, emphasizes the importance of strengthening two-way communication channels with school administrators. The aim is to cultivate a more accurate understanding of school-level conditions while simultaneously enabling the Ministry to provide more effective and context-sensitive support.

Part II, entitled **‘Practical Suggestions to be Considered in the School Context’,** presents a series of practice-oriented recommendations designed to be implemented at the school level. These suggestions are intended as illustrative examples for authorities to adapt and apply within their respective contexts. Importantly, and in contrast to the school staff guideline, the recommendations were not organized

hierarchically; rather, they were positioned as complementary elements within the broader framework of the material (see Figure 6.4 for the corresponding sitemap).

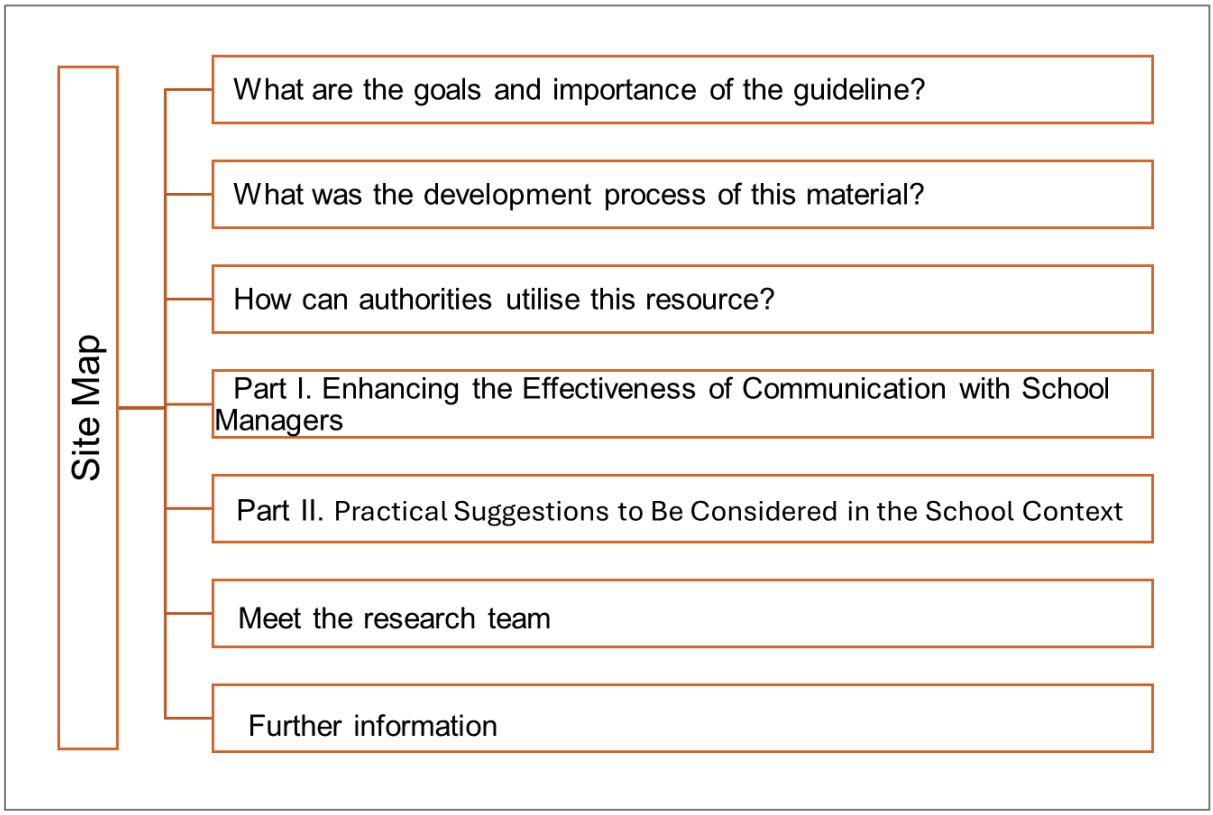


Figure 6. 4. Sitemap of the National Education Ministry Guideline

B2) Guideline for Other Relevant Policymakers (Specifically the Ministry of Interior and the Ministry of Family and Social Services)

Within the broader framework of national policy development, the recommendations presented herein are principally aligned with the mandates of the Ministry of Interior and the Ministry of Family and Social Services, as delineated by the Turkish administrative structure. In particular, the General Directorate of Migration and Social Cohesion under the Ministry of Family and Social Services is strongly encouraged to engage with these recommendations, given their direct thematic relevance to its operational remit. Similarly, the Directorate General of Migration Management within the Ministry of Interior is urged to undertake a comprehensive review of the proposals, in recognition of their clear pertinence to migration governance and integration initiatives. While these two departments are specifically emphasised, it is acknowledged that effective and coherent implementation may necessitate

collaboration with, and support from, other relevant units within the respective ministries. The guideline is organized around two principal domains of focus:

Part I, entitled **‘Policies Outlining Expectations for Immigrants in the Host Country’**, emphasises the development of policies that establish clear responsibilities for immigrants—including parents within the school context—with the aim of facilitating their adaptation to the host society. Supplementary sub-sections, such as the revision of population planning mechanisms, the establishment of measurable benchmarks, and the provision of enhanced support structures, are provided as illustrative examples rather than prescriptive directives.

Part II, entitled **‘Policies Fostering a Welcoming Environment Within the Host Community’**, concentrates on preparing local populations to adopt more open and receptive attitudes toward immigrants, thereby contributing to smoother adaptation processes and improved overall efficiency in integration efforts. Representative sub-sections include initiatives such as the organization of community seminars, the application of storytelling methodologies, the use of gaming techniques, and the adaptation of international models and best practices. These examples are presented solely for illustrative purposes and should be regarded as potential strategies rather than exhaustive recommendations (see Figure 6.5 for the corresponding sitemap).

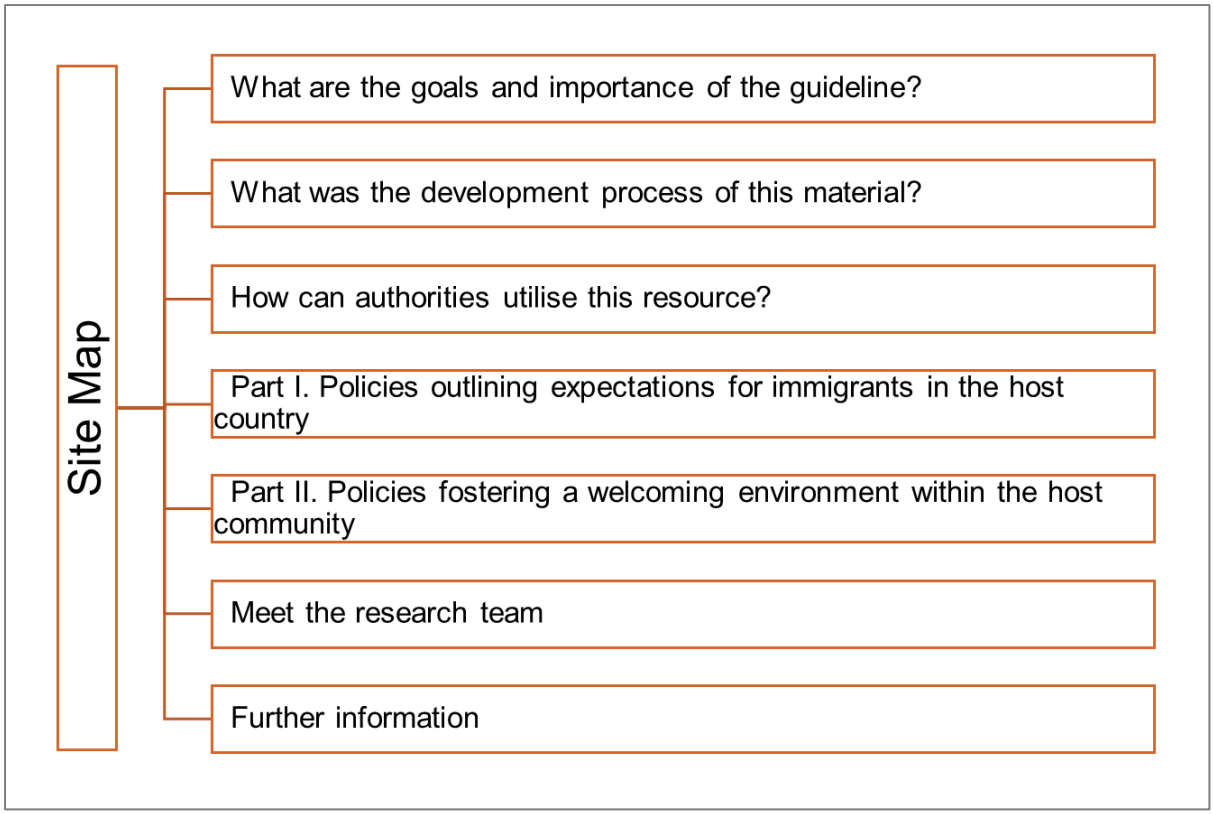


Figure 6. 5. Sitemap of the Ministry of Interior & Ministry of Family and Social Services guideline

C) Summary of the Recommendations

Information System Design Strategies, and key elements of information design (e.g., Gestalt principles) were applied in the development of the four guidelines, though to varying extents. The guideline for school staff was developed with explicit use of these principles, as elaborated in Chapter 5. The guidelines for ministry representatives followed a similar approach, with careful application of relevant design strategies; however, the use of hierarchical structuring (in line with DS-5) was deemed unnecessary and therefore omitted. In the case of the parental guideline, certain strategies were deemed unnecessary. For example, DS-1 was not applied, as parents did not require in-depth methodological details for the purposes of this project. Similarly, DS-5 was excluded, since the material for parents also did not need to be structured in a hierarchical format. Furthermore, using the same template as the school staff guideline ensured that key principles of information design were applied consistently. Table 6.27 below illustrates the application of Information System Design strategies across the diverse guidelines.

Table 6. 26. Application of Information System Design Strategies Suggested by Tore-Yargin (2013) Across the Diverse Guidelines

Strategies		School staff	Parents	Ministry representatives
Content strategies	Multidimensionality *(CS1)*	✓	-	✓
	In-depthness *(CS1)*	✓	✓	✓
	Persuasiveness (CS3)	✓	✓	✓
	Credibility *(CS4)*	✓	✓	✓
Delivery strategies	Representing user and context of use *(DS1)*	✓	-	✓
	Providing an interpretable system *(DS2)*	✓	✓	✓
	Providing concrete exemplification *(DS3)*	✓	✓	✓
	Providing an informative system *(DS4)*	✓	✓	✓
	Prioritizing problems and findings *(DS5)*	✓	-	-

Ultimately, all guidelines demonstrated sufficient clarity, the required level of comprehensiveness, and the expected level of practicality and usefulness, thereby effectively serving their intended roles. Analysis of the potentially achieved targets revealed that both 'Inspiration' and 'Guidance' were attained at distinct levels for school staff, parents and higher authorities. For example, guidance was more dominant at higher levels, such as ministry representatives, while Inspiration was more pronounced among parents. primary teachers and Heads of Year, aligning with their specific roles. Furthermore, consistent with the literature findings elaborated in Section 5.2, all these guidelines can also be classified as ‘full guidelines’.

Finally, the researcher anticipates that these distinct guidelines, each tailored to a specific group, can collectively enhance the overall situation. For instance, a dedicated guideline for the Turkish Ministry of Education is intended to empower high authorities to provide crucial support at the policy level and improve the broader national environment. Similarly, a customized guideline for school managers is designed to help them effectively navigate on-site issues. As primary teachers are central to this issue, the detailed guideline created for them can help reduce obstacles in their communication with parents. A concise guideline for parents seeks to address potential challenges based on their individual capabilities, while a

separate guideline for heads of year is designed to facilitate their role in supporting both school staff and parents – see Figure 6.6 as a visual representation.

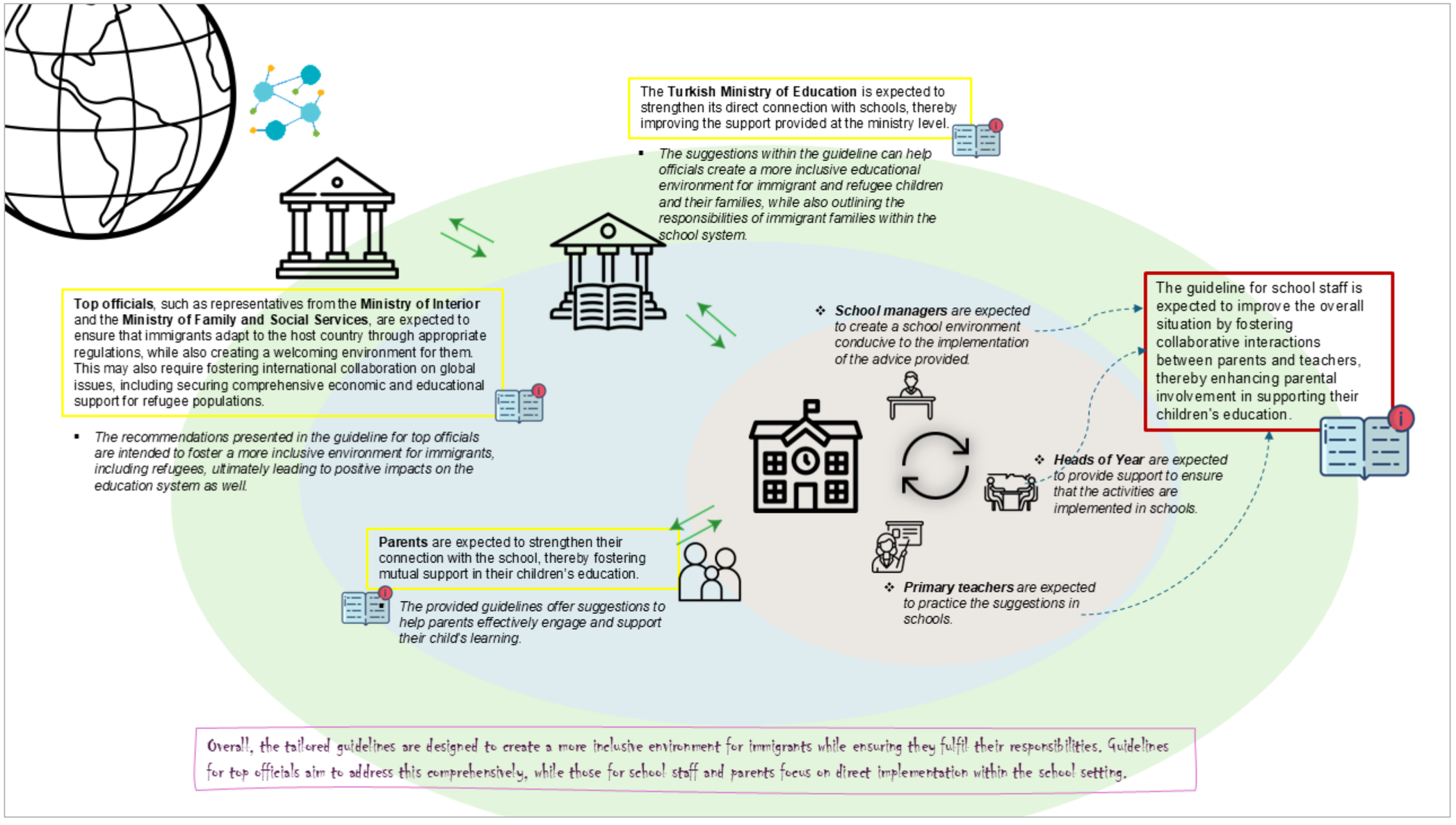


Figure 6. 6. The Expected Influencing Area of the Guidelines Provided

Before concluding this section, it is important to address the delivery format of the materials. This study identifies a vertical A4 digital booklet as the most effective format, given its compatibility with prevalent communication platforms such as WhatsApp and email. Nevertheless, this format is adaptable and can be tailored to various dissemination channels depending on the contextual needs. For example, the content may be reformatted for presentation on a website or converted into a printed brochure. The selection of the medium should also consider the target audience; interactive digital formats may be more suitable for school staff, whereas printed materials might enhance engagement among parents. Ultimately, the researcher posits that the appropriate dissemination of these materials has the potential to mitigate language barriers between immigrant parents and teachers within Turkish schools. The broader applicability and transferability of these guidelines, along with recommendations for future research, is further explained in Chapter 7.

6.5 CONCLUDING DISCUSSION

This section provides a critical reflection on the guideline evaluation, with particular emphasis on the interplay between primary and secondary research findings. Overall, the integration of secondary and primary research was instrumental in the meaningful development of the guideline. While the initial scope was narrowly focused on addressing language barriers between migrant parents and school communities, the desk-based review broadened the conceptual boundaries of the study. In particular, secondary research not only identified potentially effective tools for mitigating language-related challenges but also highlighted the significance of other interrelated factors, such as emotional and cultural barriers, which were subsequently explored and substantiated through the collection of primary data.

Firstly, as detailed in Chapter 4, the primary findings obtained from key stakeholders were both insightful and constructive; however, the evaluation process necessitated a number of contextually driven revisions to the proposed content. For instance, in relation to the language support component of the guideline, school staff in the case study predominantly advocated for more effective utilisation of translators and the facilitation of parents' acquisition of the Turkish language. While these proposals were theoretically sound, the evaluation process showed that their practical

applicability was limited by systemic constraints. Consequently, this section was updated in line with broad feedback. Similar context-specific, content-oriented modifications were implemented across several sections of the guideline, although the overarching structure remained intact.

Furthermore, expert interviews played a pivotal role in the refinement of the guideline. Experts with design background often helped enhance clarity of the material, and some comprehensiveness as well. Experts directly interacted with the research group mostly helped enhance usefulness, comprehensiveness and practicality. Ultimately, inclusion of diverse group of stakeholders brought beneficial outcomes, the guideline had a chance to be improved from diverse aspects.

The findings from key stakeholders, particularly heads of year and school managers were especially useful in shaping the final version, as these individuals work at the centre of school operations. Heads of year supported modifications, enabling the researcher to engage with school managers more effectively and use time efficiently. Presenting only the most potentially meaningful recommendations also helped to collect higher-quality feedback. All issues were addressed in the guideline; however, there was a common request for school-wide applicability of the material, as well as the development of a separate parent-focused guideline, which were subsequently prepared in response to this direction.

Themes extracted during the evaluation indicated that, without policy-level support, the proposed solutions would remain limited in impact. Therefore, the researcher prepared separate guidelines for ministries. Nevertheless, it is important to emphasise that there is a need for further, policy-level research. While these guidelines may serve as a source of inspiration, they should not be considered definitive. This point is further reinforced in the conclusion, within the section on recommendations for future research.

Finally, no major structural changes were made to the guidelines following the comprehensive evaluation, indicating that the prior research methodology adopted was largely appropriate. Overall, the guideline was considered beneficial, and it is anticipated that the development of tailored guidelines for additional groups will further enhance its utility. In conclusion, the researcher offers both theoretical contributions (discussed in Chapter 7) and practical implications for the literature,

which may also inform and guide future research in this area. Notably, the discussion presented here is relatively concise, as comprehensive discussions are integrated throughout the thesis, with dedicated sections concluding each chapter.

Chapter 7. CONCLUSION

This chapter covers contributions (Section 7.1), limitations and considerations (Section 7.2), considerations on flexibility and adaptability (Section 7.3), recommendations for further research (Section 7.4), and finally, concluded with the brief summary of the chapter at the end (Section 7.5).

7.1 CONTRUBITIONS

This section revisits the key contributions of the research project to the field. While the preceding chapters have outlined how the research objectives were achieved and how the research questions were addressed, the present section provides a deeper reflection on these contributions. Specifically, the contributions are framed in relation to the research objectives (A) and research questions (B), and are subsequently summarised and presented in their entirety (C).

A) Addressing Research Objectives

The contributions of this study are articulated through the lens of the research objectives, which are explained as follows.

This section revisited the contributions of this research project to the field. While each section detailed the research questions and objectives addressed, this section aimed to elaborate on these contributions in greater depth, framing them in relation to the research objectives as outlined below.

- **O1.** To develop an in-depth understanding of the context that immigrant parents are experiencing in Turkish schools

This research project marks a pioneering effort in providing comprehensive insights into the experiences of immigrant parents within Turkish schools. Specifically, it is the first study to investigate problems between primary school teachers and Syrian immigrant parents, focusing on the nuanced aspects of emotional, cultural, and unfamiliarity barriers. Previous research within the Turkish context has acknowledged problems faced by parents and school staff; however, these studies have largely been limited to identifying issues without delving into their underlying

causes. In contrast, this research uniquely contributes by deeply investigating the root of these problems from diverse perspectives. This in-depth analysis, through a comprehensive examination of these barriers, offers a unique and valuable contribution not only to the Turkish educational context but also to broader educational settings. It provides a robust foundation that can inform, and guide future projects aimed at fostering enhanced collaboration between immigrant parents and local teachers, and its insights extend applicability to other critical contexts such as healthcare and social care services in Türkiye.

- **O2** To gain in-depth understanding of language barriers preventing effective communication between immigrant parents and Turkish primary school teachers.

This research stands as one of the first investigations into this area within the Turkish context to comprehensively delve into the intricacies of language barriers between immigrant parents and local teachers. Previous research has primarily focused on demonstrating the *outcomes* of language barriers, such as reduced contact with teachers and diminished parental support for children's education. However, this research project also undertakes a comprehensive investigation into the issue of language barriers within Turkish schools, specifically integrating and analysing the interconnectedness of emotional, cultural, and unfamiliarity-related barriers within this broader topic. Consequently, this research offers significant guidance for future language barriers focused research, extending its applicability not only to the educational domain but also to other critical contexts such as healthcare and social care services within Türkiye and internationally.

- **O3** To explore elements which could help reduce experienced problems by immigrant parents, such as the policies suggested by the Turkish Government for immigrants.

This research represents the first comprehensive investigation into both the problems faced by immigrant parents and the potential solutions to mitigate these issues from a policy-level perspective. Existing research within the Turkish educational context has largely been confined to the exploration of school-level interventions. In contrast, this project adopts a significantly broader lens, examining the efficacy of various policies at both country-wide and education-wide levels within

Türkiye. By analysing what policies have succeeded or failed, this research provides critical insights. Ultimately, its contributions are poised to guide future research endeavours, serving as an inspiration for adopting a policy-level perspective when considering solutions not only within the Turkish education context but also in other relevant national and international settings.

- **O4.** To evaluate existing solutions and case studies regarding language barriers in other contexts which could help provide potential solutions/good practices.

This research marks the first comprehensive analysis of the potential efficacy of existing solutions aimed at reducing language barriers within Turkish schools. Earlier research has predominantly been limited to identifying problems, with proposed solutions often confined to the utilization of school-level facilities (e.g., translation services). In contrast, this project dedicates extensive research to this specific topic, offering a synthesized evaluation of the advantages and disadvantages of widely adopted solutions. Furthermore, it assesses the appropriateness of these solutions for the specific research group under investigation. The findings of this study are therefore instrumental in guiding future research, enabling researchers to leverage a deeply evaluated and compared set of practical solutions, and to apply similar evaluative frameworks to their own research groups.

- **O5.** To critically review relevant Human-Centred Design principles and explore how they could be used to gain better understanding of language barriers and come up with solutions.

This researcher extends the application of Human-Centred Design by exploring its relevance in a context where it has not been widely implemented. While HCD principles have proven effective in addressing a range of everyday challenges, their use in tackling language barriers within educational settings, particularly in the Turkish educational context, remains largely unexplored, and this study enhances the HCD framework by adapting and applying it to this novel area of inquiry. This project serves as a compelling example of the diverse utility of HCD approaches; specifically, the IDEO (2015) methodology guided the overall research framework, while the HCD pyramid, proposed by Giacomin, 2014, was primarily instrumental in the creation of the practical output of this research (the guidelines). As such, this

research not only adds to the academic discourse within the HCD field but also offers actionable insights for researchers and practitioners aiming to address similar challenges through design-led strategies.

- **O6.** To explore how Information Design could be applied to reduce language barriers between Turkish teachers and immigrant parents.

This research project yielded novel insights into the application of Information Design (ID) principles to mitigate language barriers in Turkish schools, culminating in a set of guidelines for relevant stakeholders. While numerous examples exist for using ID to convey information effectively in various contexts, its application within the specific topic of this research is unique. This project provides a compelling example of the integration of both Information System Design principles and the fundamental principles of Information Design within a Turkish educational setting. Although this project adopted specific Information System Design principles, notably the content and delivery strategies suggested by Tore-Yargin (2013), its application herein serves as a valuable precedent for further research exploring the employment of other distinct strategies. Furthermore, the researcher's utilization of several Fundamental Principles of Information Design, such as certain Gestalt principles and the use of icons, establishes this project as an exemplary case for the future application of these principles in other contexts. Ultimately, the researcher has expanded the scope of ID applications, providing a valuable practical example to the existing literature.

- **O7.** To propose Information Design guidelines that could assist Turkish school managers to foster better communication between primary school teachers and immigrant parents

The guidelines proposed as a practical outcome of this research project represent a pioneering contribution to Turkish schools in their current form, combining both critical secondary and primary data through specific methodological approaches. While the Turkish Ministry of Education has provided several topic-based guidelines to school staff, primary findings indicate that these are often not effectively utilised due to their excessive length, complexity, inclusion of superfluous details, and limited practical suggestions. Moreover, despite some existing materials related to immigrant education for school staff, no comprehensive guideline specifically

focused on fostering better communication between primary school teachers and immigrant parents has been available. In this context, the practical guideline developed for school managers through this project represents the first of its kind within the Turkish education system and is notably more robust in its design and preparation than existing materials provided to school staff. Significantly, as an outcome of the guideline evaluation process, the researcher further created tailored guidelines for other relevant groups, including other school staff and policy makers. Ultimately, this research project presents several distinct guidelines exemplified through the application of Information Design principles. These examples offer valuable guidance for both education researchers and design researchers for future projects.

B) Addressing the Research Questions

The research objectives provided a solid framework for addressing the research questions, all of which were comprehensively answered as follows.

- **RQ 1.** What are the main reasons that caused language barriers between immigrant parents and Turkish primary school teachers?

The research objectives provided a solid framework for addressing the research questions, all of which were comprehensively answered. With respect to the first research question, this study represents the first attempt to investigate the underlying factors that contribute to language barriers between immigrant parents and Turkish primary school teachers. The findings indicated that these barriers arise from the combined effects of three interrelated factors: emotional barriers (e.g. limited mutual empathy between parents and teachers), cultural barriers (e.g. differences in mindsets between Syrian parents and Turkish teachers), and unfamiliarity barriers (e.g. differing parental support roles in the Turkish and Syrian education systems). By conceptualising language barriers as a multidimensional phenomenon shaped by various factors, this study offers a distinctive and original contribution to the existing literature.

- **RQ 2.** To what extend existing solutions, research, and/or current practices address these language barriers?

In relation to the second research question, the study is the first to examine the extent to which existing solutions, prior research, and current practices address these barriers within the Turkish educational context, highlighting both the strengths and shortcomings of current approaches.

- **RQ 3.** How could Human-centred Design principles and Information Design applications be used to address language barriers between immigrant parents and Turkish primary school teachers?

Finally, regarding the third research question, this research makes an original contribution by proposing a context-specific guideline for the Turkish education system, designed through the integration of Human-Centred Design (HCD) and Information Design (ID) principles.

C) Summary of the Contributions

Overall, the contributions could be simply summarised within contribution to the educational context, methodological contribution, and contribution to practice.

Regarding its contribution to the educational context, this research extends the literature on language barriers between primary school teachers and Syrian immigrant parents within the Turkish educational context, while also contributing to the fields of Human-Centred Design (HCD) and Information Design (ID). The findings confirm that immigrant parents in different countries share similar experiences; however, this study highlights that the nature of these challenges is closely related to the type of migration. In particular, refugees who have fled due to war face more pronounced difficulties in host countries, and their children's education-related challenges tend to be more visible. While the findings align with existing research in the Turkish educational context, this thesis provides a more detailed examination of the underlying causes of these problems; it expands the literature on language barriers by incorporating emotional, cultural, and unfamiliarity-related dimensions into the analysis of parent–teacher interactions in Turkish schools, which constitutes a distinctive contribution to this context. In terms of proposed solutions, the findings support existing literature indicating that translation services are among the most effective approaches for groups whose in-person participation and integration are prioritised, while also highlighting key factors required to enhance the effectiveness

of such services. Additionally, in line with the disciplinary focus of this research, the study demonstrates how HCD and ID can be applied to complex social issues; HCD primarily informs the research methodology, while ID guides the design of user-oriented guidelines. Although these design principles have been applied in other domains, their use in this specific context remains limited; therefore, this thesis contributes novel examples to the design literature, particularly in addressing complex social problems involving vulnerable groups.

With regard to methodological contribution, this research provides an example of the use of qualitative methods within a case study–based approach during the primary research phase, complemented by mixed methods during the evaluation of the guidelines. The study illustrates the development of data collection tools, the use of card-sorting techniques for solution exploration, and the application of ethical research practices when working with vulnerable populations. As demonstrated in this research, studies involving vulnerable groups require sensitive approaches, including careful question design and research processes that prioritise participant comfort. These practices were implemented through pressure-free recruitment procedures and one-to-one interviews, creating a safe environment for open and comfortable expression. Furthermore, the study exemplifies how qualitative analysis and conceptual mapping can be used to identify key themes, with stakeholder findings informing problem definition and expert insights guiding solution development. The guideline evaluation phase, in particular, serves as an example of the use of mixed methods to collect feedback and refine outputs through an iterative process based on recurring themes identified during evaluation.

In terms of practical contributions, this research offers tailored guidelines for school staff, parents, and policymakers, developed according to the needs and capacities of each target group, ranging from simplified materials for parents to more formal documents for higher authorities. The study demonstrates how research findings were translated into practical outputs using Information System Design principles and how clarity and usability were enhanced through key Information Design elements, such as Gestalt principles, the use of icons and symbols, and colour selection. These practical outcomes may serve as exemplary resources for similar contexts in which improving communication and supporting adaptation are primary objectives.

Finally, in line with the exploratory nature of this research, no contradictions were identified between the existing literature and the primary findings of the study. Instead, the research extends current knowledge by offering additional insights into the Turkish educational context, language barriers, and relevant design disciplines. Overall, this thesis is expected to be beneficial for social researchers, educators, design researchers, policymakers, and other stakeholders interested in communication, migration, and design-driven solutions.

7.2 LIMITATIONS AND CONSIDERATIONS

The limitations and considerations of this project are provided below.

A) Limitations

The limitations of this study primarily concern the scope of generalisability and the evaluation of guideline effectiveness, as outlined below.

A1) Scope of Generalisability

The scope of this study did not encompass a national-level approach, focusing instead on schools within Istanbul. Despite this geographical limitation, the selected school was highly representative of the broader context, exhibiting characteristics and challenges commonly observed across Turkish schools with immigrant student populations. The evaluation phase also similarly involved schools chosen for their representative qualities. While recruitment challenges and time constraints precluded engagement with a wider diversity of participant groups, the meticulous selection of representative sites suggests that the findings, though primarily derived from the primary school in Istanbul, possess a degree of generalisability to similar educational settings across the country.

A2) Assessment of the Guideline Effectiveness

One notable limitation of this study was that it did not include a longitudinal assessment to test the long-term effectiveness of the proposed guideline in practice. Such an evaluation would require extended implementation time and ongoing observation, which were beyond the scope of this research. However, the potential impact of the guideline was explored through a structured evaluation process involving a wider group of participants. The evaluation findings indicated strong

potential for the guideline's applicability, with many participants expressing interest in adopting it within their respective educational settings. These results suggest that, while its effectiveness remains to be tested over time, the guideline is perceived as both relevant and valuable by key stakeholders.

B) Considerations

This part outlines several key considerations pertaining to the data collection processes employed in this research as follows.

B1) Response Bias in Interviews with Immigrant Parents

The potential for response bias among immigrant parents was considered during the primary research phase. While meticulous attention was paid to the development of sensitive interview questions designed to minimize discomfort, and a translator from the participants' country of origin was employed to facilitate effective communication, the possibility remains that some participants may have felt hesitant to express negative perspectives. This potential reluctance could stem from a perceived lack of entitlement to criticise, a dynamic often observed among individuals in newcomer or guest status within a host country (this interpretation is informed by the researcher's understanding of the potential social dynamics and by her earlier engagement with literature relevant to studies involving vulnerable groups). Ultimately, it can be acknowledged that all qualitative research is subject to some degree of bias; however, in this study, the researcher took deliberate steps to mitigate such bias and maintain a balanced approach. As a result, the data collection process yielded a diverse range of responses, including both positive and negative feedback, with participants offering critical perspectives where appropriate.

B2) Potential Bias of the Researcher

The researcher held a dual role as both the designer of the guideline and the observer of its evaluation, which raised concerns regarding potential bias. To mitigate this risk, a systematic methodology was rigorously followed, preventing the researcher from reshaping the guideline based on personal perspectives. In addition, two academic supervisors were actively involved in the evaluation process, serving as independent reviewers. Throughout this stage, the researcher provided them with

detailed reports and supporting evidence, sought confirmation at each step, and proceeded only after receiving their approval.

B3) Participant Engagement with Pre-Distributed Research Materials

During the data collection phase, a key observation was the variability in participants' engagement with pre-distributed materials, such as the interview questions and the Participant Information Sheet. Although interviews were scheduled according to participants' availability, allowing ample time for prior review, it became apparent in some cases that the materials had not been thoroughly examined. While the majority of participants appeared well-prepared, demonstrating familiarity with the content, a few instances involved repetitive questions or requests for clarification on information already provided. In these situations, the researcher responded by offering a brief yet comprehensive summary of the research process, with the aim of ensuring clarity and supporting participant comfort. This reflects a common challenge in qualitative research, where limited engagement with preparatory materials may stem from external factors such as time constraints or competing personal and professional obligations. Despite this, all interviews were successfully completed, and a sufficient volume of data was collected to support the study's objectives.

B3).

7.3 GENERALISABILITY AND TRANSFERABILITY

This section discusses the broader use of the guidelines beyond the immediate education context.

A) Use of the Guidelines in Other Countries

The proposed guidelines possess a degree of broader applicability beyond the specific context of Türkiye. Other countries may encounter similar situations, characterised by the presence of immigrant students and challenges in communication with their parents. Many of the suggestions embedded within the guidelines are likely to address the fundamental requirements of schools in diverse international settings. For instance, the provision of orientations for immigrant parents and the dissemination of prior information are arguably essential across various educational systems. Similarly, the establishment of clear meeting protocols,

ensuring parents understand procedural expectations, is a universally beneficial practice.

However, certain considerations are paramount when adapting these guidelines to other national contexts, particularly concerning the dynamics of community interaction and the nature of immigration. Firstly, this research specifically focused on Syrian immigrants in Türkiye, a group with both shared and distinct cultural aspects relative to the local Turkish population, and the materials were developed accordingly. Therefore, the characteristics of both immigrant and local communities should be carefully considered when adapting these guidelines elsewhere. Secondly, the Syrian immigration to Türkiye was largely a consequence of conflict, resulting in the unprepared arrival of students and parents who required extensive support within the Turkish educational system. In contrast, many instances of migration involve individuals who are more prepared (e.g., possessing a certain level of language proficiency, having researched the host country's systems, or being financially stable). Therefore, the type of immigration also necessitates careful attention during any adaptation process.

B) Use of the Guidelines in Different Education Settings

While the guidelines were primarily developed for primary school levels within Türkiye, their utility extends to other educational stages, including pre-school (kindergarten) and secondary schools. In these settings, students remain significantly dependent on parental involvement, thereby necessitating effective teacher-parent communication. Although the reliance on parental communication might diminish somewhat at the high school level, the guidelines retain a degree of applicability. The framework's inherent flexibility allows for adaptation to the specific circumstances of different educational levels, enabling their efficient use across a variety of settings. This adaptability underscores the potential for these guidelines to serve as a valuable resource for fostering communication between educators and immigrant parents across the educational spectrum.

7.4 RECOMMENDATIONS FOR FURTHER RESEARCH

The recommendation for further research primarily involves expanding this study to the policy level. The primary data results unequivocally indicated that policy-level interventions are highly crucial for developing proper solutions to the identified research problem. Therefore, it is strongly suggested that a dedicated research endeavour focused on policy perspectives be conducted to gain a comprehensive understanding of this critical dimension and to develop actionable policy-level solutions for proposal to top officials.

7.5 SUMMARY OF THE CHAPTER

This chapter provides a concise synthesis of the theoretical contributions of the research. The study contributes to three interrelated bodies of knowledge: the Turkish education context, the literature on language barriers in school–parent communication, and, most notably, the design context. These contributions are outlined below.

A) The Turkish Education & Language Barriers Contexts

The contributions to the Turkish education context and to the literature on language barriers are closely interconnected and are therefore discussed together in this section. As a contribution to knowledge within Turkish primary schools, the findings of this research demonstrate that communication challenges between immigrant parents and Turkish teachers are multifaceted and cannot be explained solely by linguistic limitations. Rather, these challenges extend beyond language to include emotional barriers, cultural differences, and limited familiarity with the Turkish education system. To address these complex and overlapping barriers, the research identified a critical need for the establishment of effective communication channels alongside the implementation of a range of supportive measures.

While translation services emerged as a particularly valuable tool, the research highlighted the necessity of other supplementary channels. For instance, the use of platforms such as WhatsApp was identified as effective for the timely dissemination of general information, and the integration of AI-based tools was suggested for

situations where human translators are not readily available. Furthermore, the findings underscored the need for further several key initiatives, including the enhancement of parent-teacher consultations, the improvement of orientation courses and social activities, and the implementation of more effective school-wide visual and physical modifications. Notably, beyond the immediate school environment, the findings underscored that policy-level interventions are highly crucial for navigating this complex situation, a need that the research highlights as a key direction for future study.

B) Design Context

The most significant theoretical contribution of this research lies within the design context, as originally intended. The application of HCD and ID principles proved to be instrumental in addressing the research problem and in shaping both the research process and its outcomes.

Firstly, this research project shows a unique example for how HCD was effectively employed for shaping the overall methodology and guiding the development of the guideline content, specifically in education context, within the scope of integration of vulnerable groups. Furthermore, the second contribution of HCD is visible during the transfer research findings into the guideline in a meaningful way with the use of HCD pyramid developed by Giacomin (2014).

Secondly, ID principles played a key role in the development of the guidelines, and this research demonstrates their application in several important ways. First, the study illustrates how the selected Information System Design principles support the effective delivery of information to the target users, namely school managers. Second, it shows how core elements of ID contribute to improved clarity, accessibility, and comprehensibility of the material. In doing so, this research offers a distinctive contribution to the Information Design literature by providing a unique example of the application of ID principles within an educational context.

C) Summary of the Contributions to the Theory

In summary, this research contributes to the literature on Turkish education, on language barriers in parent-teacher communication, and most notably on design

theory through the applied use of Human-Centred Design and Information Design principles. Drawing on these theoretical foundations, the study successfully achieved its primary aim: the development of a set of ID guidelines for Turkish primary school management, grounded in HCD principles, to address language barriers between immigrant parents and Turkish primary school teachers. Beyond these, this research not only offers practical value for improving current communication practices within Turkish primary schools, but also provides a conceptual and methodological framework that can inform future research and policy development.

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APPENDIX

This appendix comprises seven sections in total, as summarised in Table A. 1. below.

Table A. 1. Overview of the Appendix

Sections		Explanation
Appendix A. Supplementary Documents Cited in Chapter 1		This section includes supplementary materials from the background research, specifically the review of Turkish government immigration projects.
Appendix B. Supplementary Documents Cited in Chapter 2	A1) A Comparative Review of the Fundamental Features of Türkiye and Syria	This section presents the supplementary documents referenced in the desk-based research.
	B2) Reviewed Design Approaches	
Appendix C. Supplementary Documents Cited in Chapter 3	C1) Recruiting Messages	This section provides the supplementary materials cited within the methodology section, supporting the research design and procedures described.
	C2) Participant Information Sheet	
	C3) Consent Form	
	C4) Primary Classroom Units at the School Examined in the Case Study	
	C5) Data Collection Instruments Employed in Primary Research	
Appendix D. Supplementary Documents Cited in Chapter 4	D1) Sample Teacher Quotations from Primary Data Collection	This section presents illustrative quotations from key participants, obtained during the semi-structured interviews conducted in the primary research phase.
	D2) Sample Parent Quotations from Primary Data Collection	
Appendix E. Supplementary Documents Cited in Chapter 5 & Prototype Guideline		This section includes the prototype guideline prepared for school managers.
Appendix F. Supplementary Documents Cited in Chapter 6 & Complete Versions of the Guidelines	F1) Evaluation form	This section provides supplementary material related to the guideline evaluation stage, encompassing the full and finalised versions of all guidelines.
	F2) Recruitment Messages	This section provides supplementary material related to the guideline evaluation stage, encompassing the full and finalised versions of all guidelines.
	F3) Participant Information Sheet	
	F4) Consent Form	
	F5) Ethical Approval for the Evaluation Stage	
	F6) Sample Participant Responses to the Guideline Evaluation Questions	
	F7) Complete Versions of the Final Guidelines	

Appendix G. References for Appendix	References for the appendix are provided separately at the end of the document.

APPENDIX A. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 1

Figure A. 1. The image illustrates the researcher teaching Turkish to immigrants as a volunteer during the 2016–2017 period.

APPENDIX B. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 2

This section provides a review of Turkish government immigration projects (B1), a comparative review of the key characteristics of Türkiye and Syria, and (B2) the reviewed design approaches identified in the literature (B3).

B1) Review of Turkish Government Immigration Projects

This part includes a review of Turkish government immigration projects, drawing on research conducted in 2022.

Table A. 2. Completed projects by Directorate of Migration Management (T.C. İçişleri Bakanlığı Göç İdaresi Başkanlığı [T.C. Ministry of Interior Directorate General of Migration Management], 2022)

1	Support Project for the Institutional Structuring of the Directorate General of Migration Management	33	Supporting TR in the establishment of a human rights-oriented and effective system for the implementation of the EU-TR Readmission Agreement
2	Support for DGMM on the Creation of a Framework on the Basis of Human Rights for the Implementation of the EU-Türkiye Readmission Agreement (Bilateral Cooperation)	34	Combating Human Trafficking and Organized Crimes - Stage 2
3	Support for DGMM on the Creation of a Framework on the Basis of Human Rights for the Implementation of the EU-Türkiye Readmission Agreement (Bilateral Cooperation)	35	Assisted Voluntary Return Project
4	Comprehensive Assessment of Key Trends and Sources of International Migration in Türkiye	36	Supporting Türkiye in the Development of National Harmonization Policies
5	Strengthening the Capacity of the Directorate General of Migration Management	37	Project for Strengthening the Operational and Strategic Capacity of the Directorate General of Migration Management _ Phase III
6	Strengthening the Capacity of the Directorate General of Migration Management	38	Project on Supporting the Asylum Decision Making Capacity of the Directorate General of Migration Management _ ASCAP II
7	An Analysis on Afghan International Protection Applicants and Status Holders in Türkiye : Reasons for Arrival in Türkiye , Their Stay in Türkiye , Future Plans and Objectives	39	Project of Preventing, Detecting and Combating Human Trafficking in Türkiye _ P-TIP
8	Assessment of the Effects of the Syrian War and the Refugee Problem on Human Trafficking Project	40	Project of Supporting Türkiye to Strengthen Harmonization (Migrant integration and social harmonization of migrants) in Türkiye through an online information platform and raising awareness on migration
9	Assessment of Supply and Demand for Migrant Workforce in Türkiye on the Basis of the Sectors, Analysis of the Economic and Social Impacts of Seasonal Migrant Workers in the Context of Temporary and Cyclical Migration	41	Support for Türkiye to Provide Assistance to Syrians Under Temporary Protection
10	Implementation of Irregular Migration Strategy Document and National Action Plan Focused on Mixed Migration Flows	42	Verification of Personal Data of Foreigners under Temporary Protection in Türkiye
11	Protection of Victims of Human Trafficking	43	"Supporting DGMM's Efforts in the Development of the Capacity of Removal Centres within the

			Framework of International Human Rights Standards"
12	Study of the Profile and Living Conditions of Foreigners Legally Residing in Our Country	44	Protection of the Rights of Migrants and Refugees in Türkiye
13	Development of Protection Strategies for People in Need of International Protection Living in Urban Environment	45	Supporting the Development of Migration Policies in Türkiye
14	Silent Support: Supporting a Development-Sensitive and Harmonious Migration Policy Framework in Türkiye	46	Children's Protection Project - Phase I
15	Implementation of Irregular Migration Strategy Document and National Action Plan Focused on Mixed Migration Flows	47	Voluntary Assisted Return and Reintegration Program for Irregular Migrants in Türkiye
16	Protection of Victims of Human Trafficking	48	Project of Supporting the Implementation of Development-Sensitive Migration Policies in Türkiye _ SIDEM
17	Study of the Profile and Living Conditions of Foreigners Legally Residing in Our Country	49	Supporting the Implementation of the EU-Türkiye March 18 Memorandum of Understanding
18	Development of Protection Strategies for People in Need of International Protection Living in Urban Environment	50	Project of Supporting National Institutions for Mitigating the Effects of the Syrian Crisis
19	Silent Support: Supporting a Development-Sensitive and Harmonious Migration Policy Framework in Türkiye	51	Support Project for Provincial Directorates of Migration Management
20	Document and Visa Control Systems Before Exiting in Countries of Origin - PREDOC	52	Support Project for Provincial Directorates of Migration Management-Stage II
21	Training of DGMM personnel on the handling of individual readmission requests in accordance with the provisions of the Türkiye -EU Readmission Agreement	53	Increasing Türkiye 's Compliance with Regional and International Obligations in the Field of Asylum Application
22	Supporting the Creation of Strategic Risk Analysis Capacity in DGMM	54	Norway AVRR
23	Preventing foreigners under temporary protection in Türkiye from being subject to human trafficking	55	Strengthening Türkiye 's National Asylum System
24	Supporting the Development of Sustainable Asylum Capacity in Türkiye	56	Children's Protection Project-Phase II
25	Voluntary Return (AVR)	57	Strengthening Utilization of Additional Policies and Measures for Reinforcing Migration Management in Türkiye (SUPREME)
26	Supporting Türkiye 's Efforts to Respond to the Migration Crisis by Strengthening Migration Management	58	Support Project of the Directorate General of Migration Management for the Development of the System of Alternatives to Administrative Detention in Türkiye
27	Strengthening the Migration Dimension of the Foreign Fighters Problem	59	Supporting Türkiye 's Work on Migration Management
28	Support Project for the development of institutional capacity of the Directorate General of Migration Management (UK Phase II Project)	60	Project on Supporting DGMM's Institutional Capacity and Policy Development Processes in the Field of Asylum (PACT)
29	Strengthening the Admission Conditions of Removal Centres	61	Project of Integrating Approaches to Combating Human Trafficking into Crisis Situations (LEVANT Project)
30	Determination of the Needs of the Children of Syrian Families Working in the Agriculture Sector in Antalya	62	Capacity Building for Effective Nationality Determination
31	Development of the Harmonization Course Curriculum in cooperation with MoNE and DGMM to Support the Harmonization of Migrants and Refugees	63	Assisted Voluntary Return and Reintegration Program for Irregular Migrants in Türkiye (AVR - United Kingdom)
32	Strengthening National Asylum Decision Procedures		

Table A. 3. Ongoing projects by Directorate of Migration Management (T.C. İçişleri Bakanlığı Göç İdaresi Başkanlığı [T.C. Ministry of Interior Directorate General of Migration Management], 2022)

1	Assisted Voluntary Return and Re-Integration of Irregular Migrants in Türkiye (AVR)	11	Strengthening the Protection of Foreigners and Victims of Human Trafficking in Türkiye in terms of Human Rights
2	Support Project for Strengthening DGMM's Capacity of Removal Centres within the Framework of International Human Rights Standards - PHASE II	12	Research on Human Trafficking based on Child Trafficking and Labor Exploitation in Türkiye to Support the Decisions Taken by DGMM and the Process of Creating Evidence-based Policy in Türkiye 's Fight against Human Trafficking (Human Trafficking Research Laboratory-Türkiye)
3	Migrant Presence Monitoring Program (DTM)	13	Social Harmonization and Life Trainings
4	Technical Cooperation with Civil Society in the Field of Migration and International Protection	14	Harmonization of Foreigners in Türkiye
5	Raising Awareness on Migration and International Protection	15	Supporting DGMM for the Management, Reception and Sheltering of Irregular Migrants
6	Maintenance, Repair and Furnishing of Removal Centres	16	Supporting the Capacity of Removal Centres and Developing Alternative Measures to Administrative Detention
7	Construction of the "6" Removal Centres for the Effective Implementation of the EU-Türkiye Readmission Agreement	17	Norway AVRR
8	Furnishing of 6 Removal Centres for Effective Implementation of the EU-Türkiye Readmission Agreement	18	Children's Protection Project Phase -III
9	Support Project for the Implementation of Development-Sensitive Sustainable Migration Management Policies (SUMMIT)	19	Supporting the Development of Return Counselling Capacities in Türkiye (ReCONNECT)
10	Supporting Provincial Directorates of Migration Management Project- Stage III		

B2) A Comparative Review of the Fundamental Features of Türkiye and Syria

The table below presents the fundamental characteristics of Türkiye and Syria, including their capitals, official languages, neighbouring countries, and other key features. Table A.4 summarises basic features of Türkiye and Syria, based on data in 2022.

Table A. 4. Basic features of Türkiye and Syria

Key features	Türkiye	Syria
Placement	Between Europe and Asia	West Asia
Surface area	783.577 km²	185.180 km²
Number of people	83.614.362	Currently not clear
Capital	Ankara	Sam
Current president	Recep Tayyip Erdoğan	Beşşar Esad
Official Language	Turkish	Arabic
Currency	Turkish lira	Syrian Lira

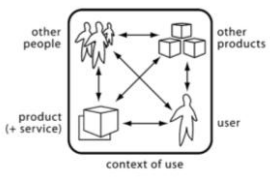
Religion	Islam	Islam
Neighbour countries	Bulgaria, Greece, Georgia, Armenia, Azerbaijan, Iran, Iraq and Syria	Lebanon, Palestine, Jordan, Iraq, Türkiye, Republic of Cyprus (in the Mediterranean Sea)
Seaside	Black Sea on the north, Mediterranean Sea on the south, and Aegean Sea on the west	Mediterranean Sea on the east
Türkiye and Syria in the maps		

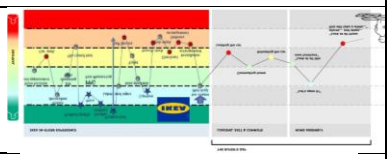
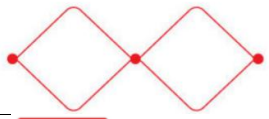
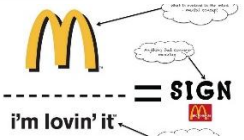
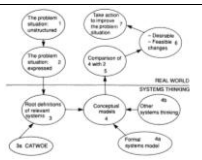
(Data obtained from official websites in 2022)

B3) Reviewed Design Approaches

The researcher conducted a comprehensive review of projects that utilised a range of design methodologies. These included Human-Centred Design, User-Centred Design, Participatory Design, Co-Creation, Co-Production, Co-Design, User Experience (UX) Design, the Double Diamond framework, Behavioural Design, Semiotics, and Soft Systems Methodology. Representative examples of these approaches are presented in Table A.5 below to illustrate their practical application within relevant contexts.

Table A. 5. Illustrative Case Studies Across Reviewed Design Methodologies

	Reviewed approaches	**Examples for case studies**	**Pictures**
1	Human-centred design	The Field Guide to Human Centred Design (IDEO.org, 2015)	
2	User-centred design	User-centred design for sustainable behaviour (Wever et al., 2008)	
3	Participatory Design	Involving the elderly in the design process: a participatory design model for usability, safety, and attractiveness (Demirbilek, 1999)	
4	Co-Creation	Co-creating value through customers' experiences: The Nike case (Ramaswamy, 2008)	

5	Co-production	The design of a co-produced health & social care service in Grimsby (OpenDoor, 2006)	
6	Co-design	The evolution of engagements and social bonds during child-parent co-design (Yip et al., 2016)	
7	UX (User-Experience)	The IKEA Effect — A UX Case Study (Hughes, 2018)	
8	Double-diamond	Eleven lessons: Managing design in eleven global companies-desk research report / Alessi (Council, 2007)	
9	Behavioural Design	To overcome splashing urine problem in Amsterdam airport with nudging users (BBC News, 2017)	
10	Semiotics	A semiotics perspective to web usability: An empirical case study (Islam, 2011)	
11	Soft system methodology	A case study on Soft System methodology: An application of soft system methodology (Mehregan et al., 2012)	

APPENDIX C. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 3

This section comprises the materials used and referenced in Chapter 3, including: (C1) participant recruitment messages, (C2) the Participant Information Sheet, (C3) the Consent Form, (C4) an overview of the primary classroom units at the case study school, (C5) the data collection instruments employed in the primary research, and the ethical approval documents (C6).

C1) Recruiting Messages for Participants

This section presents the recruiting messages prepared for school staff (C1.1), parents (C1.2), and experts (C1.3).

C1.1) Recruiting Message for School Staff

Dear teachers / Heads of year / School managers / Interpreter team member

You are cordially invited to take part in the research titled as '*Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers'* carried out by Sena Berktaş. This research aims to gain better understanding about language barriers between immigrant parents and Turkish primary school teachers in order to develop appropriate solutions to address these issues. There is no obligation to take part in this study. However, your participation could help improve communication between immigrant parents and Turkish primary school teachers. Your valuable time and insightful information will be highly appreciated. If you are interested in taking part, please see the participant information sheet for further information. You will be asked to sign the consent form in advance. Nevertheless, you can withdraw from the study at any point without any problem.

If you have any questions, please contact Sena Berktaş via her e-mail address: sena.berktas@brunel.ac.uk.

C1.2) Recruiting Message for Parents

Dear parents,

You are invited to the research titled as '*Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers'* carried by Sena Berktaş. This research intends to offer solutions for language-based communication problems between immigrant parents and Turkish primary school teachers. There is no obligation in order to take part, however, your statements in this research will be helpful to bring solution for language barriers so the researcher will be grateful if you accept to attend this project. The participants will sign the consent form which stresses anonymisation and other issues. Please see the information sheet for further information.

If you have any questions, please contact Sena Berktaş via her e-mail address: sena.berktas@brunel.ac.uk.

C1.3) Recruiting Message for Experts

Dear [Their Name],

My name is Sena Berktas. I am a PhD researcher at Brunel Design School, Brunel University of London. I would like to invite you to take part in my research project titled 'Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers'. This research aims to gain better understanding about language barriers between immigrant parents and Turkish primary school teachers in order to develop appropriate solutions to address these issues. Since you have experience of working with non-native speakers and/or addressing similar issues, your inputs would be really helpful for this study. Your valuable time and insightful information will be highly appreciated. If you are interested in taking part, please see the participant information sheet for further information. You will be asked to sign the consent form in advance. Nevertheless, you can withdraw from the study at any point without any problem.

If you have any questions, please contact me via my e-mail address: sena.berktas@brunel.ac.uk.

C2) Participant Information Sheet

The following content outlines the information sheet provided to all participants for the purpose of primary data collection.

Participant Information Sheet

Study title

Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication Between Immigrant Parents and Turkish Primary School Teacher

Invitation Paragraph

You are cordially invited to take part in the interview carried out by Sena Berktas as part of the PhD Research at the Design Department, College of Engineering, Design and Physical Sciences, Brunel University of London. This study is carried out independently by the researcher and not part of the school evaluation. You contact the researcher directly without involving the school. The participation is voluntary, and you could be supported by a translator if needed.

What is the purpose of the study?

This study aims to investigate propose guidance and practical solution(s) based on Human Centre Design and Information Design principles to help overcome language barriers between immigrant parents and Turkish primary school teachers.

Why have I been invited to participate?

You are invited to participate because you are stakeholders of this subject. Therefore, the researcher would like to hear your opinions and experiences.

Do I have to take part?

Your participation is completely voluntary. You have the right to decline this invitation as well as the right to withdraw from the study at any point. There will be no

negative consequences for declining to participate or later withdrawing.

What will happen to me if I take part?

You will be asked to answer a number of open questions, which will help the researcher understands your perceptions toward communication problems between Turkish primary school teachers and immigrant parents. If you have any questions, please feel free to clarify them with the researcher.

Are there any lifestyle restrictions?

There will be no lifestyle restrictions required.

What are the possible disadvantages and risks of taking part?

The study is considered low risk. It is very unlikely to cause any financial loss/burden to participants. No sensitive and personal question is included. It should take no more than 45 minutes to complete.

With regard to Covid-19 situation, the researcher considers safety measures: The interviews will be held online where possible. Face to face interviews also can be requires; for such cases the researcher will wear a mask, she will use virucidal sanitiser and offer to participants also, 30 minutes before each interview the room will be ventilated, the interpreter in the room also follows the same guidelines.

Participants will be asked not to attend if they have symptoms of COVID or test positive; they should notify the researcher if they test positive within 48 hours of a face to face interview.

What are the possible benefits of taking part?

There is no direct benefit for the participants. However, the data can be useful in the future in order to improve communication between immigrant parents and local teachers.

What if something goes wrong?

You can decide to leave the study at any point. You can also withdraw your data. Please inform the researcher before 1th November 2023.

With regard to the indemnity arrangements, Brunel University of London provides appropriate insurance cover for research which has received ethical approval.

Where is the location for the interviews?

The interviews will be held online where possible. Face to face interviews will be in a safe public space (e.g., a meeting room of the school. The interviews will be planned according to your availability.

Will my taking part in this study be kept confidential?

The information will be used of academic purposes only and treated as highly confidential. All answers will be anonymised. The results will be published anonymously.

Will I be recorded, and how will the recording be used?

Your voice will be recorded in order to analyse answers afterwards. The research will inform you when she starts and stops recording.

What will happen to the results of the research study?

The findings will be presented used included in the researcher's PhD research project and might be published in academic journals or conferences.

Who is organising and funding the research? Who has reviewed the study?

The questions have been developed in consultation with academic staff of Brunel Design School, College of Engineering, Design and Physical Sciences, Brunel University of London.

Research Integrity

Brunel University of London is committed to compliance with the Universities UK Research Integrity Concordat. You are entitled to expect the highest level of integrity from the researchers during the course of this research.

Contact for further information and complaints

For further information, please contact Dr Derek Millard-Healy who is the Chair of Brunel University of London Research Ethics Committee

The contact details are:

Email: derek.millard-healy@brunel.ac.uk

Brunel University of London, Uxbridge, UB8 3PH

Please do not hesitate to contact with the researcher and the supervisor if you have any queries.

The researcher: Sena Berktas: sena.berktas@brunel.ac.uk

The supervisor: Busayawan Lam: busayawan.lam@brunel.ac.uk

Thank you very much for your time and valuable information.

Sena Berktas, 2022

C3) Consent Form

The following content outlines the consent form provided to all participants for the purpose of primary data collection.

EXAMINING HOW HUMAN-CENTRED DESIGN AND INFORMATION DESIGN COULD HELP OVERCOME CHALLENGES TO ACHIEVE BETTER COMMUNICATION BETWEEN IMMIGRANT PARENTS AND TURKISH PRIMARY SCHOOL TEACHERS

SENA BERKTAŞ

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 15/11/2022 AND 01/11/2023

The participant (or their legal representative) should complete the whole of this sheet.		
	YES	NO
Have you read the Participant Information Sheet?	☐	☐
Have you had an opportunity to ask questions and discuss this study? (via email/phone for electronic surveys)	☐	☐
Have you received satisfactory answers to all your questions? (via email/phone for electronic surveys)	☐	☐

Who have you spoken to about the study?		
Do you understand that you will not be referred to by name in any report concerning this study?	☐	☐
Do I have to take part? This research is a voluntarily study so I would like to highlight that there will be no negative consequences for declining to participate or later withdrawing. Please see the related concerns as follows: Do you understand that:		
• You have a right to decline	☐	☐
• You don't have to give any reason for withdrawing	☐	☐
• Choosing not to participate or withdrawing will not affect your rights	☐	☐
• Your personal data will not be published	☐	☐
• You can withdraw your data any time up to 01/11/2023	☐	☐
I agree to my interview being audio recorded	☐	☐
I agree to the use of non-attributable quotes when the study is written up or published	☐	☐
The procedures regarding confidentiality have been explained to me	☐	☐
I agree that my anonymised data can be stored and shared with other researchers for use in future projects.	☐	☐
I agree to take part in this study.	☐	☐

Signature of research participant:	
Print name:	Date:

Please feel free to contact the researcher and the supervisor if you have any queries:

The researcher: Sena Berktas / sena.berktas@brunel.ac.uk

The supervisor: Dr. Busayawan Lam / busayawan.lam@brunel.ac.uk

C4) Primary Classroom Units at the School Examined in the Case Study

This part provides an overview of the primary classroom units in the school selected for the case study.

Table A. 6. Data on Students at First-Year Level

Classroom Branches	Student population				
	Total Male Student Enrolment	Total Female Student Enrolment	**Total Student Enrolment**	**Syrian students**	**Other immigrant students**
A	19	17	36	2	-
B	23	16	39	2	-
C	18	17	35	2	1 (Ukraine)
D	15	17	32	2	-
E	16	19	35	2	-
F	19	13	32	1	1 (Afghanistan)
G	17	18	35	3	1 (Palestine)
H	16	20	36	1	-
I	17	17	34	1	-
A/Special needed students/Mild mental	1	0	1	-	-
B/Special needed students/Mild mental	1	0	1	-	-
Total	162	154	**316**	**16**	**3**

Table A. 7. Data on Students at Second-Year Level

Classroom Branches	Student population				
	Total Male Student Enrolment	Total Female Student Enrolment	**Total Student Enrolment**	**Syrian students**	**Other immigrant students**
A	15	12	27	2	-
B	11	10	21	2	-
C	14	10	24	2	-
D	12	8	20	3	-
E	15	11	26	2	-
F	11	15	26	3	-
G	16	9	25	2	-
H	10	11	21	2	-
I	13	10	23	2	1 (Turkmenistan)
A/Special needed students/Mild Autistic	1	0	1	-	-
Total	118	96	**214**	**20**	**1**

Table A. 8. Data on Students at Third-Year Level

Classroom Branches	Student population				
	Total Male Student Enrolment	Total Female Student Enrolment	**Total Student Enrolment**	**Syrian students**	**Other immigrant students**
A	12	15	27	-	-
B	13	14	27	1	-
C	13	12	25	1	1 (Uzbekistan)
D	13	14	27	1	1 (Azerbaijan)
E	16	11	27	1	-
F	16	13	29	-	1 (Kyrgyzstan)
G	13	13	26	-	-
H	12	16	28	2	1 (Afghanistan)
I	15	12	27	-	1 (Turkmenistan)
A/Special needed students/Mild mental	2	2	4	-	-
B/Special needed students/Mild mental	2	1	3	-	-
Total	127	123	**250**	**6**	**5**

Table A. 9. Data on Students at Forth-Year Level

Classroom Branches	Student population				
	Total Male Student Enrolment	Total Female Student Enrolment	**Total Student Enrolment**	**Syrian students**	**Other immigrant students**
A	15	16	31	4	-
B	16	13	29	6	-
C	17	11	28	3	--
D	16	16	32	5	
E	18	16	34	4	-
F	15	15	30	3	-
G	15	16	31	4	-
H	14	16	30	4	1 (Afghanistan)
I	16	14	30	2	2 (Turkmenistan)
A/Special needed students/Mild mental	1	1	2	-	-
Total	143	134	**277**	**35**	**3**

C5) Data Collection Instruments Employed in Primary Research

This section includes interview questions developed for key stakeholders—primary teachers, heads of year, parents, school managers, interpreters—as well as for experts.

Table A. 10. Interview Questions for Turkish primary school teachers

Core Scope	Questions	Explanation
Overview of Group and Individual Parent Meetings	Q1. How frequently do you generally meet with parents? Q2. How frequently do you organize group or parental meetings? What are the main	The researcher aimed to differentiate between the modalities of group parent meetings and individual parent meetings within the context of this school.

	topics typically addressed during these meetings? Q3. Do you hold individual meetings with parents? If yes, how would you generally describe your communication with them?	
Overview of Group and Individual Meetings with Immigrant Parents	Q4. How would you describe the participation of immigrant parents in group meetings? Q5. How would you characterise your individual communication with immigrant parents?	The researcher examined the nature and extent of immigrant parents' involvement in this school
Modes of Communication	Q6. Through which communication channels do you typically interact with immigrant parents (e.g., phone, face-to-face, WhatsApp)? Q7. Have you experienced any challenges with your preferred communication channels? If yes, please explain.	The researcher aimed to explore the ways in which immigrant parents and Turkish teachers communicate despite existing language barriers.
Recurring Problems	Q8. What challenges do you frequently encounter regarding immigrant parents? Are you able to address these issues? If so, please describe how.	The researcher investigated the recurring problems experienced with immigrant parents and examined how these issues affect parent–teacher interactions.
Emotional barriers	Q9. How would you describe the communication between immigrant parents and Turkish teachers, and what are your views on the presence of immigrant students in Turkish schools?	The researcher sought to identify emotional challenges, as perceived by teachers, that could hinder effective communication.
Cultural barriers	Q10. How would you describe the cultural differences you have observed between immigrant communities and your own experiences? Q11. In your opinion, how do cultural differences impact communication between Turkish teachers and immigrant parents?	The researcher sought to examine cultural clashes as perceived by teachers and to understand how these conflicts may affect the nature and effectiveness of communication between parents and teachers.
Unfamiliarity barriers	Q12. How would you describe immigrant parents' engagement with the Turkish education system?	The researcher sought to examine how parents' unfamiliarity with the local education influences the nature and effectiveness of their communication with Turkish teachers.
Extended Inquiry Question	Q13. Would you be interested in solutions that improve communication channels between immigrant parents and Turkish primary school teachers?	The researcher sought to investigate the extent to which teachers demonstrate interest in identifying and implementing solutions.

Recommendations for Future Practice	Q14. What communication channels would you suggest designers develop to facilitate interactions between immigrant parents and Turkish teachers? Please explain your recommendations. Q15. Card Sorting Activity: Teachers were asked to sort the cards and explain the reasons for their choices (see the cards in Section 3.6).	The researcher aimed to identify the most effective communication channels between teachers and parents directly involved with the issue and to gather their recommendations.

Table A. 11. Interview Questions for Heads of year

Core Scope	Questions	Explanation
Overview	Q1. How would you describe your role in engaging with parents? Q2. Do you meet with immigrant parents? If so, how frequently?	The researcher seeks to investigate the role of the heads of year in relation to the identified problem, initially raising general questions to frame the discussion, as presented.
Common Challenges	Q3. What challenges do you frequently encounter regarding immigrant parents? Are you able to address these challenges? If so, please explain how.	The researcher sought to investigate the challenges as perceived by the heads of year, with the objective of obtaining a deeper understanding of the recurring issues within the school context.
Emotional barriers	Q4. How would you describe the general attitudes of Turkish primary school teachers towards immigrant parents?	The researcher aimed to obtain more information regarding the emotional dynamics between parents and teachers.
Cultural barriers	Q5. How would you describe the cultural differences between immigrant parents and your own experiences and observations? Q6. Based on your experiences and observations, how do cultural differences affect communication between Turkish teachers and immigrant parents?	The researcher sought to gain a comprehensive understanding of the cultural dynamics that influence interactions between parents and teachers.
Unfamiliarity barriers	Q7. How would you describe immigrant parents' engagement with the Turkish education system?	The researcher aimed to obtain comprehensive information regarding parents' engagement with the local system.
Extended Inquiry Question & Recommendations for Future Practice	Q8. What communication channels would you suggest designers develop to facilitate interactions between immigrant parents and Turkish teachers? Please explain your recommendations.	The researcher aimed to examine potential solutions to the problems as perceived from the heads of year perspective.

	Q9. Card Sorting Activity: Heads of year were asked to sort the cards and explain the reasons for their choices (see the cards in Section 3.6).	

Table A. 12. Interview Questions for Immigrant Parents

Core Scope	Questions	Explanation
Overview	Q1. Do you communicate with primary teachers? If not, please explain why. If yes, please describe how this communication typically occurs.	The researcher sought to explore the overall situation by examining the experiences and viewpoints of parents.
Modes of Communication	Q2. Through which communication channels do you usually interact with teachers (e.g., phone, face-to-face, WhatsApp)? Q3. Have you experienced any difficulties with your preferred communication channels? If yes, please explain.	The researcher aimed to explore the ways in which immigrant parents and Turkish teachers communicate despite existing language barriers.
Emotional barriers	Q4. How would you describe the nature of parental meetings in your country?	The researcher sought to identify emotional challenges, as perceived by parents, that could hinder effective communication.
Cultural barriers	Q5. How would you describe parental meetings in your country?	The researcher sought to examine cultural clashes as perceived by parents and to understand how these conflicts may affect the nature and effectiveness of communication within the school context.
Unfamiliarity barriers	Q6. How would you describe the Turkish education system?	The researcher sought to examine the extent of parents' engagement with the local system.
Extended Inquiry Question	Q7. Would you be interested in solutions that provide improved communication channels between immigrant parents and Turkish primary school teachers?	The researcher sought to assess the degree of parents' involvement in problem-solving processes.
Extended Inquiry Question & Recommendations for Future Practice	Q8. What communication channels would you suggest designers develop to facilitate interactions between immigrant parents and primary teachers? Please explain your recommendations. Card Sorting Activity: Parents were asked to sort the cards and explain the	The researcher aimed to identify the most effective communication channels between teachers and parents directly involved with the issue and to gather their recommendations.

	reasons for their choices (see the cards in Section 3.6).	

Table A. 13. Questions for School Management

Core Scope	Questions	Explanation
Overview	Q1. How would you describe your engagement with immigrant parents?	The researcher sought to investigate the extent to which the school administration is engaged with and responsive to the needs of immigrant parents.
Modes of Communication	Q2. How do you typically communicate with immigrant parents? For example, by phone, face-to-face, WhatsApp, or other methods?	The researcher sought to investigate how school management staff and immigrant parents communicate, including the approaches and strategies employed to facilitate effective interaction.
Emotional barriers	Q3. How would you describe the relationship between immigrant parents and Turkish teachers?	The researcher sought to investigate school managers' awareness of the situation and to obtain deeper insights into the emotional barriers that may affect interactions between parents and teachers.
Cultural barriers	Q4. How do you describe cultural differences between your country and to your experiences and observations? Q5. How cultural differences effect communication between teachers and immigrant parents?	The researcher sought to investigate the extent of school managers' awareness of the situation and to gain deeper insights into the cultural barriers that may influence interactions between parents and teachers.
Unfamiliarity barriers	Q6. How do you describe the immigrant parents' engagement with Turkish education system? Do you think the immigrant parents struggle with Turkish education system? If so, in which points they have difficulties?	The researcher sought to investigate school managers' awareness of the situation while also obtaining deeper insights into the ways in which parents engage with the local system.
Extended Inquiry Question & Recommendations for Future Practice	Q7. What communication channels would you suggest designers develop to facilitate interactions between immigrant parents and primary teachers? Please explain your recommendations.	The researcher aimed to obtain appropriate recommendations from the school management to help mitigate problems.

Table A. 14. Questions for Interpreter Service

Core Scope	Questions	Explanation
Overview	Q1. How do you define your role?	The inquiry sought to investigate the depth of the interpreter's involvement with parents and to explore how this support contributes to addressing language barriers between teachers and parents."
Recurring problems	Q2. What types of challenges do you typically encounter with immigrant parents? How do you address or resolve these issues?	The researcher aimed to identify the prevalent problems experienced by immigrant parents that may contribute to communication difficulties. Additionally, she sought to assess the effectiveness of the school staff in addressing these issues.

Table A. 15. Questions for Experts

Core Scope	Questions
Participants' Areas of Expertise	Q1. What types of projects do you typically undertake, and where do you primarily focus your professional efforts?
Relevant Experience(s)	Q2. Have any of your projects specifically aimed to facilitate communication between individuals? If so, could you please elaborate on these initiatives?
Applicable and Beneficial Theories	Q3. Have you drawn upon any theories or frameworks to assist in reducing communication barriers between people?
Interventions to Mitigate Cultural Barriers	Q4. Have you ever worked on, or are you aware of, projects that address challenges arising from cultural barriers? Q5. In your professional practice, have you had to consider cultural issues? If so, could you provide some specific examples? Q6. Have you encountered situations in which cultural considerations between users influenced your work? If so, how were these addressed?
Interventions to Mitigate Emotional Barriers	Q7. Have you ever worked on, or do you know of, projects that sought to address issues of prejudice? Q8. In your opinion, how might a designer contribute to fostering more welcoming and comfortable communication between individuals from diverse backgrounds? Q9. Have you ever been involved in, or are you aware of, projects that focus on emotional issues? If so, in what ways were these issues considered?
Interventions to Mitigate Unfamiliarity Barriers	Q10. In your view, how can a designer help reduce communication barriers when parties are unfamiliar with the subject matter being discussed?

	Q11. Have you undertaken projects in which you were expected to assist users in accessing specific information? If so, in what ways was this achieved?
Factoring in Other Variables	Q12. Beyond language itself, what other factors do you believe are important in overcoming language barriers?
Assessing Possible Solutions	Q13. If you were to propose approaches or strategies to address such challenges, what would your recommendations be?
Concluding Inquiry & Further Recommendations	Q14. Do you have any additional comments or further recommendations you would like to share?

C6) Ethical Approval Documents

T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-59090411-20-54859569 08/08/2022
Konu : Anket ve Araştırma İzni (Sena BERKTAŞ)

VALİLİK MAKAMINA

İlgi : a) Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.01.2020 tarihli ve 2020/2 sayılı genelgesi.
b) İstanbul Gedik Üniversitesinin 20.06.2022 tarihli ve 735 sayılı yazısı.
c) Müdürlüğümüz Araştırma ve Anket Komisyonunun 04.07.2022 tarihli tutanağı.

Araştırma Konusu	: İnsan Odaklı Tasarım ve Bilgi Tasarımının Yabancı Ebeveynler ve Türk İlköğretim Öğretmenleri Arasındaki Dil Engelini Azaltmaya Nasıl Yardımcı Olabileceğinin İncelenmesi
Araştırma Türü	: Anket
Araştırma Yeri	: İstanbul
Araştırma Yapılacak Kişiler	: İlkokul Yönetici, Öğretmenleri, Öğrenci Velileri
Araştırmanın Süresi	: 2022 - 2023 Eğitim ve Öğretim Yılı

Yukarıda bilgileri verilen araştırmanın; 6698 sayılı Kişisel Verilerin Korunması Kanununa aykırı olarak kişisel veri istenmemesi, öğrenci velilerinden açık rıza onayı alınması, yüz yüze eğitime geçmiş olan kurumlarımızda, Covid-19 tedbirlerinin araştırmacı ve ilgili kurum idarelerince alınması, bilimsel amaç dışında kullanılmaması, bir örneği Müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarımıza araştırmacı tarafından ulaştırılarak uygulanması, katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun kamuoyuyla paylaşılmaması ve araştırma bittikten sonra 2 (iki) hafta içerisinde Müdürlüğümüze gönderilmesi, okul idarelerinin denetim, gözetim ve sorumluluğunda, eğitim ve öğretimi aksatmayacak şekilde, ilgi (a) genelge esasları dâhilinde uygulanması kaydıyla Müdürlüğümüzce uygun görülmektedir.

Makamınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

Levent YAZICI
İl Millî Eğitim Müdürü

OLUR
08/08/2022
Dr. Hasan Hüseyin CAN
Vali a.
Vali Yardımcısı

Ek:
1- İlgi (b) Yazı ve Ekleri (10 Sayfa)
2- İlgi (c) Tutanak (1 Sayfa)

Bu belge güvenli elektronik imza ile imzalanmıştır.

Adres : Binbirdirek Mah. İmran Öktem Cad. No: 1 Sultanahmet Fatih İstanbul
Telefon : 0212 384 36 30
E-posta : stratejigelistirme34@meb.gov.tr
Kep Adresi : meb@hs01.kep.tr
Belge Doğrulama : https://www.turkiye.gov.tr/meb-ebys
Bilgi İçin : Aykut ÇELİK
Unvanı : Büro Hizmetleri
İnternet Adresi : http://istanbul.meb.gov. tr/

Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evraksorgu.meb.gov.tr adresinden c395-9d12-3bb2-b563-d98b kodu ile teyit edilebilir.

University Research Ethics Committee
Brunel University London
Kingston Lane
Uxbridge
UB8 3PH
United Kingdom

www.brunel.ac.uk

22 November 2022

LETTER OF CONDITIONAL APPROVAL

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 22/11/2022 AND 31/12/2023

Applicant (s): Miss Sena Berktas

Project Title: Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers

Reference: 36622-LR-Oct/2022- 41880-4

Dear Miss Sena Berktas,

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- **PIS: Under the heading 'What will happen to the results of the research study', please include a statement to indicate that the results will be shared with the Turkish Education Ministry.**
- **The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.**
- **Please ensure that you monitor and adhere to all up-to-date local and national Government health advice for the duration of your project.**

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- If your project has been approved to run for a duration longer than 12 months, you will be required to submit an annual progress report to the Research Ethics Committee. You will be contacted about submission of this report before it becomes due.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

Kind regards,

Dr Derek Millard-Healy

Chair of the University Research Ethics Committee

Brunel University London

APPENDIX D. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 4

This section covers example quotations from participants, specifically teachers (D1) and parents (D2). The researcher deliberately selected quotations from teachers and parents, as they were the primary stakeholders involved in this project.

D1) Sample Teacher Quotations from Primary Data Collection

The following section presents sample teacher quotations derived from the primary data collection process.

Table A. 16. Representative Teacher Quotations in Response to Questions 1, 2, and 3.

Part.	Example quotations
T4	Before the pandemic, we used to invite parents individually and set aside a specific time for each. Normally, there was a parent meeting day once a week. I would meet 2–3 parents each week and spend about 15 minutes with each during school hours whenever I had free time. Currently, since we can't bring parents into the school, we catch up with them outside when they come to pick up their children.
T6	Before the pandemic, I used to visit all parents, including Syrian families, after school, especially those with first-year children. These visits were very useful for observing students' family life, such as family members' attitudes toward each other, their living conditions, and other details. This information helped us better understand the children and provide more support. There were also one-to-one, in-person parent meetings before. Currently, we usually communicate by phone when needed.

Table A. 17. Representative Teacher Quotations in Response to Questions 4 and 5.

Part.	Example quotations
T2	One of the child's parents is relatively indifferent, while the other is very involved and participates in every event. Even though she doesn't fully understand, she attends most occasions, and the child translates for her.
T9	Sometimes, fathers speak Turkish better than mothers, but one mother is learning Turkish and making an effort to communicate; she is attentive and takes good care of her child. A common issue is that some Syrian parents change their mobile numbers frequently and don't inform us of the new ones, making it hard to reach them. One parent has already changed their number five times.

Table A. 18. Representative participant quotations in response to Questions 6 and 7.

Part.	Example quotations
T1	Communication usually happens through WhatsApp, but it's the students who are texting, not the parents. They even send voice messages. I once spoke to a parent on the phone and tried to explain, but she didn't understand
T4	Mostly, we communicate by phone since it's not always easy to bring parents to school for translation. An external person is usually on the call, which isn't very convenient. For example, an uncle who speaks Turkish translates what I say to a parent. However, sometimes I want to share something privately with a parent, but I can't.

Table A. 19. Representative participant quotations in response to Question 8.

Part.	Example quotations
T5	These parents are generally not involved in school activities and do not attend meetings. When requested, they do not provide necessary documents and rarely come to school when called. To compensate for the children's needs, we try to provide support, so they are not disadvantaged, and when necessary, we purchase books and materials ourselves. Parents' limited involvement in their children's education may be influenced by uncertainty about whether they will remain in the country or return home
T1	The parents do not speak Turkish. While some students can speak the language, they often struggle to comprehend it. For example, when I ask a student to read a book and provide a summary, they are unable to do so due to limited reading and comprehension skills. Because Syrian families usually speak Arabic at home, the students' proficiency in Turkish is generally low.

Table A. 20. Representative participant quotations in response to Question 9

Part.	Example quotations
T1	I don't believe they hold any prejudice or bias against us. It is important to also consider their perspective, as they have come from another country under difficult circumstances. May no one be left without a homeland or nation. They, too, are now separated from their country. For example, one child had poor nutrition, so I collected money monthly to support him and made sure he could buy toast and pastries from the canteen every day.
T3	It appears that they are reluctant to engage in conversation, possibly because they are unsure whether teachers will give their concerns the same level of attention afforded to other parents.

Table A. 21. Representative teacher quotations in response to Question 10-a.

Part.	Example Quotations
T1	I believe we are culturally and religiously close. However, the parents do not contact us, and since we cannot reach them, we do not have a thorough understanding of their culture.
T6	During my visits to the parents' homes, I found their culture to be familiar and not distant.

Table A. 22. Representative participant quotations in response to Question 10-b.

Part.	Example Quotations
T6	We share the same religion, and they, like us, enjoy serving treats. We have similar tea and coffee traditions, and they take pleasure in hosting guests. They show respect and care toward teachers, as well as toward relatives, family members, and elders. Similar to the eastern regions of Türkiye, family ties are strong, and some live with relatives in the same household, reflecting traditional Turkish family structures. However, there are differences in food and home decor; for example, while we have a morning tea culture, they have their own specific type of coffee.
T7	There are common characteristics associated with sharing the same religion. Our holidays coincide, and our lifestyles are similar. However, in traditional Syrian families, women often occupy background social roles, while men tend to have more prominent positions.

Table A. 23. Representative Participant Quotations in Response to Question 11.

Part.	Example Quotations
T1	Education doesn't seem to be a top priority for them. They mostly send their children to school because it's required or to give them some space in crowded homes where 7–8 people live together.
T2	By approaching them with empathy, I find that cultural differences do not impede our communication.

Table A. 24. Representative Participant Quotations in Response to Question 12.

Part.	Example Quotations
T6	Initially, they are unfamiliar with the topics, but over time they become more acquainted. In the first grade, language barriers exist between us, the students, and the parents. If a parent knows some Turkish, the barrier is smaller, but if they do not know any, it is difficult to establish a connection. Additionally, it appears they have not yet fully adapted. They seem unfamiliar with the topics we discuss, are disconnected from what is being done, and are unaware of their child's achievements. They also do not appear to have any plans for their children.
T7	They appear to be unfamiliar with our education system. Many parents in this region have limited formal education, and some are unable to read or write in Arabic.

Table A. 25. Representative Participant Quotations in Response to Question 13.

Part.	Example Quotations
T3	Yes, it is essential to find solutions that support their adaptation and address their language challenges. Measures should be put in place to assist with both their integration and language development.
T6	There is a clear need for solutions to facilitate in-person communication.

Table A. 26. Representative Participant Quotations in Response to Question 14.

Part.	Example Quotations
T1	I prefer in-person communication and would like to have an interpreter available at the school. Parents should be encouraged to visit the school every two weeks.
T2	The government should provide solutions that address the problem at its root. Initially, parents should learn Turkish, and programs should be offered to support their integration, such as familiarizing them with Turkish culture. Once this foundation is established, other challenges can be addressed more easily.

Table A. 27. Representative Participant Quotations in Response to Question 15.

Communication channels	Example Quotations
Interpreter services	I prefer face-to-face communication. There should be a translator who is familiar with their language, culture, and needs. Parents should be encouraged to visit the school once a week or every two weeks to facilitate direct communication (T1).
	There should be someone at the school who is fluent in both Turkish and Arabic and has a thorough understanding of the education system, Turkish idioms, and school operations. Ideally, this person would be a member of the community who understands both sides. Additionally, cultural bridges should be established, and a translator from their country is needed (T6).
Apps	It looks a bit formal but potentially, it explains better what I'm saying (T4).
	When an interpreter is not available, a translation program can be used during face-to-face meetings between parents and teachers (T8).

WhatsApp	WhatsApp allows for communication at any time. I use this channel to provide general information, which students then translate and share with their parents (T2).
	I do not find WhatsApp very effective for communication because more children use it than their mothers. This applies not only to Syrian students but to all students. As a result, parents often do not see the messages, while the children do. Generally, parents are not very active on their phones, which limits the platform's usefulness for communication. However, I do use WhatsApp to send homework, which proves to be helpful (T8).
Pictorial booklets	There is no emotional nuance; we are expected to use only the limited phrases provided (T4).
	If no other solution is available, pictorial booklets can support in-person communication. When contacting a parent about a specific topic, we can provide the booklet relevant to that topic and use its images and phrases to communicate. This allows the parent to understand the information and ensures that they at least come to school. Its effectiveness is uncertain and would need to be tested (T8).

D2) Sample Parent Quotations from Primary Data Collection

The following section presents sample parent quotations derived from the primary data collection process.

Table A. 28. Representative Participant Quotations in Response to Question 1.

Parents	Example Quotations
P1	My child does not speak Turkish, so he is unable to participate fully in his studies and is essentially outside the education system. Because of the language barrier, the teacher does not assign him homework. I have not met the teacher in person this year. The teacher noted that my child is struggling to understand and requested a simpler book, as he still cannot read or write in Turkish. I could not communicate with her due to my limited Turkish. Additionally, I have been dealing with health problems.
P2	The child is thriving thanks to the teacher's support. I visited the school twice this year. The teacher provided supplies and financial assistance and invited me to the school for guidance. Since I do not speak Turkish, we were unable to discuss other matters. When necessary, the teacher communicates information to me through my child.

Table A. 29. Representative Participant Quotations in Response to Questions 2 and 3.

Part.	Example Quotations
P4	My children translate when I communicate with the teacher. I ask questions such as what the homework is, and my children text on my behalf. I usually use Google Translate for WhatsApp messages.
P5	We usually meet at the school gate when leaving. My child translates for me, and my eldest son, who also speaks Turkish, helps with translation. I use Google Translate to understand messages in the WhatsApp group. Occasionally, I communicate by phone through my daughter.

Table A. 30. Representative Participant Quotations in Response to Question 4.

Part.	Example Quotations
P5	The current teacher is very good. I feel comfortable with her and do not hesitate to communicate; the only barrier is the language. However, I was not as comfortable with the previous teacher who was here two years ago.
P8	Teachers in Türkiye are very good and treat children with care. Before the pandemic, parents and teachers used to meet regularly. I actively participated in activities, such as cooking, and we would eat together at school. Currently, this is not possible due to COVID-19. Additionally, the teacher of one of my children has changed, and I have not yet met the new teacher.

Table A. 31. Representative Participant Quotations in Response to Question 5.

Part.	Example Quotations
P3	Culturally, religious holidays are the same. We meet with our Turkish neighbours to read the Quran and go on trips together to places such as mosques and historical sites. Regarding education, children in Syria experience more academic pressure, while they are more flexible in Türkiye. In Türkiye , students who are unsuccessful do not have to repeat the same grade, whereas in Syria, they do. For example, a traffic lesson is taught in the 4th grade here, which is not the case in Syria. Additionally, textbooks here are often large, making children's bags heavy. On the other hand, most lessons, such as mathematics and English, are similar in both countries.
P8	When I compare Türkiye and Syria, for example, burial practices are different. Hospitality is more common in Syria than in Türkiye, although every family is different. I am not very familiar with the cultural differences because I have limited contact with Turkish people. However, my sister's husband is Turkish, and their lifestyle is very similar to ours. In terms of education, parent meetings do not take place in Syria. Additionally, in Syria, boys and girls attend separate schools after the 4th grade, whereas in Türkiye, they study together.

Table A. 32. Representative Participant Quotations in Response to Question 6.

Part.	Example Quotations
P1	Schools in Türkiye and Syria are physically similar, with gardens, classrooms, boards, and other facilities. However, I am quite unfamiliar with the subjects taught, as I do not know Turkish. As far as I know, the weekly holidays are on Friday and Saturday. School hours also differ: primary schools in Syria operate from 7:30 a.m. to 12:30 p.m., whereas in Türkiye, they run from 9:10 a.m. to 2:10 p.m. Break schedules are different as well. In Syria, there is one break after every two lessons, while in Türkiye, there is one recess after each lesson.
P9	My neighbours are Turkish, so I learn from them. Therefore, I do not have any problems.

Table A. 33. Representative Participant Quotations in Response to Question 7.

Part.	Example Quotations
P1	I would like to attend the public education centre to learn Turkish, but I am not sure whether such a course is available.
P2	The child is already performing very well thanks to the teacher's support, so I do not see a need for a new solution. Since my child is not experiencing any problems, my presence is not necessary. When needed, it is sufficient for my child to act as a translator.

Table A. 34. Representative Participant Quotations in Response to Questions 8 and 9.

Communication tools	Example quotes
Interpreter services	I do not know any Turkish, so using a translator is the most practical option (P1).
	When we communicate face-to-face, I can discuss everything without any restrictions (P9).
WhatsApp	I prefer WhatsApp because it is fast and easy to use (P5).
	When I am unable to go to school, I can communicate via WhatsApp (P9).
Apps	I like the idea of the online translation program, but Ammiya (their local language) is not translated accurately. Therefore, this program may not be very useful, making this option seem challenging.
	Such programs can be helpful when children are not at home (P8).
Pictorial booklets	I do not understand what it says; it is confusing (P6).
	If it is in Arabic, I can read it, but I read slowly because my Arabic is limited. I only completed education up to the fifth grade in Syria (P8).

APPENDIX E. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 5 (PROTOTYPE GUIDELINE)

This section includes the prototype guideline prior to evaluation, as noted within Chapter 5.

WHAT ARE THE GOALS AND IMPORTANCE OF THIS MATERIAL?

The aims of this guideline are to: 1) raise awareness among school managers regarding language barriers between immigrant parents and Turkish primary school teachers, and 2) propose practical solutions to address these challenges.

Highlighting the significance of the material, it's evident that supporting immigrant students' academic success not only improves their individual lives but also contributes to the long-term prosperity of Turkish society. Research consistently shows a correlation between education and lower crime rates, fostering more peaceful communities. Moreover, a well-educated populace drives economic growth, leading to greater national prosperity and reduced reliance on external dependencies. Recognising the crucial impact of parental involvement on students' academic achievements, this research underscores the necessity of facilitating stronger connections between immigrant parents and Turkish schools. Effective communication between teachers and parents is therefore paramount in cultivating and enhancing the parental support vital for student success.

Real-life personas are presented below, briefly outlining their stories. Due to their unique circumstances, immigrants may require further assistances and effort, and as school managers, your support is greatly valued in contributing to the improvement of the situation.

Name: Ruqaiya Ahmad
Age: 50
Birthplace: Damascus
Language (s): Arabic, Turkish

'I am from Damascus but am natively Turkmen, so I can speak Turkish. I lost my husband and children during in war. I lived in Gaziantep, then had to move to Ankara. Recently, I got sick but was rejected at the hospital because the ID card I received in Gaziantep was not valid here. I am applying for a new ID card at the moment'.

Name: Aisha Al-badi
Age: 32
Birthplace: Homs
Language (s): Arabic

'I have three children. I lost my husband in the Syrian war, and I came to Turkiye with my children. I couldn't find a job in Ankara because I cannot speak Turkish. We're staying with a relative whose husband also passed away in the war. Our children need to go to school, but I don't know how to register them, receive ID cards, etc.'

Source: Tosun and Gürtekin, 2018

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WHAT WAS THE DEVELOPMENT PROCESS OF THIS MATERIAL?

This material was a practical output of a PhD research, conducted by Sena Berktas in the UK, at Brunel Design School. She utilised the principles of Human-Centred Design and Information Design when developing this guideline. Studies have revealed that parental involvement is of critical importance at the primary school level; therefore, this study focuses on education at the primary school level.

In Istanbul, a case study was conducted at a primary school with a significant immigrant student population, with permission obtained from the Ministry of National Education. Relevant stakeholders at the school (teachers, parents, heads of year, school administration, and the school translator) helped identify existing problems, while experts participating in the research proposed solutions to mitigate the language barrier. A total of 38 professionals have contributed to this development so far, and the resulting guideline is being evaluated with participants from diverse schools and will be updated based on their feedback.

So far, the research findings have indicated that language barriers are significant and are linked to several factors, including cultural differences, emotional challenges, and limited access to information. In this context, parents and teachers require not only specific communication tools but also diverse forms of support from the school to overcome these barriers. Accordingly, this guideline presents a range of practical recommendations that could be implemented in schools.

"The potential of immigrant students is boundless. They bring not just the hope of a better life for themselves, but the promise of a better world for us all."
Michelle Obama, Former First Lady of the United States

HOW CAN HEADS OF YEAR UTILISE THIS RESOURCE?

- This guideline is designed to be adaptable to the diverse needs of immigrant parents. Schools can tailor the suggestions to reflect the specific backgrounds and requirements of families within their community
- Although the primary focus is on immigrant parents, the core of the suggestions can be applied to the entire parent community.
- A total of six practical suggestions are provided. Each suggestion is introduced with a concise explanation outlining the essence of the activity and its key fundamentals. In addition, supplementary ideas are offered in bullet points for further consideration.
- Throughout this guideline, external links are provided to allow readers to access additional information and resources.
- The following recommendations are structured hierarchically to guide school managers' prioritisation of activities: essential support, recommended support, and extra support. However, this order is only a suggestion, and school management teams may implement them based on their school's specific needs and resources.

LANGUAGE SUPPORT

Language barriers are recognised as one of the most critical challenges in fostering effective communication between parents and teachers. Verbal communication, particularly through in-person interactions supported by a translator, is identified as the most effective approach. To address this, translator services could be provided by schools to ensure that meaningful, direct conversations between parents and teachers can take place. When possible, in-person meetings with translation support could be prioritised, allowing for clearer communication and stronger collaboration in support of student success. Consideration of these language support measures is recommended throughout the entire academic term. Supplementary information is also provided below for further reference.

'I would like to see their facial expression and their behaviour when communicating'.
A primary teacher, Istanbul

- Enhanced effectiveness of the translator: Research indicates that translators are not always utilised effectively in schools; therefore, steps to improve their effectiveness are recommended. Regular meetings could be held by school managers with translators, ideally every two weeks, to review service usage, address any challenges, and identify strategies for improvement. Additionally, weekly written reports from translators could also be requested, detailing the parents and teachers assisted and the topics discussed, such as student health, family financial challenges, or behavioral issues.

'I would like to see their facial expression and their behaviour when communicating'.
A primary teacher, Istanbul

- Use of alternative tools: If in-person translator services are unavailable, alternative communication methods may be employed as a temporary solution. For example, communication channels with built-in translation, such as WhatsApp, can be used by parents and teachers. Notably, these channels need to be reserved for the discussion of non-sensitive topics, such as school trips or homework.

- Availability of language courses for parents at schools: Many immigrant parents have not participated in external language programs but have expressed a clear preference for courses offered at their children's schools. It is therefore recommended that school-based language courses be actively promoted, supporting and encouraging the strong interest shown by parents.

CLEAR MEETING PROTOCOL

Research findings demonstrate the need for a clear protocol for one-to-one parent-teacher meetings. While a standard parental meeting is held at the beginning of each term, parents may still lack clarity regarding the expected frequency and methods of communication with teachers throughout the year. This uncertainty may be compounded by the fact that, in some parents' countries of origin, regular communication and active engagement in their children's education and school life are not the norm. To address this, a clear protocol for one-to-one meetings should be established and shared with all parents and teachers at the start of the academic year, with periodic reminders provided. Its development may be guided by the recommendations presented herein.

"In Syria, parents cannot meet with the teacher; they can only speak with school administrators. Therefore, parent-teacher meetings are not common there."
An immigrant parent, Istanbul

- Framed meeting periods: Teachers and parents could be ensured the opportunity to meet privately at least twice each semester (a minimum of four times per academic year). These meetings may be structured to address key topics, including children's well-being, academic progress, peer interactions, future goals, and strategies to support long-term success. An example protocol, titled "Co-operation in Education Application Protocol," is available *›on the website* for reference. Moreover, records of one-to-one meetings can be maintained to make the process more concrete and facilitate follow-up, with *›a sample form*—provided by the Turkish Ministry of Education—available as guidance.

- Enhanced collaboration: Increased collaboration between teachers and heads of year can be facilitated by establishing a partnership with parents. This supportive triangle enables the timely and effective resolution of students' challenges.

- Use of a translator: The active involvement of translators in meetings with school staff should be ensured, as their support can greatly enhance the effectiveness and clarity of all discussions.

ORIENTATION COURSES

Orientations are invaluable for providing essential information quickly and thoroughly. Building on this, formal orientation sessions are recommended to effectively disseminate important information to immigrant parents and to foster greater empathy among diverse groups, including both school staff and parents. Parents need comprehensive information about various aspects of the educational environment, such as the structure of the school system, expectations for parental engagement, and available support services. This information is particularly critical for parents from immigrant backgrounds. For educators, it is equally important to develop a deeper understanding of the socio-economic circumstances of families and to raise awareness about the challenges faced by disadvantaged students and their parents. To address these needs, as a school manager, you could offer separate orientation sessions tailored to the specific needs of different groups. These sessions could be repeated throughout the academic terms. Collaboration with heads of year could assist in organizing and delivering these orientations. Please find the suggested topics below:

'When you explain terms, people get a big picture. Don't assume everybody knows'
A professor, Inclusive Design expert, London

a) Suggested orientation topics for immigrant parents

- The impact of education and parental support on children's future outcomes (both short- and long-term).
- Clear information about the local education system and parental expectations, including teacher allocation, parent-teacher meetings, and typical modes of communication between parents and schools.
- Social norms and expectations in the local community.
- School-provided support services, such as language assistance and support from heads of year.
- Opportunities offered by local authorities, including language courses, financial assistance, and well-being support.
- Practical advice for adaptation, such as engaging with local communities, attending Turkish language courses, and watching local TV channels or listening to local radio stations.

'People typically learn such things while they are in that environment, but this process can take time. It is important to provide the necessary information in advance'.
A specialist in cultural studies, Istanbul

b) Suggested orientation topics for school staff

- Challenges for immigrant parents (for example, trauma, health problems, financial issues).
- Advise for effective communication with parents (for example, use of body language, active listening).
- Available support offered by the school (for example, availability of a translator at certain times).
- Advise to reduce problems regarding immigrant children and their parents (for example, teachers should be encouraged to cooperate with heads of year).

'These are innocent individuals who have fled their countries due to war. It is important for school staff to especially embrace this understanding'.
A primary teacher, Istanbul

SOCIAL ACTIVITIES

Social activities inherently foster interpersonal interaction and cultivate empathy, making them invaluable for bringing together and integrating diverse groups within schools. Therefore, it is recommended that schools maintain a consistent schedule of social events throughout the academic year. All parents, especially those who are new to the community or from immigrant backgrounds, need to take part in these events. Additionally, the accompanying suggestions could also be given consideration.

- Cultural and historical activities: The organisation of trips that highlight shared connections between different cultural groups could be highly beneficial. Contributions to these excursions could also be made with the help of staff members with relevant expertise, such as history teachers.

"I organised a visit to Çanakkale. This experience aimed to foster an understanding and appreciation of Turkish culture among the parents".
A primary teacher, Istanbul

- Parent-focused school activities: Schools could consider offering courses for parents, with a focus on options that are low-cost and directly beneficial, given the potential for diverse economic situations. For example, skills-based courses, such as sewing, could be provided, as they may offer opportunities for income generation. Similarly, art classes could be offered, as they may support psychological well-being and provide a means of mental relaxation.

'Art teachers, for example, could offer painting classes to parents. Sewing courses could also provide them with opportunities to earn income'.
A primary school manager, Istanbul

- Public course information dissemination: Many parents, particularly those from immigrant backgrounds, remain unaware of available public courses, which are important for supporting their integration. To address this, targeted information could be shared through student-led handouts or parent seminars, ensuring that parents are well informed about relevant opportunities.

COMMON SPACE

Research findings indicate that exposure suggests that physical adaptations and visual revisions can improve the accessibility and inclusiveness of a space for people from various groups. With this in mind, as a head of year, you could explore visual arrangements in the school area that would also be helpful for parents. These physical arrangements should be an ongoing process throughout the year, with periodic updates as required (further information on the psychological effects of spatial design can be found on the linked website). The example suggestions provided alongside may also be useful for your consideration.

- Availability of certain materials: Materials that assist immigrant parents in learning more about Turkish culture and the Turkish education system (e.g., newspapers, television, books) can be made available within this area.
- Existence of an inviting environment: Refreshments, such as snacks and drinks, which can make the space more welcoming and encourage parents to spend additional time at the school, could be available in this area.

'At the previous school, we wrote the word 'welcome' on the doors in different languages. That way, they could understand that they were accepted'.
A primary head of year, Istanbul

VISUAL AND PHYSICAL MODIFICATIONS

Research suggests that physical adaptations and visual revisions can improve the accessibility and inclusiveness of a space for people from various groups. With this in mind, schools can explore simple solutions that could enhance accessibility of immigrant parents, and also increase the sense of belonging at the area. Treating adjustments as an ongoing process throughout the academic year, with periodic updates as needed, can help ensure they remain effective and relevant. The accompanying examples may also offer helpful guidance in enabling these initiatives.

'When entering a building, it's important to be able to clearly identify the location of the elevator'.
Architect with expertise in Accessibility, Istanbul

- Use of certain illustrations: The standardised use of icons, universal symbols and bilingual signage across Turkish schools is recommended, as this can enhance communication and accessibility for diverse parent populations, while promoting inclusivity within the school environment.

Examples of icons that can be used throughout the school environment

- Use of additional elements: Further modifications may be explored to enhance the inclusivity of the school environment. For example, the incorporation of celebrations, such as Eid, can be employed to promote inclusivity, highlight shared values, and strengthen the sense of community. To support this, collaboration among school staff including heads of year and art teachers, may be sought in the creation of inclusive displays and artwork, which can be placed in visible locations within the school to celebrate cultural diversity.

'We wrote the word 'welcome' on the doors in different languages. That way, they could understand that they were accepted'.
A primary head of year, Istanbul

FURTHER INFORMATION

Reviewing these supplementary resources may also help mitigate challenges within the schools.

- ↗This brief material on the website (Reimagining migration) offers concise tips for teachers working with immigrant students. These recommendations could also prove valuable for educators in Türkiye.
- ↗This website (Borders to Bridges) is dedicated to inform teachers about immigrant and refugee children. There are several subsection that could also be valuable for teachers in Turkish schools.
- ↗This website (Making Schools a Welcoming Place for Immigrant Students) developed by Harvard University, provides comprehensive guidance on creating inclusive school environments for immigrant and refugee children. Several of the strategies outlined may be highly applicable and beneficial for schools in Turkey.

'If you want a wonderful garden, you need to allow different flowers to flourish and grass as well'.
An Inclusive Design expert, London

ACTION PLAN

This action plan could help manage the situation more effectively. The plan is structured to include categories of support (e.g., essential support) and relevant topics (e.g., language support). For each category, planned actions could be specified (e.g., a translator hired, regular feedback requested every two weeks, texts sent to all parents regarding available days and hours, etc.). The collaborators for each planned action could then be identified (e.g., information about service availability distributed to parents by teachers). Clear deadlines for each action can also be established (e.g., by the end of 2026). Any activities that are not currently relevant may be marked as N/A for future consideration.

	Topics	Planned actions	Individuals responsible	Deadline
Essential support	Language support			
	Clear protocol			
Recommended support	Orientation courses			
	Social activities			
Extra support	Common space			
	Visual and physical modifications			

MEET THE RESEARCHERS

SENA BERKTAS

The researcher

The researcher completed her PhD at Brunel Design School, specialising in Human-Centred Design and Information Design. The material presented here represents a practical contribution to her research project. She has a strong interest in Social Innovation Design and aims to pursue her career in this field by incorporating other design principles as well.

BUSAYAWAN LAM

Principal supervisor

Dr Lam is a Reader and Head of Brunel Design School. She specialises in the areas of New Product Development (NPD) process, Innovation Strategy and Management, and Design Strategy. Her current research interests include co-design, community-led design and social innovation.

GULSEN TORE-YARGIN

Secondary supervisor

Dr. Tore-Yargin is a Senior Lecturer at Brunel Design School. Her current research interests include UX research methods and education and human-centred design in emerging technologies, including conversational agents, sensor-based innovations, smart products, and more.

Brunel University London,
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Sena Berktas
Design researcher
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GUIDELINE FOR SCHOOL MANAGERS: SUGGESTIONS TO REDUCE LANGUAGE BARRIERS BETWEEN TEACHERS AND IMMIGRANT PARENTS

PRACTICAL SUGGESTIONS TO ENHANCE THE SUPPORT FOR PARENTS AND THEIR CHILDREN'S EDUCATION

Webpage References within the Prototype Guideline:

Beşiri Halk Eğitimi Merkezi [Beşiri Public Education Center] (2020) *Oryantasyon Eğitimi Notları [Orientation Training Notes]*. Available at: https://besirihem.meb.k12.tr/meb_iys_dosyalar/72/02/236775/dosyalar/2020_09/23142750_1-Oryantasyon_EYitimi_NotlarY.pdf (Accessed: 11 August 2025).

Borders to Bridges (no date) *Teacher Guides and Resources* [online]. Available at: https://borderstobridges.org/resources/for-educators (Accessed: 21 September 2025).

Erzincan İl Millî Eğitim Müdürlüğü & Erzincan Üniversitesi [Erzincan Provincial Directorate of National Education & Erzincan University] (2015) *Eğitimde iş birliği uygulama protokolü [Education Cooperation Implementation Protocol]*. Erzincan: Erzincan İl Millî Eğitim Müdürlüğü. Available at: https://erzincan.meb.gov.tr/meb_iys_dosyalar/2016_04/15115925_Imlletmmdrl.pdf (Accessed: 11 August 2025).

Reimagining Migration (2025) *Supporting Immigrant Students: Trauma-Informed, Relationship-Centered Strategies for Teachers* [online]. Available at: https://reimaginingmigration.org/wp-content/uploads/2025/09/Supporting-Immigrant-Students-Trauma-Informed-Relationship-Centered-Strategies-for-Teachers.pdf (Accessed: 21 September 2025).

Ross, E. M. (2023) *Making schools a welcoming place for immigrant students: How educators can help newcomers in the classroom*. Usable Knowledge, Harvard Graduate School of Education, 2 February. Available at: https://www.gse.harvard.edu/ideas/usable-knowledge/23/02/making-schools-welcoming-place-immigrant-students (Accessed: 21 September 2025).

Türkiye Milli Eğitim Bakanlığı Özel Eğitim ve Rehberlik Hizmetleri Genel Müdürlüğü [Republic of Türkiye Ministry of National Education, Directorate General of Special Education and Guidance Services] (2017) *Veli Görüşme Formu [Parent–Teacher Meeting Form]*. Available at: https://rehberlikservisim.com/wp-content/uploads/2017/09/Veli-Gorusme-Formu.pdf (Accessed: 11 August 2025).

APPENDIX F. SUPPLEMENTARY DOCUMENTS CITED IN CHAPTER 6 & COMPLETE VERSIONS OF THE FINAL GUIDELINES

This section comprises all documents referenced in the guideline evaluation, including the Evaluation Form (F1) Recruitment Messages (F2), Participant Information Sheet (F3), Consent Form (F4), Ethical Approval for the Evaluation Stage (F5), Sample Participant Responses (F6), and the Complete Version of the Final Guidelines (F3).

F1) Evaluation form

Questions for the Guideline Evaluation Initiative

Dear participants,

Please help evaluate the proposed guidelines by answering the questions below. Thank you very much for your constructive inputs and valuable time.
Please review the entire guideline before responding to the questions.

Q1 / A. Please provide your opinions for the overall guidelines

Please rate the proposed guideline on following aspects (Before assigning scores, please review the guideline carefully. Consider it from multiple perspectives, such as its overall structure (e.g., organization and prioritization of content) and its potential to reduce language barriers between immigrant parents and Turkish primary school teachers):

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*

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Q1 / B. In your opinions what extent, could this guideline help reduce the language barrier or enhance the communication between teachers and parents?

Please mark the appropriate space below to reflect your opinion, and feel free to make any comments.

Completely				Not at all

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Q2. Please provide your opinions for the language support section.

Please rate the proposed language support on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*

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Q3. Please provide your opinions for the suggestions regarding the school meeting protocol.

Please rate the suggestions regarding the school protocol on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*.

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Q4. Please provide your opinions for the proposed orientation programme.

Please rate the proposed orientation programme on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*.

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Q5. Please provide your opinions for the proposed social activities.

Please rate the proposed social activities on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					

• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*.

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Q6. Please provide your opinions for the proposed common spaces.

Please rate the proposed common spaces on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*

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Q7. Please provide your opinions for the proposed visual and physical modifications.

Please rate the proposed physical arrangements on following aspects:

Key elements	5	4	3	2	1
• Usefulness					
• Comprehensiveness					
• Clarity					
• Practicality					

Please provide suggestions and/or examples on how to improve for the areas that you score lower than 3 *(Even though you score upper than 3, please feel free to make any comments)*

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Q8. If you have any further suggestions, please describe *(Please feel free to type any of your comments here)*:

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F2) Recruitment Messages

The messages provided below were circulated to participants via e-mail.

F2.1) Recruitment Message for Experts

My name is Sena Berktas. I am a PhD researcher at Brunel Design School, Brunel University of London. I would like to invite you to take part in my research project titled *'Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers'*. The research aims to offer solutions to enhance communication between immigrant parents and Turkish primary school teachers. The researcher already developed guidelines based on findings, which involves several practical suggestions that could help reduce language barriers between parent and teachers

You are invited to help evaluate the guidelines since you have experience of working with non-native speakers and/or addressing similar issues, your input would be really helpful for this study. Your valuable time and insightful information will be highly appreciated. If you are interested in taking part, please see the participant information sheet for further information. You will be asked to sign the consent form in advance. Nevertheless, you can withdraw from the study at any point without any problem.

If you have any questions, please contact me via my e-mail address: sena.berktas@brunel.ac.uk.

F2.2) Recruitment Messages for School Staff

Dear School Managers / Heads of Year,

You are cordially invited to take part in the research titled as '*Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers'* independently carried out by Sena Berktaş. This research aims to propose practical solutions which could help reduce language barriers between immigrant parents and Turkish teachers. The researcher already developed guidelines based on findings, which involves several practical suggestions that could help reduce language barriers between parent and teachers.

You are invited to help evaluate the guidelines because you have a close relationship with immigrant children and their parents. There is no obligation to take part in this study. However, your participation could help improve communication between immigrant parents and Turkish primary school teachers. Your valuable time and insightful information will be highly appreciated.

If you are interested in taking part, please see the participant information sheet for further information. You will be asked to sign the consent form in advance. Nevertheless, you can withdraw from the study at any point without any problem (see the latest withdrawal date on the information sheet).

If you have any questions, please contact Sena Berktaş via her e-mail address: sena.berktas@brunel.ac.uk.

F3) Participant Information Sheet

PARTICIPANT INFORMATION SHEET

Study title

Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication Between Immigrant Parents and Turkish Primary School Teacher

Invitation Paragraph

You are cordially invited to take part in the interview carried out by Sena Berktas as part of the PhD Research at Brunel Design School, College of Engineering, Design and Physical Sciences, Brunel University of London. This study is carried out independently by the researcher.

What is the purpose of the study?

This study aims to propose guidance and practical solution(s) based on Human Centre Design and Information Design principles to help overcome language barriers between immigrant parents and Turkish primary school teachers. The researcher will present an initial version of the guidelines to you. After that, you will be asked to evaluate and provide further suggestions. The guidelines will be revised according to your comments.

Why have I been invited to participate?

You are invited to participate because you have relevant expertise and/or experience. Therefore, the researcher would like to hear your opinions and suggestions.

Do I have to take part?

Your participation is completely voluntary. You have the right to decline this invitation as well as the right to withdraw from the study at any point. There will be no negative consequences for declining to participate or later withdrawing.

What will happen to me if I take part?

The researcher will present the initial version of guidelines (which covers several suggestions to help reduce language barriers between immigrant parents and teachers). You will be asked to evaluate the guidelines by answering a number of open questions, which will help the researcher understands your opinions towards proposed ideas. If you have any questions, please feel free to clarify them with the researcher.

Are there any lifestyle restrictions?

There will be no lifestyle restrictions required.

What are the possible disadvantages and risks of taking part?

The study is considered low risk. It is very unlikely to cause any financial loss/burden to participants. No sensitive and personal question is included. It should take no more than 45 minutes to complete.

What are the possible benefits of taking part?

There is no direct benefit for the participants. However, the data can be useful in the future in order to improve communication between immigrant parents and local teachers.

What if something goes wrong?

You can decide to leave the study at any point. You can also withdraw your data. Please inform the researcher before 28.02.2025.

With regard to the indemnity arrangements, Brunel University of London provides appropriate insurance cover for research which has received ethical approval.

Where is the location for the interviews?

The interviews will be held online. You will be sent links on MS Teams (alternatively Zoom). The interviews will be planned according to your availability. Before the interview, you will be asked to sign the consent form. You will be also sent the initial draft of the guidelines to be evaluated and interview questions.

Will my taking part in this study be kept confidential?

The information will be used of academic purposes only and treated as highly confidential. All answers will be anonymised. The results will be published anonymously.

Will I be recorded, and how will the recording be used?

Your voice will be recorded for the data analysis purposes. The researcher will inform you when she starts and stops recording. Alternatively, if you do not want the interviews to be recorded, please inform the researcher know so she can take notes during the interview rather than making a record.

What will happen to the results of the research study?

The findings will be included in the researcher's PhD research project and might be published in academic journals or conferences.

Who is organising and funding the research? Who has reviewed the study?

The questions have been developed in consultation with academic staff of Brunel Design School, College of Engineering, Design and Physical Sciences, Brunel University of London.

Research Integrity

Brunel University of London is committed to compliance with the Universities UK Research Integrity Concordat. You are entitled to expect the highest level of integrity from the researchers during the course of this research.

Contact for further information and complaints

For further information, please contact Professor Christina Victor who is the Chair of the Brunel University Research Ethics Committee

The contact details are:

Email: christina.victor@brunel.ac.uk

Brunel University of London, Uxbridge, UB8 3PH

Please do not hesitate to contact with the researcher and the supervisor if you have any queries.

The researcher: Sena Berktas: sena.berktas@brunel.ac.uk

The supervisor: Busayawan Lam: busayawan.lam@brunel.ac.uk

Thank you very much for your time and valuable information.

Sena Berktas, 2024

F4) Consent Form

EXAMINING HOW HUMAN-CENTRED DESIGN AND INFORMATION DESIGN COULD HELP OVERCOME CHALLENGES TO ACHIEVE BETTER COMMUNICATION BETWEEN IMMIGRANT PARENTS AND TURKISH PRIMARY SCHOOL TEACHERS

SENA BERKTAŞ

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 01/12/2024 AND 30/09/2025

The participant (or their legal representative) should complete the whole of this sheet.		
	YES	NO
Have you read the Participant Information Sheet?	☐	☐
Have you had an opportunity to ask questions and discuss this study? (via email/phone or electronic surveys)	☐	☐
Have you received satisfactory answers to all your questions? (via email/phone or electronic surveys)	☐	☐
Who have you spoken to about the study?		
Do you understand that you will not be referred to by name in any report concerning this study?	☐	☐

Do I have to take part?: This research is a voluntarily study so I would like to highlight that there will be no negative consequences for declining to participate or later withdrawing. Please see the related concerns as follows: Do you understand that:		
• You have a right to decline	☐	☐
• You don't have to give any reason for withdrawing	☐	☐
• Choosing not to participate or withdrawing will not affect your rights	☐	☐
• Your personal data will not be published	☐	☐
• You can withdraw your data any time up to 28/02/2025	☐	☐
I agree to my interview being audio recorded	☐	☐
I agree to the use of non-attributable quotes when the study is written up or published	☐	☐
The procedures regarding confidentiality have been explained to me	☐	☐
I agree that my anonymised data can be stored and shared with other researchers for use in future projects.	☐	☐
I agree to take part in this study.	☐	☐

Signature of research participant:	
Print name:	Date:

Please feel free to contact the researcher and the supervisor if you have any queries:

The researcher: Sena Berktas / sena.berktas@brunel.ac.uk

The supervisor: Dr. Busayawan Lam / busayawan.lam@brunel.ac.uk

F5) Ethical Approval for the Evaluation Stage

University Research Ethics Committee
Brunel University of London
Kingston Lane
Uxbridge
UB8 3PH
United Kingdom

www.brunel.ac.uk

18 December 2024

LETTER OF APPROVAL

Applicant (s): Miss Sena Berktas

Project Title: Examining How Human-Centred Design and Information Design Could Help Overcome Challenges to Achieve Better Communication between Immigrant Parents and Turkish Primary School Teachers

Reference: 36622-A-Nov/2024- 53248-1

Dear Miss Sena Berktas,

The Research Ethics Committee has considered the above amendment application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed amendment(s). Approval is given on the understanding that the conditions of approval set out below are followed:

- **The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.**

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to any conditions that may appear above.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- If your project has been approved to run for a duration longer than 12 months, you will be required to submit an annual progress report to the Research Ethics Committee. You will be contacted about submission of this report before it becomes due.

Kind regards,

Professor Christina Victor

Chair of the University Research Ethics Committee

Brunel University London

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F6) Sample Participant Responses to the Guideline Evaluation Questions

This section presents sample participant responses to the guideline evaluation questions, comprising the expert assessment (D1), the head of year statement (D2), and the school manager assessment (D3), as outlined below. As part of the evaluation process, descriptive statistics and the variability of participant ratings are provided in Table A.35.

Table A. 35. Descriptive Statistics and Variability of Participant Ratings

Assessment criteria	Calculated Standard Deviations Across Diverse Groups		
	Experts	Heads of year	School managers
○ Usefulness	1.20	0.35	0.53
○ Comprehensiveness	0.71	0.52	0.53
○ Clarity	0.71	0.35	0.44
○ Practicality	1.05	0.52	0.50

F6.1) Expert Assessment

This section comprises expert feedback on eight questions, with the responses presented individually as follows (* denotes participants included in the primary data collection phase).

F6.1.1) Participant Feedback in Response to Question 1

Table A. 36. Expert Ratings for the Overall Guideline (Aligned with Q1-a)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	4	-	4	5	4	4	4	4	4	4
Comprehensiveness	5	-	4	4	5	4	5	5	4	4
Clarity	3	3	3	4	5	5	5	5	4	3
Practicality	3	-	4	5	3	4	2	2	4	2

Table A. 37. Expert Assessment of the Overall Guideline, Indicating the Extent yo Which It Can Reduce Language Barriers Between Parents and teachers (Aligned with Q1-b)

Part.	Feedback Provided		
	Completely	Partially	Not at all
E6		X	
E11		X	
E16		X	
E17		X	
E18	X		
E19		X	
E20		X	
E21		X	
E22		X	
E23		X	

Table A. 38. Representative participant quotations in response to Question 1

Part.	Example quotations	Notes
E21	Although the guideline is well-prepared, its impact will likely be limited to 40 percent without a top-down directive. A dedicated refugee ministry is needed, and directives must be issued from higher authorities. The establishment of such a ministry would be highly beneficial, as it could identify problems and communicate solutions to lower-level units. However, this alone would not be sufficient. In addition, school managers may not be able to dedicate the necessary time to implement the recommendations provided herein.	Positive Appraisal + Contextual statement
E23	It appears useful; however, external measures are necessary to achieve permanent solutions. For instance, in the United Kingdom, established policies guide schools. Similarly, there is a need for a nationwide equality, diversity, and inclusion policy for schools in Türkiye. Furthermore, the establishment of a dedicated refugee ministry would be highly beneficial.	Positive Appraisal + Contextual statement

F6.1.2) Participant Feedback in Response to Question 2

Table A. 39. Expert Ratings for the 'Language support' Section (Aligned with Q2)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	4	-	5	5	4	2	4	2	5	3
Comprehensiveness	4	-	5	4	4	3	4	4	5	3
Clarity	4	3	5	5	5	5	5	5	5	3
Practicality	4	-	5	5	5	2	4	5	4	3

Table A. 40. Representative Participant Quotations in Response to Question 2

Part.	Example Quotations	Notes
E19	Learning the host country's language is essential for immigrants' successful integration. The proposed translation system in schools could be seen as too accommodating and might reduce motivation to learn the language. Widespread use of such services in schools could also create expectations for similar support in other public sectors, with broader consequences.	Analytical statement
E21	Most schools do not have translators. Principals may expect parents to have learned Turkish, particularly if they immigrated ten years ago, and may not prioritize language support at this stage. In addition, providing translation support may not be financially efficient where consistent services cannot be ensured.	Contextual statement

F6.1.3) Participant Feedback in Response to Question 3

Table A. 41. Expert Ratings for the 'Refining the effectiveness of parent-teacher consultations' Section (Aligned with Q3)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	4	-	4	5	5	5	5	2	5	3
Comprehensiveness	4	-	4	5	5	5	5	5	5	3
Clarity	3	3	2	5	5	5	5	5	5	3
Practicality	3	-	4	5	5	5	5	2	4	3

Table A. 42. Representative Participant Quotations in Response to Question 3

Part.	Example Quotations	Notes
E21	I don't think schools really have time to do extra things for different groups.	Contextual statement
E23	In the UK, schools have pastoral teams that address serious issues, and a similar team could be established here. School managers could create a volunteer group of 5–6 people, including teachers, administrative staff, and heads of year, to handle serious matters. Home visits with the assistance of translators are also very important. Many immigrant parents face significant challenges in engaging with schools, such as caring for young children at home, being unfamiliar with the local area, or feeling anxious about interacting with others or going out in public. My research with Ugandan parents revealed these exact issues, which likely affect many other immigrant families as well.	Contextual statement + Practical Recommendation

F6.1.4) Participant Feedback in Response to Question 4

Table A. 43. Expert Ratings for the 'Orientation course' Section (Aligned with Q4)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	4	-	5	5	5	3	5	2	5	4
Comprehensiveness	4	-	5	5	5	4	5	5	5	3
Clarity	5	3	5	5	5	5	5	5	5	3
Practicality	5	-	5	5	5	4	5	2	5	2

Table A. 44. Representative Participant Quotations in Response to Question 4

Part.	Example Quotations	Notes
E22	Providing the orientation exclusively for Syrians could lead to unintended negative perceptions.	Critical statement (cautionary)
E23	Students should be included in this guideline to help them develop awareness of inclusion and learn how to interact respectfully with others. It is also recommended that the orientation be offered to all parents and presented as intended for 'newcomers,' rather than focusing solely on immigrants.	Critical statement with practical recommendation

F6.1.5) Participant Feedback in Response to Question 5

Table A. 45. Expert Ratings for the 'Social activities' Section (Aligned with Q5)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	5	-	5	5	5	5	5	4	5	3
Comprehensiveness	5	-	4	5	5	5	4	5	5	3
Clarity	5	3	4	5	5	5	5	5	5	2
Practicality	5	-	5	5	5	5	5	3	5	2

Table A. 46. Representative Participant Quotations in Response to Question 5

Part.	Example Quotations	Notes
E20	Organizing activities for students is generally easier, but parents also require support. While providing training for students is relatively straightforward, schools may need additional assistance from external sources to implement programs for parents, which can be challenging. Simple activities, such as a picnic, could also be considered, as they are practical and easy to organise.	Critical statement + Practical Recommendation
E23	There is a need for additional guidance on how school managers can seek support from external sources, as they may not be fully aware of the available options. Approval from the Ministry of Education can be challenging, and planning trips may require coordination with both the Ministry and school administrations. School principals, in particular, need clear information about the level of support the Ministry of National Education will provide. Providing detailed guidance can help reassure them. For example, schools can contact twin schools, city councils in the areas they plan to visit, and local school district councils. For visits to other cities, councils in tourist and historical destinations, such as Çanakkale, could potentially provide transportation and translation support. This information should be included in the guideline.	Contextual statement + Practical Recommendation

F6.1.6) Participant Feedback in Response to Question 6

Table A. 47. Expert Ratings for the 'Common space' Section (Aligned with Q6)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	5	-	5	5	5	2	3	4	5	5
Comprehensiveness	5	-	5	5	4	2	3	5	5	4
Clarity	5	3	4	5	5	4	4	5	5	4
Practicality	5	-	5	5	5	3	3	2	5	5

Table A. 48. Representative Participant Quotations in Response to Question 6

Part.	Example Quotations	Notes
E16	Having a shared space is important, as it helps foster a sense of belonging. Including foods from participants' cultures in this space, such as sweets or cookies, can further enhance this feeling of inclusion.	Supportive evidence
E20	This idea may be applicable in some other countries, but its suitability for Turkish schools is uncertain. While the concept is valuable, it may be more appropriate to allow students to use the area for a limited time rather than requiring them to remain there all day.	Critical statement

F6.1.7) Participant Feedback in Response to Question 7

Table A. 49. Expert Ratings for the 'Visual and physical modifications' Section (Aligned with Q7)

Key elements	Participant ratings									
	E6*	E11*	E16*	E17	E18	E19	E20	E21	E22	E23
Usefulness	5	-	5	4	5	5	5	5	2	5
Comprehensiveness	4	-	5	4	5	5	4	5	2	4
Clarity	5	3	5	5	5	5	5	5	2	4
Practicality	5	-	5	5	5	5	4	5	2	5

Table A. 50. Representative Participant Quotations in Response to Question 7

Part.	Example Quotations	Notes
E16	When parents enter the school, they should be able to locate key areas such as the principal's office, the canteen, and the waiting area. All information should be clearly understandable and provided in Turkish and English. Arabic should not be included, in order to avoid potential negative reactions.	Supportive evidence with critical statement
E21	This is an excellent idea and was particularly well-received. For example, if hospitals were bilingual, individuals could navigate them independently.	Supportive evidence

F6.1.8) Participant Feedback in Response to Question 8

Table A. 51. Representative Participant Quotations in Response to Question 8

Part.	Example Quotations	Notes
E11	The titles need to be updated, as they are currently unclear. For example, the term 'social activities' is ambiguous and could be clarified as 'organization of social activities.' Similarly, the content of the orientation courses should be specified. Consistency in labelling should be maintained across all topics. Additionally, the structure of the guideline should be made more explicit to prevent confusion. Including a table at the beginning that presents practical suggestions in a hierarchical format would significantly enhance clarity and usability.	Critical (Cautionary) with Practical Recommendation
E18	Students also need to be informed about certain matters. They should also be included within the scope of this guideline.	Critical statement with Practical Recommendation

F6.2) Head of year assessment

This section presents feedback from heads of year on eight questions, with responses shown individually (one participant, H2, chose not to provide ratings and instead offered general feedback; their response is indicated with a '–' in the tables listed below).

F6.2.1) Participant Feedback in Response to Question 1

Table A. 52. Head of year Ratings for the Overall Guideline (aligned with Q1-a)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	5	-	4	5	5	5	5	5	5
Comprehensiveness	4	-	4	5	5	4	5	4	4
Clarity	5	-	4	5	5	5	5	5	5
Practicality	4	-	4	4	5	5	5	5	5

Table A. 53. Head of year assessment of the overall guideline, indicating the extent to which it can reduce language barriers between parents and teachers (aligned with Q1-B)

Part.	Feedback Provided		
	Completely	Partially	Not at all
H1	X		
H2		X	
H3		X	
H4		X	
H5	X		
H6		X	
H7	X		
H8	X		
H9	X		

Table A. 54. Representative participant quotations in response to Question 1

Part.	Example quotations	Notes
H4	I can see that a great deal of effort has gone into this work, and it is extremely valuable. As a PhD student myself, I understand how challenging it is to prepare such material and how significant it is as an output. You have explained everything clearly and provided numerous examples, making it very well-prepared. I believe there is a high likelihood that schools will make use of it. As a Head of Year, I would certainly like to have access to this guideline.	Supportive evidence (positive appraisal)
H7	The purpose and scope of the guide are presented clearly and effectively. It begins with a well-crafted introduction, allowing readers to quickly understand its relevance to their role without needing to read the entire document. The guidance on how to use the guide is particularly valuable. In terms of structure, it starts with language support and then moves on to other forms of assistance. The inclusion of links to access support is especially helpful, as it goes beyond mere suggestions and provides direct references, enabling users to access resources immediately. I also find the hierarchical order of the content to be very logical and well-organized.	Supportive evidence (positive appraisal)

F6.2.2) Participant Feedback in Response to Question 2

Table A. 55. Head of year Ratings for the 'Improving language support' section (aligned with Q2)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	4	-	4	5	5	5	5	5	5
Comprehensiveness	4	-	5	5	5	5	5	4	4
Clarity	4	-	5	5	5	5	5	5	5
Practicality	4	-	5	5	5	5	5	4	4

Table A. 56. Representative participant quotations in response to Question 2

Part.	Example quotations	Notes
H5	At the previous school, a Syrian teacher assigned by UNICEF served as a translator. A similar role should be available in every school, as communication was difficult when the translator was not present, and parents could only be contacted when that teacher was available. The guideline should include instructions on how a translator can be requested. At the previous school, the UNICEF-assigned translator also supported children with adaptation and behavioural challenges. Such translators are assigned to schools as needed by the Ministry of National Education. While the students at this school are proficient in Turkish, translators would be beneficial in all schools.	Contextual statement + supportive evidence (positive appraisal)
H7	When a translator is not immediately available, technology can be used to facilitate communication. For spoken conversations, tools such as Google Translate's voice translation and ChatGPT for text translation are helpful. For written messages, platforms like WhatsApp now include built-in translation features, and Google offers tools that allow translation directly from the keyboard. Given these convenient and continually improving technologies, it is recommended that teachers prioritize their use for communication and stay informed about technological developments.	Supportive evidence (positive appraisal)

F6.2.3) Participant Feedback in Response to Question 3

Table A. 57. Head of year Ratings for the 'Clear meeting protocol' section (aligned with Q3)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	5	-	4	5	5	5	5	5	5
Comprehensiveness	5	-	4	5	5	5	5	4	4
Clarity	5	-	4	5	5	5	5	5	5
Practicality	5	-	4	5	5	5	5	4	4

Table A. 58. Representative participant quotations in response to Question 3

Part.	Example Quotations	Notes
H2	The Turkish Ministry of Education has introduced a system that allows parents to schedule appointments with teachers. However, in my school, this system is not being used effectively by either teachers or parents. It is desirable for both groups to utilise the system, but it has not been consistently adopted.	Contextual statement
H5	Group meetings are typically held at the beginning of the academic year, during which teachers inform parents about their specific procedures. Some teachers also schedule one-on-one meetings after school hours. It is important to note that operational practices may vary across different schools.	Contextual statement

F6.2.4) Participant Feedback in Response to Question 4

Table A. 59. Head of year Ratings for the 'Orientation courses' section (aligned with Q4)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	4	-	3	5	5	5	5	5	5
Comprehensiveness	4	-	3	5	5	5	5	4	4
Clarity	4	-	3	5	5	5	5	5	5
Practicality	4	-	3	5	5	5	5	4	4

Table A. 60. Representative participant quotations in response to Question 4

Part.	Example Quotations	Notes
H7	Orientation courses are already familiar to the Ministry of National Education, as schools conduct programs to support students' smooth transitions. These orientations help make the entry process more comfortable, particularly for students, and their familiarity facilitates implementation. Reducing uncertainty supports an environment of empathy, understanding, and mutual learning. It is also positive that the focus extends to all new students, not only first-grade students.	Supportive evidence
H9	At my previous school, we convened a group and, with the assistance of a translator, provided a comprehensive explanation. This proved highly effective, as they readily attended subsequent invitations. Consequently, their engagement with our department significantly increased.	Supportive evidence

F6.2.5) Participant Feedback in Response to Question 5

Table A. 61. Head of year Ratings for the 'Social activities' section (aligned with Q5)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	5	-	3	5	5	5	5	5	5
Comprehensiveness	5	-	3	5	5	5	5	4	4
Clarity	5	-	3	5	5	5	5	5	5
Practicality	5	-	3	5	5	5	5	4	4

Table A. 62. Representative participant quotations in response to Question 5

Part.	Example Quotations	Notes
H3	Classroom activities that involve both parents and students would be highly beneficial. For example, expressive arts–based activities can help strengthen interpersonal communication.	Supportive evidence
H7	I think the suggestions here are sufficient. It is important that activities, such as sports and arts, are low-cost and sustainable. For example, Syrian parents should also be included in picnics, as this can help facilitate communication among parents. The goal is not to segregate, but to allow them to get to know each other and interact.	Supportive evidence

F6.2.6) Participant Feedback in Response to Question 6

Table A. 63. Head of year Ratings for the 'Common space' section (aligned with Q6)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	4	-	4	2	5	5	5	4	4
Comprehensiveness	4	-	4	2	5	5	5	4	4
Clarity	4	-	4	5	5	5	5	5	5
Practicality	4	-	3	3	5	5	4	4	4

Table A. 64. Representative participant quotations in response to Question 6

Part.	Example Quotations	Notes
H6	Constant parental presence within the school environment may disrupt the child's development of secure attachment bonds and symbiotic relatedness	Critical statement (cautionary)
H7	We, along with the school principals, prefer parents to limit their time at the school for security reasons.	Critical statement (cautionary)

F6.2.7) Participant Feedback in Response to Question 7

Table A. 65. Head of year Ratings for the 'Visual and physical modifications' section (aligned with Q7)

Key elements	Participant ratings								
	H1	H2	H3	H4	H5	H6	H7	H8	H9
Usefulness	5	-	5	5	5	5	5	4	4
Comprehensiveness	5	-	4	5	5	4	5	3	3
Clarity	5	-	5	5	5	5	5	5	5
Practicality	5	-	5	5	5	5	5	3	3

Table A. 66. Representative participant quotations in response to Question 7

Part.	Example Quotations	Notes
H3	Using icons to indicate “welcome” is a lovely touch that can immediately put people at ease. For instance, establishing a bilingual school manager’s office could be highly beneficial. When I was living abroad, encountering something familiar was always the most comforting. Having brochures readily available on a table allows people to access information at their own pace. Ensuring that basic information is clearly written is crucial, and even a simple icebreaker can make a significant difference.	Supportive evidence
H5	As some students arrive mid-term, bilingual notice boards could be beneficial in helping them feel more comfortable’	Critical statement with recommendation

F6.2.8) Participant Feedback in Response to Question 8

Table A. 67. Representative participant quotations in response to Question 8

Part.	Example Quotations	Notes
H2	For the guideline to be effective, the school principal needs to provide leadership and guide the team. Additionally, everyone must be united, believe in the process, and provide their full support.	Critical statement
H4	At Guidance and Research Centers, students are not provided with specialised tests. They are also unable to benefit from rehabilitation centers; even if they are in inclusive education, they cannot access these services. As a head of year, I wanted to raise this issue.	Contextual statement

F6.3) School manager assessment

This section presents feedback from school managers on eight questions, with responses illustrated separately (two participants, M4 and M8, chose not to provide ratings for individual sections, and instead offered general feedback; their response is indicated with a ‘–’ in the following tables-).

F6.3.1) Participant Feedback in Response to Question 1

Table A. 68. School manager Ratings for the Overall Guideline (aligned with Q1-a)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	4	4	5	5	4	5	4	4	5
Comprehensiveness	5	4	5	5	4	5	4	4	4
Clarity	4	4	5	4	4	5	4	4	4
Practicality	4	4	5	4	4	5	4	4	5

Table A. 69. School manager assessment of the overall guideline, indicating the extent to which it can reduce language barriers between parents and teachers (aligned with Q1-b)

Part.	Feedback Provided		
	Completely	Partially	Not at all
M1		X	
M2		X	
M3		X	
M4		X	
M5		X	
M6		X	
M7		X	
M8		X	
M9		X	

Table A. 70. Representative participant quotations in response to Question 1

Part.	Example Quotations	Notes
M2	From a broader perspective, the state could implement mandatory measures for all immigrants, rather than addressing the issue on a school-by-school basis. Immigrant families receive some government support, which they access through schools when obtaining student documents. One condition for receiving this support could address the language barrier. Students should be placed in a more organized manner, as the current grouping does not facilitate learning. For many foreign families, education may not be the top priority due to financial, emotional, and social needs, which can affect both students' and parents' attitudes toward school and learning. The Ministry could provide additional material support beyond textbooks. Municipalities do not provide consistent support, with assistance varying from year to year. Local governments and the Ministry should offer greater help for additional needs, such as supplementary books. A major challenge is the lack of time, which limits our ability to complete all tasks. While school administrators in larger cities like Istanbul may have different experiences, those in smaller towns face similar time constraints, making it difficult to complete tasks on schedule.	Critical statement
M7	It is great to have such a guide, especially considering we have immigrant students and their parents. Even a 10% improvement is meaningful.	Supportive evidence

F6.3.2) Participant Feedback in Response to Question 2

Table A. 71. School manager Ratings for the 'Improving language support' section (Q2)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	5	4	5	-	4	5	4	-	4
Comprehensiveness	5	4	5	-	4	5	4	-	5
Clarity	5	4	5	-	4	5	4	-	4
Practicality	5	4	5	-	4	5	4	-	4

Table A. 72. Representative participant quotations in response to Question 2.

Part.	Example Quotations	Notes
M4	At our school, students have at least some knowledge of Turkish. In particular, we often rely on fourth-grade students to act as informal translators. The language barrier is sometimes addressed through older students serving as mediators. While it is possible to request a translator from the Ministry of National Education for group meetings, in practice, they rarely provide one. I believe schools should utilise staff members or other available resources within their own community to address this need.	Contextual statement with practical recommendation
M4	For the last group meeting, we received assistance from migrant students in class 12A who are fluent in both languages. It was really helpful. In addition to our own students, we can also seek support from neighbouring schools. For instance, the students we graduated last year are now attending nearby high schools and could offer their help. They generally enjoy assisting others. To show our appreciation, we could arrange shopping vouchers or gift cards. In fact, I believe that in such situations, more students than needed would be eager to help'.	Contextual statement with practical recommendation

F6.3.3) Participant Feedback in Response to Question 3

Table A. 73. School manager Ratings for the 'Refining the effectiveness of parent-teacher consultations' section (aligned with Q3)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	5	4	5	-	5	5	4	-	5
Comprehensiveness	5	4	5	-	5	5	4	-	4
Clarity	4	4	5	-	5	5	4	-	5
Practicality	5	4	5	-	5	5	4	-	4

Table A. 74. Representative participant quotations in response to Question 3.

Part.	Example Quotations	Notes
M1	First-grade teachers have no free lesson periods. In this case, a potential solution might be to allocate options for first-grade teachers, such as staying at school for an additional 20 minutes once per month or using their lunch break. The Turkish Ministry of National Education covers both primary and secondary schools together and develops common regulations. This year, the online appointment system was launched by the Ministry, but it is not available for first-year primary teachers. I hope they develop separate regulations for primary and secondary education.	Critical and contextual statement
M3	The practice of teachers conducting home visits to observe the child's familial environment is of significant importance. However, this is a matter that can only be undertaken on a voluntary basis.	Supportive evidence with contextual statement

F6.3.4) Participant Feedback in Response to Question 4

Table A. 75. School manager Ratings for the 'Enhancing orientation course focus' section (aligned with Q4)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	5	4	5	-	4	5	4	-	5
Comprehensiveness	5	4	5	-	4	5	4	-	4
Clarity	5	4	5	-	4	5	4	-	4
Practicality	5	4	5	-	4	5	4	-	5

Table A. 76. Representative participant quotations in response to Question 4.

Part.	Example Quotations	Notes
M1	It's not only immigrant parents who require this; all parents do. While both in-person and online seminars are available, Turkish and foreign parents are not attending. Moreover, group meetings are already orientations for parents.	Contextual statement + supportive evidence
M2	The Ministry of National Education offers seminars as part of the Parent Academy. Schools can organize these sessions annually on topics such as children's internet habits, time management, study routines, and social relationships. The Ministry provides a framework program to each school and requests that parents be trained on the designated topics. Heads of Year prepare for these sessions and ensure that parents are informed. However, participation among foreign parents tends to be low, even though they may have an even greater need for this information. It is therefore important that they attend these meetings. Classroom teachers, being the most accessible point of contact for parents both verbally and in writing, play a crucial role in facilitating their participation.	Contextual statement

F6.3.5) Participant Feedback in Response to Question 5

Table A. 77. School manager Ratings for the 'Wide spreading social activities' section (aligned with Q5)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	4	4	4	-	5	5	4	-	5
Comprehensiveness	4	4	5	-	5	5	4	-	4
Clarity	4	4	5	-	5	5	4	-	4
Practicality	4	4	4	-	5	5	4	-	5

Table A. 78. Representative participant quotations in response to Question 5.

Part.	Example Quotations	Notes
M1	In this school, kindergarten parent days involve joint activities like painting cloth bags and foster interactions without needing extra space. We could consider similar activities in primary school'.	Contextual statement with practical recommendation
M8	Parental support, a crucial aspect of education, often sees low participation. Greater involvement from parents is important, as it allows them to understand classroom and school culture, school operations, classroom issues, and potential solutions. Parents play a key role in ensuring that classroom activities and problem-solving	Supportive evidence with contextual statement

	run smoothly. To the extent of their awareness, they contribute to addressing problems and enhancing the quality of education. The same level of participation is expected from foreign parents. Ensuring parental involvement requires the effort of all stakeholders, from teachers to the principal. Teachers should create opportunities for foreign parents to engage in classroom activities and interact with other parents. Additionally, some parents can accompany teachers on visits to foreign families; once their shyness and hesitation are overcome, they are better able to fulfil their parental responsibilities effectively.	

F6.3.6) Participant Feedback in Response to Question 7

Table A. 79. School manager Ratings for the 'Improving visual and physical modifications' section (aligned with Q7)

Key elements	Participant ratings								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
Usefulness	3	4	5	-	4	5	4	-	5
Comprehensiveness	5	4	5	-	4	5	4	-	4
Clarity	5	4	5	-	4	5	4	-	5
Practicality	3	4	5	-	4	5	4	-	5

Table A. Participant Feedback in Response to Question 7

Part.	Example Quotations	Notes
M7	It would be beneficial if students and parents feel welcomed and embraced when they come to school.	Supportive evidence (positive feedback)
M9	The suggestions are simple yet highly useful.	Supportive evidence (positive feedback)

F6.3.7) Participant Feedback in Response to Question 8

Table A. 80. Representative participant quotations in response to Question 8

Part.	Example Quotations	Notes
M3	I believe this guideline should be accessible to all school staff, including primary teachers and heads of year, as they also need this information. Making it available to a wider audience could increase its practical applicability. Additionally, I suggest creating a separate, concise guideline for parents—perhaps just one or two pages. Since the educational level of both local and immigrant parents is relatively low, the content should be very simple. For example, it could use speech bubbles, short sentences, and images—keeping it brief and easy to understand.	Critical statement with practical recommendation
M5	Overall, I think it looks good	Supportive evidence (positive feedback)

F6.4) Holistic Representation of Key Stakeholder Feedback by Section

Table A. 81. Overall key stakeholder feedback

Sections	Key elements	Key stakeholder feedback																		
		Heads of year (H1-H9)									School manager ratings (M1-M9)									
Improving Language support	Usefulness	4	-	4	5	5	5	5	5	5	5	4	5	-	4	5	4	-	5
	Comprehensiveness	4	-	5	5	5	5	5	4	4	5	4	5	-	4	5	4	-	4
	Clarity	4	-	5	5	5	5	5	5	5	5	4	5	-	4	5	4	-	4
	Practicality	4	-	5	5	5	5	5	4	4	5	4	5	-	4	5	4	-	5
Refining the effectiveness of parent-teacher consultations	Usefulness	5	-	4	5	5	5	5	5	5	5	4	5	-	5	5	4	-	5
	Comprehensiveness	5	-	4	5	5	5	5	4	4	5	4	5	-	5	5	4	-	4
	Clarity	5	-	4	5	5	5	5	5	5	4	4	5	-	5	5	4	-	5
	Practicality	5	-	4	5	5	5	5	4	4	5	4	5	-	5	5	4	-	4
Enhancing orientation course focus	Usefulness	4	-	3	5	5	5	5	5	5	5	4	5	-	4	5	4	-	5
	Comprehensiveness	4	-	3	5	5	5	5	4	4	5	4	5	-	4	5	4	-	4
	Clarity	4	-	3	5	5	5	5	5	5	5	4	5	-	4	5	4	-	4
	Practicality	4	-	3	5	5	5	5	4	4	5	4	5	-	4	5	4	-	5
Wide spreading social activities	Usefulness	5	-	3	5	5	5	5	5	5	4	4	4	-	5	5	4	-	5
	Comprehensiveness	5	-	3	5	5	5	5	4	4	4	4	5	-	5	5	4	-	4
	Clarity	5	-	3	5	5	5	5	5	5	4	4	5	-	5	5	4	-	4
	Practicality	5	-	3	5	5	5	5	4	4	4	4	4	-	5	5	4	-	5
Improving visual and physical modifications	Usefulness	5	-	5	5	5	5	5	4	4	3	4	5	-	4	5	4	-	5
	Comprehensiveness	5	-	4	5	5	4	5	3	3	5	4	5	-	4	5	4	-	4
	Clarity	5	-	5	5	5	5	5	5	5	5	4	5	-	4	5	4	-	5
	Practicality	5	-	5	5	5	5	5	3	3	3	4	5	-	4	5	4	-	5

F7) Complete Versions of the full Guidelines

This section presents the complete versions of the final guidelines developed through the research. The guideline for school staff is provided in Section F1, while the parent-focused guideline is included in Section F2 (within Section F1, a comparison table of the initial prototype and the revised guideline is also presented, located immediately after the school staff guideline). The guideline intended for the Ministry of National Education is presented in Section F3. Finally, the guideline targeting broader-level policymakers is outlined in Section F4.

F7.1) Guideline for School Staff (School Managers, Heads of Year, Primary Teachers and Other School Staff Members)

SENA BERKTAS

BUSAYAWAN LAM

GULSEN TORE YARGIN

GUIDELINE FOR EDUCATORS (SCHOOL MANAGERS, HEADS OF YEAR, TEACHERS AND OTHER SCHOOL STAFF): SUGGESTIONS TO REDUCE LANGUAGE BARRIERS BETWEEN TURKISH PRIMARY TEACHERS AND IMMIGRANT PARENTS

PRACTICAL SUGGESTIONS TO ENHANCE THE SUPPORT FOR PARENTS AND THEIR CHILDREN'S EDUCATION

Any member of the school staff are kindly invited to review this guideline.

TABLE OF CONTENTS

01 What are the goals and importance of the guideline?

02 What was the development process of this material?

03 How can school managers utilise this resource?

06 Essential support

08 Recommended support

10 Extra support

11 Checklist

12 Further information

13 Meet the research team

WHAT ARE THE GOALS AND IMPORTANCE OF THE GUIDELINE?

The aims of this guideline are to: 1) raise awareness among school staff regarding language barriers between parents and Turkish primary school teachers, and 2) propose practical solutions to address these challenges.

Highlighting the significance of the material, it's evident that supporting immigrant students' academic success not only improves their individual lives but also contributes to the long-term prosperity of Turkish society. Research consistently shows a correlation between education and lower crime rates, fostering more peaceful communities. Moreover, a well-educated populace drives economic growth, leading to greater national prosperity and reduced reliance on external dependencies. Recognising the crucial impact of parental involvement on students' academic achievements, this research underscores the necessity of facilitating stronger connections between immigrant parents and Turkish schools. Effective communication between teachers and parents is therefore paramount in cultivating and enhancing the parental support vital for student success. As school staff, your support is greatly valued in contributing to the improvement of the situation.

Real-life personas are presented below, briefly outlining their stories. Due to their unique circumstances, immigrants may require further assistances and effort, and as school management team members, your support is crucial in creating a school environment with fewer problems.

Name: Ruqaiya Ahmad
Age: 50
Birthplace: Damascus
Language (s): Arabic, Turkish

'I am from Damascus but am natively Turkmen, so I can speak Turkish. I lost my husband and children during in war. I lived in Gaziantep, then had to move to Ankara. Recently, I got sick but was rejected at the hospital because the ID card I received in Gaziantep was not valid here. I am applying for a new ID card at the moment'.

Name: Aisha Al-badi
Age: 32
Birthplace: Homs
Language (s): Arabic

'I have three children. I lost my husband in the Syrian war, and I came to Turkiye with my children. I couldn't find a job in Ankara because I cannot speak Turkish. We're staying with a relative whose husband also passed away in the war. Our children need to go to school, but I don't know how to register them, receive ID cards, etc.'

Source: Tosun and Gürtekin, 2018

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WHAT WAS THE DEVELOPMENT PROCESS OF THIS MATERIAL?

This material is a practical output of PhD research conducted by Sena Berktas at Brunel University London, Brunel Design School, UK. She applied the principles of Human-Centred Design and Information Design in developing this guideline. Research has shown that parental involvement is critically important at the primary school level, and the education of immigrant students in Türkiye requires urgent improvement. Many immigrant students are unable to read or write even by the end of primary school, despite teachers' dedicated efforts. This underachievement represents a significant loss both for the students and the host community. Active parental support has a strong potential to improve these students' outcomes, which is why this research project focused on this topic.

In Istanbul, a case study was conducted at a primary school with a significant immigrant student population, with permission obtained from the Ministry of National Education. Relevant stakeholders at the school (teachers, parents, heads of year, school managers, and the school translator) helped identify existing problems, while experts participating in the research from various fields (e.g., psychologists, sociologists, education specialists, designers, nonprofit leaders) proposed solutions to mitigate this language barrier. A total of 60 individuals officially contributed to this development. The resulting guideline was evaluated with participants from five different schools in Istanbul, and finalised based on their suggestions.

The research findings indicated that language barriers are significant and are linked to several factors, including cultural differences, emotional challenges, and limited access to information. In this context, parents and teachers require not only specific communication tools but also diverse forms of support from the school to overcome these barriers. To address these issues, the researcher developed a guideline for school staff which includes a range of practical recommendations to be applied in Turkish primary schools.

However, certain recommendations extended beyond the immediate school context; hence, the need arose to prepare another guideline for policymakers. Given that policymakers have diverse areas of focus, the researcher provided two guidelines for top officials. One is for the Ministry of the Interior and the Ministry of Family and Social Services, focusing on country-wide implementations. The guideline currently presented is for the Ministry of Education, with a focus on school-related matters.

HOW CAN SCHOOL STAFF UTILISE THIS RESOURCE?

Furthermore, educators may also consider reviewing the suggestions outlined below.

- Despite the primary focus on immigrant parents, the core of these suggestions benefits all parents. Therefore, the suggestions can be considered as a whole for entire parent community in Turkish schools.

- Although this guideline is primarily proposed for primary school levels, the suggestions can be adapted to other educational levels, such as secondary schools or kindergartens.

- The suggestions provided may not necessarily be implemented directly. They can be adapted or tailored to suit the specific circumstances of different schools.

- In certain instances, external support may be required and could be requested as appropriate. For example, assistance for social activities may be sought from twin schools, municipalities of the areas being visited, or local municipalities within the school's vicinity. Moreover, requests for any support could be submitted through the E-School help desk (school management teams may also be engaged to facilitate the provision and coordination of external support).

- The suggestions are presented in a hierarchical order, reflecting the varying levels of importance associated with the problems identified in the research findings:

1. **Essential support:** These suggestions could be considered a high priority as they are directly linked to communication problems.
2. **Recommended support:** It is advisable to include these elements, as they form the foundation of essential support.
3. **Extra support:** Including these elements where possible could also help integrate parents and foster a sense of belonging.

However, it is important to emphasize that adherence to this hierarchy is not mandatory; school staff may prioritise any suggestion based on the specific context and needs of their school. The following page illustrates this hierarchical order, after which the suggestions are provided throughout the material.

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HOW CAN SCHOOL STAFF UTILISE THIS RESOURCE?

The sections within the guideline are outlined below.

Categories	Practical suggestions	Page
Part 1. Essential support	Improving language accommodation	6
	Refining the effectiveness of parent-teacher consultations	7
Part 2. Recommended support	Enhancing orientation course focus	8
	Wide-spreading social activities	9
Part 3. Extra support	Promoting visual and physical modifications	10

- Each suggestion begins with a concise explanation of the activity's essence and fundamental concepts, followed by supplementary ideas in bullet points. Participant quotes, images and external links are also provided for further context and information.
- A checklist is provided at the end, which may facilitate more effective use of the material.
- A further information page is also provided, offering resources that may assist in managing the situation more effectively.
- For any inquiries or potential collaboration opportunities, the researcher's contact information can be found on the back cover.
- Notably, circulation of this material among colleagues would be appreciated, as it would promote awareness and facilitate collaboration.

IMPROVING LANGUAGE ACCOMMODATION

A key highlight in this context is to create opportunities for clear and comfortable face-to-face communication. Whenever possible, the presence of a professional interpreter can greatly enhance understanding for all parties. When this is not feasible, other approaches, such as using translation technology or drawing on the help of trusted third parties, can be valuable alternatives. Additional steps to strengthen language support may also help reduce relevant problems.

- Home visits: Research findings highlighted that home visits can be highly valuable in initiating parent–teacher interactions. For some parents, attending meetings at school may be difficult for various reasons; however, when communication is initiated through a home visit, there is a strong likelihood of establishing a sustainable and ongoing channel for engagement.

'...to observe the child's familial environment is of significant importance'.
A primary school manager, Istanbul

(www.debbiepushor.ca)

- Use of interpreters: Participants highlighted the importance of interpreters for group meetings and parent seminars. Where professional interpreters are unavailable, translation support may be provided by a qualified individual during these sessions.

'For the last group meeting, we received assistance from migrant students in class 12A who are fluent in both languages. It was really helpful'.
A primary school manager, Istanbul

- Effective Use of Technology: AI-based tools, such as translation apps, can help reduce language barriers in schools and are easily accessible on smartphones. While some staff are comfortable using these tools, others may require additional support. Schools can facilitate this through seminars, dedicated training sessions, instructional videos, or peer guidance from colleagues experienced with AI applications (see the video entitled ↗ *"How to Change the Voice in Google Translate"* as an example).

'I use Google Translate's voice translation for spoken conversations. For written messages, WhatsApp now have built-in translation features as you type, it directly translate from your keyboard'.
A primary head of year, Istanbul

- Availability of language courses for parents at schools: Many immigrant parents have not participated in external language programs but have expressed a clear preference for courses offered at their children's schools. There is an opportunity for schools to partner with public education centres so that educators can provide the requested courses for up to 10 hours per week. Schools could explore this opportunity to accommodate such courses.

REFINING THE EFFECTIVENESS OF PARENT-TEACHER CONSULTATIONS

Research indicates that parent–teacher consultations are essential for supporting children's development, yet there remains room for improvement. Parents often lack clarity about how frequently and in what manner to communicate with teachers. This uncertainty may stem from cultural differences, where regular parental involvement in schooling is uncommon, and can also affect local parents due to limited information. In this context, group meetings can effectively orient parents, while one-on-one consultations provide more personalised and impactful support. Supplementary measures may further enhance parent–teacher engagement.

'In Syria, parents hardly can see teachers; they typically only meet with school managers if necessary'.
An immigrant parent in Istanbul

- Preliminary standardisation of parent–teacher interactions: Structuring meetings in a consistent and systematic manner is beneficial, as it can strengthen relationships between families and schools. Draft standardization may include measures such as the consistent use of online appointment scheduling platforms and agreement on a minimum frequency of meetings—for example, school staff could commit to meeting parents at least twice per term, or no fewer than four times per academic year.

'***Random meetings reduce efficiency'.***
A primary teacher in Istanbul

'We should develop a solution for first-grade teachers, as they currently have no free periods for parent meetings. Possible options include staying an extra 20 minutes or using part of their lunch break once a month'.
A primary school manager, Istanbul

- Dedicated school support teams: Participants emphasized the importance of integrating immigrant students into existing at-risk groups or creating dedicated support groups. Volunteer school staff could collaborate to provide targeted assistance, offering students and their parents a clear point of contact for guidance and queries.

'We have a crisis intervention team, so students would be able to access support whenever they encounter difficulties'.
A primary head of year, Istanbul

'A volunteer team of 5–6 members, including teachers, administrators, and year heads, could be formed to provide targeted support for immigrant students and their parents'.
A primary head of year, Istanbul

'A service catalogue could be developed to outline available child-related support and access points, listing up to 50 key organisations. School staff may use this resource to guide parents when needed'.
A primary head of year, Istanbul

ENHANCING ORIENTATION COURSE FOCUS

Formal orientation sessions are recommended to share essential information and foster empathy within the school community. These sessions could address the needs of parents, students, and staff from different perspectives. Parents, particularly those from immigrant backgrounds, benefit from guidance on the school system and parental expectations. School staff, in turn, need to develop a deeper understanding of families' socio-economic circumstances and the needs of disadvantaged students. Students also need attention; empathy-focused seminars can help promote a more inclusive and supportive environment. The following suggestions provide practical guidance for implementation.

- Access to required information for parents: Relevant topics can be communicated to parents through monthly seminars conducted by heads of year or by external experts invited to the school. Suggested orientation topics for parents could include:
- The impact of education and parental support on children's future outcomes (short and long term).
- Clear information about the local education system and parental expectations, such as allocation of teachers, parent-teacher meetings meetings and the mode of parent-teachers interactions in schools.
- Social norms in the local community.
- Available opportunities provided by local authorities, such as language courses, financial assistance, and well-being support.
- Advice to support their adaptation, such as engaging with local communities, attending Turkish language courses, and watching Turkish TV channels and listening to radio stations.

'When you explain terms, people get a big picture. Don't assume everybody knows'
A professor, Inclusive Design expert, London

'Orientation sessions should be provided for mid-term students and their parents upon arrival to help them integrate smoothly.'
A primary head of year, Istanbul

- Access to required information for school staff: Relevant topics can be received by school staff through online and in-service professional training offered by the Ministry of National Education, with particular emphasis placed on specific modules. This can also be provided through seminars conducted by heads of year or external experts within the school. School staff may benefit from having access to the following information:
- Challenges for immigrant parents (for example, traumas, health problems, financial issues)
- Way of effective communication with parents (for example, use of body language, active listening)
- Available supports offered by the school (for example, availability of a translator at certain times)
- Way of reduce problems regarding immigrant children and their parents (for example, teachers should be encouraged to co-operate with heads of year).

'***These are innocent individuals who have fled their countries due to war. It is important for school staff to especially embrace this understanding'.***
A primary teacher, Istanbul

WIDE SPREADING SOCIAL ACTIVITIES

Social activities inherently encourage interpersonal interaction and nurture empathy, making them particularly valuable for bringing together and integrating diverse groups within schools. Enhancing such activities throughout the academic year can further strengthen these connections. Additionally, joint parent–student activities may offer further opportunities for fostering inclusion and community. The accompanying suggestions can also be considered to support the effective implementation of these initiatives.

'I organised a visit to Çanakkale. This experience aimed to foster an understanding and appreciation of Turkish culture among the parents'.
A primary teacher, Istanbul

- Parent day activities: Participants emphasized the importance of parental involvement in schools but noted that space constraints limit such activities in many schools. As a solution, they proposed holding Parent Day events within classrooms. In addition, simple outdoor activities, such as parent–student picnics, may also be considered.

'Kindergarten parent days involve joint activities like painting cloth bags and foster interactions without needing extra space'.
A primary school manager, Istanbul

- Inclusivity in activity organization: School staff noted that Parent-Teacher Association members assist with organizing activities. It would be beneficial for them to be more proactive in including newcomers, including immigrant parents, as new parents may be unfamiliar with the system and unintentionally excluded.

- Public course information dissemination: Many parents remain unaware of available public courses, which are important for supporting their integration. To address this, targeted information campaigns could be implemented (for example, information could be shared through student-led handouts, parent seminars, or group meetings).

'Sewing courses could provide them with opportunities to earn income'.
A primary school manager, Istanbul

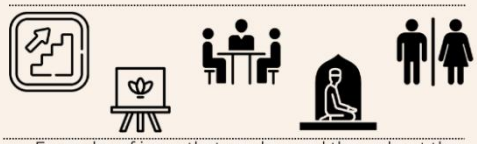
IMPROVING VISUAL AND PHYSICAL MODIFICATIONS

Research suggests that physical adaptations and visual modifications can help make school spaces more welcoming and inclusive for individuals from diverse backgrounds. Schools can explore simple solutions that could enhance accessibility of immigrant parents and also increase the sense of belonging at the area. Treating adjustments as an ongoing process throughout the academic year, with periodic updates as needed, can help ensure they remain effective and relevant.

'When entering a building, it's important to be able to clearly identify the location of the elevator'.
Architect with expertise in Accessibility, Istanbul

- Use of certain illustrations: The standardised implementation of icons and universal symbols (with English text beneath) and bilingual information boards across Turkish schools is recommended. This can enhance communication and accessibility for diverse parent populations and support inclusivity within the school environment.

'Icons make life much easier. Simply print them on an A4 sheet of paper and stick them'.
A primary head of year, Istanbul



Examples of icons that can be used throughout the school environment

- Use of further elements: School staff could work together to introduce visual and physical changes that celebrate the school's diversity. For example, incorporating celebrations such as Eid can promote inclusivity, highlight shared values, and strengthen a sense of community.

'We wrote the word 'welcome' on the doors in different languages. That way, they could understand that they were accepted'.
A primary head of year, Istanbul

CHECK_ LIST

This checklist plan might be considered to manage the situation more effectively. The list is organised by support categories (e.g., essential support) and relevant topics (e.g., language support). Once goals have been addressed within a section, the box next to that topic can be ticked (notably, it is not necessary for every suggestion to be addressed).

Topics		Action completed
Essential support	Improving language accommodation	
	Refining the effectiveness of parent-teacher consultations	
Recommended support	Enhancing orientation course focus	
	Wide spreading social activities	
Extra support	Improving visual and physical modifications	

FURTHER INFORMATION

Reviewing these supplementary resources may also help mitigate challenges within the schools.

- ↗This brief material on the website (Reimagining migration) offers concise tips for teachers working with immigrant students. These recommendations could also prove valuable for educators in Türkiye.

- ↗This website (Borders to Bridges) is dedicated to inform teachers about immigrant and refugee children. There are several subsection that could also be valuable for teachers in Turkish schools.

- ↗This website (Making Schools a Welcoming Place for Immigrant Students) developed by Harvard University, provides comprehensive guidance on creating inclusive school environments for immigrant and refugee children. Several of the strategies outlined may be highly applicable and beneficial for schools in Turkey.

'If you want a wonderful garden, you need to allow different flowers to flourish and grass as well'.
An Inclusive Design expert, London

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MEET THE RESEARCHERS

SENA BERKTAS

The researcher

The researcher completed her PhD at Brunel Design School, specialising in Human-Centred Design and Information Design. The material presented here represents a practical contribution to her research project. She has a strong interest in Social Innovation Design and aims to pursue her career in this field by incorporating other design principles as well.

BUSAYAWAN LAM

Principal supervisor

Dr Lam is a Reader and Head of Brunel Design School. She specialises in the areas of New Product Development (NPD) process, Innovation Strategy and Management, and Design Strategy. Her current research interests include co-design, community-led design and social innovation.

GULSEN TORE-YARGIN

Secondary supervisor

Dr. Tore-Yargin is a Senior Lecturer at Brunel Design School. Her current research interests include UX research methods and education and human-centred design in emerging technologies, including conversational agents, sensor-based innovations, smart products, and more.

- Webpage References within the School Staff Guidelines:

Borders to Bridges (no date) *Teacher Guides and Resources* [online]. Available at: https://borderstobridges.org/resources/for-educators (Accessed: 21 September 2025).

Nace, T. (2023) *How to change the voice in Google Translate*. YouTube, 12 October. Available at: https://www.youtube.com/watch?v=xlic6AWrR_U (Accessed: 21 September 2025).

Reimagining Migration (2025) *Supporting Immigrant Students: Trauma-Informed, Relationship-Centered Strategies for Teachers* [online]. Available at: https://reimaginingmigration.org/wp-content/uploads/2025/09/Supporting-Immigrant-Students-Trauma-Informed-Relationship-Centered-Strategies-for-Teachers.pdf (Accessed: 21 September 2025).

Ross, E. M. (2023) *Making schools a welcoming place for immigrant students: How educators can help newcomers in the classroom*. Usable Knowledge, Harvard Graduate School of Education, 2 February. Available at: https://www.gse.harvard.edu/ideas/usable-knowledge/23/02/making-schools-welcoming-place-immigrant-students (Accessed: 21 September 2025).

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Table A. 82. Comparative Overview of the Initial Prototype and Revised Guidelines

Initial Prototype Guideline	The Revised Guideline
The title of the initial guideline indicated that the material was primarily intended for school managers (*Guideline for School Managers: Suggestions to Reduce Language Barriers between Teachers and Immigrant Parents*)	The title of the revised guideline indicates that it is intended for all school staff members (*Guideline for Educators (School Managers, Heads of Year, Teachers and Other School Staff): Suggestions to Reduce Language Barriers between Turkish Primary Teachers and Immigrant Parents*).
In the section explaining how the material should be used, the initial guideline addressed its application exclusively for school managers.	The revised guideline provides explicit guidance for each staff group separately, outlining how different users can utilise the resource.
The *language support* section in the initial guideline primarily focused on enhancing the effectiveness of translation services within schools.	In the revised guideline, this section has been retitled *Improving Language Accommodation*. Moreover, its content has been broadened to include a wider range of solutions, such as home visits to initiate communication, the involvement of older students in supporting translation, and the use of recent technological tools, illustrated with practical examples.

The clear meeting protocol section in the initial guideline primarily addressed the need to structure informal in-person meetings, such as establishing regular meeting schedules and defining recurring discussion topics (e.g., a child's overall wellbeing).	In the revised guideline, this section has been retitled *Refining the Effectiveness of Parent–Teacher Consultations*. The existing content has been expanded, and broader recommendations have been incorporated, including the establishment of dedicated school support teams, such as crisis intervention teams.
In the *Orientation Courses* section, example orientation programme topics were provided for both immigrant parents and school staff, and school managers were advised to ensure the delivery of these courses with the support of relevant experts.	In the revised guideline, the section has been retitled *Enhancing Orientation Course Focus*. While there were no substantial changes to the core content, the revised guideline shifts the approach to programme delivery. For instance, it emphasises adapting existing seminars within schools and making use of seminars already provided by the Ministry of National Education. In addition, the provision of relevant information for students is explicitly addressed in this section.
The *Social Activities* section in the initial guideline primarily included activity suggestions that were largely situated outside the school context, such as initiatives aimed at strengthening cultural bonds and visits to historical sites.	In the revised guideline, the section has been retitled *Widespread Social Activities*. While the existing content has been retained, the focus has shifted towards integrating parents into activities within the school context (e.g., classroom-based parent-day activities, which can facilitate parental participation in shared activities with their children and promote engagement with teachers and other parents).
The earlier prototype guideline included a *Common Space* section, which recommended the creation of a designated area within schools where parents could spend time.	This section has been completely removed in the revised guideline, primarily due to security concerns and the limited availability of additional space within schools.
The V*isual and Physical Modifications* section in the initial guideline presented suggestions applicable within the school environment to enhance accessibility and foster a sense of belonging.	In the revised guideline, the section has been retitled *Improving Visual and Physical Modifications*. While there were no substantial changes to the core content, minor refinements were made, such as the inclusion of additional illustrative quotations from new participants involved in the guideline evaluation.
The initial guideline concluded with an action plan designed to support school managers in organising and managing the implementation of the proposed recommendations.	In the revised guideline, the action plan has been replaced with a checklist to enhance practicality and ease of use.

F7.2) Guideline for Parents

SENA BERKTAS

BUSAYAWAN LAM

GULSEN TORE YARGIN

GUIDELINE FOR PARENTS
SUGGESTIONS TO ENHANCE PARENTAL INVOLVEMENT AND SUPPORT IN EDUCATION

This resource is designed to help you support your child's learning. Your involvement in their primary education is incredibly important, as there is a strong link between parental support and a child's academic achievement and future success. This guideline offer recommendations to help empower you in this role.

Brunel University London,
Brunel Design School,
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Sena Berktas
Design researcher,
sena.brk1@gmail.com

2025

SUGGESTIONS TO ENHANCE PARENTAL INVOLVEMENT AND SUPPORT IN EDUCATION

- Please attend all group meetings, which are typically held at the beginning of each semester.
- Please meet with primary teachers in-person regularly, throughout the education term.
- Please feel free to consult the heads of year whenever you need support for your child. You are welcome to request an appointment and seek guidance whenever needed.

- Please be attentive to teachers' requests. For example, provide the necessary materials for your child's class activities and come to school when invited.
- Please attend monthly organised parent seminars at the school.
- Please attend all school activities, both inside and outside the school (such as trips and picnics).
- Make friends and support each other—for example, by sharing questions on WhatsApp, joining school events together, or meeting for tea.

- Please take part in public courses like sewing, painting, or cooking. Moreover, ask school managers about free courses and other support.

LANGUAGE SUPPORT:

- Bring someone to translate at school seminars.
- Use translation apps when needed.
- Practice Turkish through courses, TV, or time with locals.

F7.3) Guideline for the Turkish Ministry of National Education Representatives

SENA BERKTAS

BUSAYAWAN LAM

GULSEN TORE YARGIN

GUIDELINE FOR THE TURKISH MINISTRY OF NATIONAL EDUCATION: SUGGESTIONS TO REDUCE LANGUAGE BARRIERS BETWEEN TURKISH PRIMARY TEACHERS AND IMMIGRANT PARENTS

PRACTICAL SUGGESTIONS TO ENHANCE THE SUPPORT FOR PARENTS AND THEIR CHILDREN'S EDUCATION

Representatives from the Turkish education ministry are respectfully encouraged to review this guideline.

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10 Further information

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WHAT ARE THE IMPORTANCE AND GOALS OF THIS GUIDELINE?

The aims of this guideline are to: 1) raise awareness among authorities regarding language barriers between immigrant parents and Turkish teachers, and 2) propose practical solutions to address these challenges.

Highlighting the significance of the material, it's evident that supporting immigrant students' academic success not only improves their individual lives but also contributes to the long-term prosperity of Turkish society. Research consistently shows a correlation between education and lower crime rates, fostering more peaceful communities. Moreover, a well-educated populace drives economic growth, leading to greater national prosperity and reduced reliance on external dependencies. Recognising the crucial impact of parental involvement on students' academic achievements, this research underscores the necessity of facilitating stronger connections between immigrant parents and Turkish schools. Effective communication between teachers and parents is therefore paramount in cultivating and enhancing the parental support vital for student success. your support is highly valued in promoting the standardization of practices within schools and the broader community.

Real-life personas are presented below, briefly outlining their stories. Due to their unique circumstances, immigrants may require further assistances and effort, and as primary teachers, your support is greatly valued in contributing to the improvement of the situation.

Name: Ruqaiya Ahmad
Age: 50
Birthplace: Damascus
Language (s): Arabic, Turkish

'I am from Damascus but am natively Turkmen, so I can speak Turkish. I lost my husband and children during in war. I lived in Gaziantep, then had to move to Ankara. Recently, I got sick but was rejected at the hospital because the ID card I received in Gaziantep was not valid here. I am applying for a new ID card at the moment'.

Name: Aisha Al-badi
Age: 32
Birthplace: Homs
Language (s): Arabic

'I have three children. I lost my husband in the Syrian war, and I came to Turkiye with my children. I couldn't find a job in Ankara because I cannot speak Turkish. We're staying with a relative whose husband also passed away in the war. Our children need to go to school, but I don't know how to register them, receive ID cards, etc.'

Source: Tosun and Gürtekin, 2018

"The potential of immigrant students is boundless. They bring not just the hope of a better life for themselves, but the promise of a better world for us all."
Michelle Obama, Former First Lady of the United States

WHAT WAS THE DEVELOPMENT PROCESS OF THIS MATERIAL?

This material is a practical output of PhD research conducted by Sena Berktas at Brunel University London, Brunel Design School, UK. She applied the principles of Human-Centred Design and Information Design in developing this guideline. Research has shown that parental involvement is critically important at the primary school level, and the education of immigrant students in Türkiye requires urgent improvement. Many immigrant students are unable to read or write even by the end of primary school, despite teachers' dedicated efforts. This underachievement represents a significant loss both for the students and the host community. Active parental support has a strong potential to improve these students' outcomes, which is why this research project focused on this topic.

In Istanbul, a case study was conducted at a primary school with a significant immigrant student population, with permission obtained from the Ministry of National Education. Relevant stakeholders at the school (teachers, parents, heads of year, school managers, and the school translator) helped identify existing problems, while experts participating in the research from various fields (e.g., psychologists, sociologists, education specialists, designers, nonprofit leaders) proposed solutions to mitigate this language barrier. A total of 60 individuals officially contributed to this development. The resulting guideline was evaluated with participants from five different schools in Istanbul, and finalised based on their suggestions.

The research findings indicated that language barriers are significant and are linked to several factors, including cultural differences, emotional challenges, and limited access to information. In this context, parents and teachers require not only specific communication tools but also diverse forms of support from the school to overcome these barriers. To address these issues, the researcher developed a guideline for school staff which includes a range of practical recommendations to be applied in Turkish primary schools.

However, certain recommendations extended beyond the immediate school context; hence, the need arose to prepare another guideline for policymakers. Given that policymakers have diverse areas of focus, the researcher provided two guidelines for top officials. One is for the Ministry of the Interior and the Ministry of Family and Social Services, focusing on country-wide implementations. The guideline currently presented is for the Ministry of Education, with a focus on school-related matters.

HOW CAN AUTHORITIES UTILISE THIS RESOURCE?

This guideline is divided into two main sections, as outlined below. The recommendations are presented under each section with bullet points to facilitate more effective use of the guideline.

Part 1. Enhancing the effectiveness of communication with schools: This section presents suggestions aimed at strengthening two-way communication between school managers and top officials from the Turkish Ministry of National Education, thereby improving awareness of challenges and facilitating the development of appropriate solutions. While all departments are encouraged to engage, the 'Provincial and District Education Directorates', 'General Directorate of Primary Education', and 'General Directorate for Special Education and Guidance' are especially relevant, given their frequent interaction with school administrators.

Part 2. Practical suggestions to be considered in the school context: This section includes practical suggestions organized under five sub-headings. These suggestions were originally provided to school staff in a separate guideline, but it could also be beneficial to present them to representatives of the Ministry of National Education. While the recommendations are highly valuable for enhancing parent-teacher interactions and improving student success, their implementation may vary across institutions, with some schools adopting these practices while others have yet to do so. In this regard, strategic leadership and clear directives from senior authorities are crucial to ensure consistent and effective application. This section is primarily intended for the 'General Directorate of Primary Education', the 'General Directorate for Special Education and Guidance', the 'General Directorate of Lifelong Learning', and the 'Provincial and District Education Directorates', given their authority to implement relevant policies and practices in schools.

- This document provides key explanations for the two main topics, accompanied by supplementary suggestions. These supplementary suggestions are intended as a source of inspiration, and more contextually appropriate recommendations may be considered for the Turkish context.
- Despite the primary focus on immigrant parents, the core of these suggestions benefits all parents. Therefore, the suggestions can be considered as a whole for entire parent community in Turkish schools.
- For any inquiries or potential collaboration opportunities, the researcher's contact information can be found on the back cover.

PART 1 – **ENHANCING THE EFFECTIVENESS OF COMMUNICATION WITH SCHOOLS**

Research findings highlighted a need to enhance two-way communication between school managers and higher authorities.

School managers often possess limited knowledge regarding available support that could improve their schools. This may stem from insufficient training on the topic, as their progression to management typically involves passing written exams and joining the school management team. Consequently, it can take considerable time for them to become familiar with opportunities such as activity funding and additional expert support. Therefore, you could consider delivering information about available resources in a practical format that accommodates their busy schedules and potential reluctance to read lengthy documents.

Conversely, higher authorities may lack sufficient insight into the diverse situations within individual schools. While standardized support exists, each school can face unique challenges. For example, observations across five schools revealed varying levels of immigrant student literacy in Turkish and differing levels of parental engagement. Staff in schools with a higher proportion of students from low-education backgrounds suggested that within PICTES (Promoting Integration of Syrian Children into the Turkish Education System) Turkish language education should have commenced earlier than the 3rd grade, as they felt valuable time was being lost. To proactively address such context-specific issues, you could-enhance communication based on the individual circumstances of each school.

Overall, improved two-way communication holds significant potential for positive change. As representatives of the Ministry of National Education, you are uniquely positioned to lead this effort, and the recommendations provided here offer practical pathways to achieve it.

- Training programs for school managers: Research findings indicated the need for comprehensive induction training for school managers at the commencement of their tenure. Such training could be delivered through a variety of methods, including concise instructional videos and orientation sessions, to effectively convey essential information on available resources, support programs, and related procedures.

'School managers often lack knowledge of where and how to apply for permissions or external support for activities, as they typically are not trained in this area. They gain experience over time."
Education researcher from the Ministry of Education, Ankara

- Regular meetings with school management teams: Regular engagement with school management teams is essential to ensure effective communication with senior officials, to report on emerging challenges, and to articulate the specific needs of each school. These meetings should also serve as a mechanism for verifying that managers have systematically gathered feedback from teachers, heads of year, and other relevant staff, thereby enabling a comprehensive and accurate understanding of the school environment and supporting evidence-based revisions where necessary (illustrative quotations are provided below).

'I wish this study had been conducted sooner. If the problems were reported to the authorities earlier, some of the solutions could have been implemented by now'
A primary School Vice Principal, Istanbul

PART 2 - **PRACTICAL SUGGESTIONS TO BE CONSIDERED IN THE SCHOOL CONTEXT**

A) IMPROVING LANGUAGE ACCOMMODATION

A key highlight in this context is to create opportunities for clear and comfortable face-to-face communication. Whenever possible, the presence of a professional interpreter can greatly enhance understanding for all parties. When this is not feasible, other approaches, such as using translation technology or drawing on the help of trusted third parties, can be valuable alternatives. Additional steps to strengthen language support may also help reduce relevant problems.

- Home visits: Research findings highlighted that home visits can be highly valuable in initiating parent–teacher interactions. For some parents, attending meetings at school may be difficult for various reasons; however, when communication is initiated through a home visit, there is a strong likelihood of establishing a sustainable and ongoing channel for engagement.

'...to observe the child's familial environment is of significant importance'.
A primary school manager, Istanbul

(www.debbiepushor.ca)

- Use of interpreters: Participants highlighted the importance of interpreters for group meetings and parent seminars. Where professional interpreters are unavailable, translation support may be provided by a qualified individual during these sessions.

'For the last group meeting, we received assistance from migrant students in class 12A who are fluent in both languages. It was really helpful'.
A primary school manager, Istanbul

- Effective Use of Technology: AI-based tools, such as translation apps, can help reduce language barriers in schools and are easily accessible on smartphones. While some staff are comfortable using these tools, others may require additional support. Schools can facilitate this through seminars, dedicated training sessions, instructional videos, or peer guidance from colleagues experienced with AI applications (see the video entitled ↗ *"How to Change the Voice in Google Translate"* as an example).

'I use Google Translate's voice translation for spoken conversations. For written messages, WhatsApp now have built-in translation features as you type, it directly translate from your keyboard'.
A primary head of year, Istanbul

- Availability of language courses for parents at schools: Many immigrant parents have not participated in external language programs but have expressed a clear preference for courses offered at their children's schools. There is an opportunity for schools to partner with public education centres so that educators can provide the requested courses for up to 10 hours per week. Schools could explore this opportunity to accommodate such courses.

SECTION 2 - **PRACTICAL SUGGESTIONS TO BE CONSIDERED IN THE SCHOOL CONTEXT**

B) REFINING THE EFFECTIVENESS OF PARENT-TEACHER CONSULTATIONS

Research indicates that parent–teacher consultations are essential for supporting children's development, yet there remains room for improvement. Parents often lack clarity about how frequently and in what manner to communicate with teachers. This uncertainty may stem from cultural differences, where regular parental involvement in schooling is uncommon, and can also affect local parents due to limited information. In this context, group meetings can effectively orient parents, while one-on-one consultations provide more personalised and impactful support. Supplementary measures may further enhance parent–teacher engagement.

'In Syria, parents hardly can see teachers; they typically only meet with school managers if necessary'.
An immigrant parent in Istanbul

- Preliminary standardisation of parent–teacher interactions: Structuring meetings in a consistent and systematic manner is beneficial, as it can strengthen relationships between families and schools. Draft standardization may include measures such as the consistent use of online appointment scheduling platforms and agreement on a minimum frequency of meetings—for example, school staff could commit to meeting parents at least twice per term, or no fewer than four times per academic year.

'Random meetings reduce efficiency'.
A primary teacher in Istanbul

'We should develop a solution for first-grade teachers, as they currently have no free periods for parent meetings. Possible options include staying an extra 20 minutes or using part of their lunch break once a month'.
A primary school manager, Istanbul

- Dedicated school support teams: Participants emphasized the importance of integrating immigrant students into existing at-risk groups or creating dedicated support groups. Volunteer school staff could collaborate to provide targeted assistance, offering students and their parents a clear point of contact for guidance and queries.

'We have a crisis intervention team, so students would be able to access support whenever they encounter difficulties'.
A primary head of year, Istanbul

'A volunteer team of 5–6 members, including teachers, administrators, and year heads, could be formed to provide targeted support for immigrant students and their parents'.
A primary head of year, Istanbul

'A service catalogue could be developed to outline available child-related support and access points, listing up to 50 key organisations. School staff may use this resource to guide parents when needed'.
A primary head of year, Istanbul

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SECTION 2 - **PRACTICAL SUGGESTIONS TO BE CONSIDERED IN THE SCHOOL CONTEXT**

C) ENHANCING ORIENTATION COURSE FOCUS

Formal orientation sessions are recommended to share essential information and foster empathy within the school community. These sessions could address the needs of parents, students, and staff from different perspectives. Parents, particularly those from immigrant backgrounds, benefit from guidance on the school system and parental expectations. School staff, in turn, need to develop a deeper understanding of families' socio-economic circumstances and the needs of disadvantaged students. Students also need attention; empathy-focused seminars can help promote a more inclusive and supportive environment. The following suggestions provide practical guidance for implementation.

- Access to required information for parents: Relevant topics can be communicated to parents through monthly seminars conducted by heads of year or by external experts invited to the school. Suggested orientation topics for parents could include:
- The impact of education and parental support on children's future outcomes (short and long term).
- Clear information about the local education system and parental expectations, such as allocation of teachers, parent-teacher meetings meetings and the mode of parent-teachers interactions in schools.
- Social norms in the local community.
- Available opportunities provided by local authorities, such as language courses, financial assistance, and well-being support.
- Advice to support their adaptation, such as engaging with local communities, attending Turkish language courses, and watching Turkish TV channels and listening to radio stations.

'When you explain terms, people get a big picture. Don't assume everybody knows'
A professor, Inclusive Design expert, London

'Orientation sessions should be provided for mid-term students and their parents upon arrival to help them integrate smoothly.'
A primary head of year, Istanbul

- Access to required information for school staff: Relevant topics can be received by school staff through online and in-service professional training offered by the Ministry of National Education, with particular emphasis placed on specific modules. This can also be provided through seminars conducted by heads of year or external experts within the school. School staff may benefit from having access to the following information:
- Challenges for immigrant parents (for example, traumas, health problems, financial issues)
- Way of effective communication with parents (for example, use of body language, active listening)
- Available supports offered by the school (for example, availability of a translator at certain times)
- Way of reduce problems regarding immigrant children and their parents (for example, teachers should be encouraged to co-operate with heads of year).

'***These are innocent individuals who have fled their countries due to war. It is important for school staff to especially embrace this understanding'.***
A primary teacher, Istanbul

SECTION 2 – **PRACTICAL SUGGESTIONS TO BE CONSIDERED IN THE SCHOOL CONTEXT**

D) WIDESPREADING SOCIAL ACTIVITIES

Social activities inherently encourage interpersonal interaction and nurture empathy, making them particularly valuable for bringing together and integrating diverse groups within schools. Enhancing such activities throughout the academic year can further strengthen these connections. Additionally, joint parent–student activities may offer further opportunities for fostering inclusion and community. The accompanying suggestions can also be considered to support the effective implementation of these initiatives.

'I organised a visit to Çanakkale. This experience aimed to foster an understanding and appreciation of Turkish culture among the parents'.
A primary teacher, Istanbul

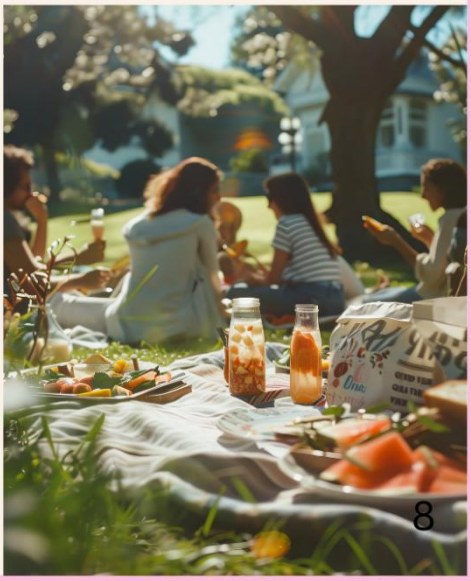
- Parent day activities: Participants emphasized the importance of parental involvement in schools but noted that space constraints limit such activities in many schools. As a solution, they proposed holding Parent Day events within classrooms. In addition, simple outdoor activities, such as parent–student picnics, may also be considered.

'Kindergarten parent days involve joint activities like painting cloth bags and foster interactions without needing extra space'.
A primary school manager, Istanbul

- Inclusivity in activity organization: School staff noted that Parent-Teacher Association members assist with organizing activities. It would be beneficial for them to be more proactive in including newcomers, including immigrant parents, as new parents may be unfamiliar with the system and unintentionally excluded.

- Public course information dissemination: Many parents remain unaware of available public courses, which are important for supporting their integration. To address this, targeted information campaigns could be implemented (for example, information could be shared through student-led handouts, parent seminars, or group meetings).

'Sewing courses could provide them with opportunities to earn income'.
A primary school manager, Istanbul



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SECTION 2 - **PRACTICAL SUGGESTIONS TO BE CONSIDERED IN THE SCHOOL CONTEXT**

E) VISUAL AND PHYSICAL MODIFICATIONS

Research suggests that physical adaptations and visual modifications can help make school spaces more welcoming and inclusive for individuals from diverse backgrounds. Schools can explore simple solutions that could enhance accessibility of immigrant parents and also increase the sense of belonging at the area. Treating adjustments as an ongoing process throughout the academic year, with periodic updates as needed, can help ensure they remain effective and relevant.

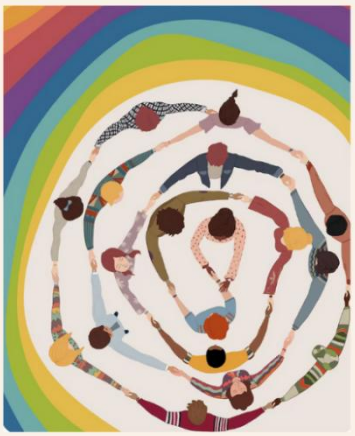
'When entering a building, it's important to be able to clearly identify the location of the elevator'.
Architect with expertise in Accessibility, Istanbul

- Use of certain illustrations: The standardised implementation of icons and universal symbols (with English text beneath) and bilingual information boards across Turkish schools is recommended. This can enhance communication and accessibility for diverse parent populations and support inclusivity within the school environment.

'Icons make life much easier. Simply print them on an A4 sheet of paper and stick them'.
A primary head of year, Istanbul

Examples of icons that can be used throughout the school environment

- Use of further elements: School staff could work together to introduce visual and physical changes that celebrate the school's diversity. For example, incorporating celebrations such as Eid can promote inclusivity, highlight shared values, and strengthen a sense of community.



'We wrote the word 'welcome' on the doors in different languages. That way, they could understand that they were accepted'.
A primary head of year, Istanbul

FURTHER INFORMATION

The supplementary resources listed below may also contribute to addressing challenges encountered within schools in Türkiye.

- The brief document, ↗ "Welcoming and Supporting Refugee Children: Information for Schools," outlines UK school strategies that could inspire policymakers to adapt similar approaches in Turkish schools.
- ↗This website (Cesie.org) is dedicated to the involvement of immigrant and refugee parents in their children's education. It presents several examples that could serve as inspiration for practices in Turkish schools.
- ↗This website (Parent Engage) features a digital booklet that highlights several immigrant parent-inclusion projects implemented across Europe. These successful examples from other countries could also prove beneficial if adapted for use in Türkiye.
- Furthermore, two conference papers have emerged from this research and could also be reviewed: ↗ Conference paper 1, ↗ Conference paper 2.

‘If you want a wonderful garden, you need to allow different flowers to flourish and grass as well’.

An Inclusive Design expert, London

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MEET THE RESEARCHERS

SENA BERKTAS

The researcher

The researcher completed her PhD at Brunel Design School, specialising in Human-Centred Design and Information Design. The material presented here represents a practical contribution to her research project. She has a strong interest in Social Innovation Design and aims to pursue her career in this field by incorporating other design principles as well.

BUSAYAWAN LAM

Principal supervisor

Dr Lam is a Reader and Head of Brunel Design School. She specialises in the areas of New Product Development (NPD) process, Innovation Strategy and Management, and Design Strategy. Her current research interests include co-design, community-led design and social innovation.

GULSEN TORE-YARGIN

Secondary supervisor

Dr. Tore-Yargin is a Senior Lecturer at Brunel Design School. Her current research interests include UX research methods and education and human-centred design in emerging technologies, including conversational agents, sensor-based innovations, smart products, and more.

- Webpage references within the guideline for the Turkish Ministry of national Education representatives:

British Psychological Society (2022) *Welcoming and Supporting Refugee Children: Information for Schools* [online]. Available at: https://cms.bps.org.uk/sites/default/files/2022-06/Welcoming%20and%20supporting%20refugee%20children%20-%20information%20for%20schools.pdf (Accessed: 21 September 2025).

CESIE (2022) *ParentsEngage: Building bridges between schools and migrant and refugee parents in Europe* [online]. Available at: https://cesie.org/en/project/parentsengage/ (Accessed: 21 September 2025).

Galani, C. (2022) *Collection and analysis of innovative initiatives engaging migrant and refugee parents in school life*. Parents Engage, Deliverable D1, Version 2.1. Available at: https://parentsengage.eu/media/parents-engage-io1-en.pdf (Accessed: 21 September 2025).

F7.4) Guideline for Policy Makers (For the Ministry of Family and Social Services & Ministry of the Interior Representatives)

SENA BERKTAS

BUSAYAWAN LAM

GULSEN TORE YARGIN

GUIDELINE FOR POLICY MAKERS: SUGGESTIONS TO REDUCE BARRIERS FOR IMMIGRANTS PARENTS

SUGGESTIONS TO ENHANCE THE COHESION WITHIN THE COUNTRY

Representatives from the **Ministry of Family and Social Services** and the **Ministry of the Interior** are especially encouraged to review this guideline.

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04 Part 1. Policies outlining expectations for immigrants in the host country

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07 Further information

08 Meet the research team

WHAT ARE THE IMPORTANCE AND GOALS OF THIS GUIDELINE?

The aims of this guideline are to: 1) raise awareness among authorities regarding language barriers between immigrant parents and Turkish teachers, and 2) propose policy-level solutions to address these challenges.

Highlighting the significance of the material, it's evident that supporting immigrant students' academic success not only improves their individual lives but also contributes to the long-term prosperity of Turkish society. Research consistently shows a correlation between education and lower crime rates, fostering more peaceful communities. Moreover, a well-educated populace drives economic growth, leading to greater national prosperity and reduced reliance on external dependencies. Recognising the crucial impact of parental involvement on students' academic achievements, this research underscores the necessity of facilitating stronger connections between immigrant parents and Turkish schools. Effective communication between teachers and parents is therefore paramount in cultivating and enhancing the parental support vital for student success.While the researcher has proposed actionable strategies within the school context, the support of policymakers is vital in ensuring that these recommendations are effectively implemented, and that both the local community and immigrant populations are adequately prepared for their successful integration.

Real-life personas are presented below, briefly outlining their stories. Due to their unique circumstances, immigrants may require further assistances and effort, and as primary teachers, your support is greatly valued in contributing to the improvement of the situation.

Name: Ruqaiya Ahmad
Age: 50
Birthplace: Damascus
Language (s): Arabic, Turkish

'I am from Damascus but am natively Turkmen, so I can speak Turkish. I lost my husband and children during in war. I lived in Gaziantep, then had to move to Ankara. Recently, I got sick but was rejected at the hospital because the ID card I received in Gaziantep was not valid here. I am applying for a new ID card at the moment'.

Name: Aisha Al-badi
Age: 32
Birthplace: Homs
Language (s): Arabic

'I have three children. I lost my husband in the Syrian war, and I came to Turkiye with my children. I couldn't find a job in Ankara because I cannot speak Turkish. We're staying with a relative whose husband also passed away in the war. Our children need to go to school, but I don't know how to register them, receive ID cards, etc.'

Source: Tosun and Gürtekin, 2018

1

WHAT WAS THE DEVELOPMENT PROCESS OF THIS MATERIAL?

This material is a practical output of PhD research conducted by Sena Berktas at Brunel University London, Brunel Design School, UK. She applied the principles of Human-Centred Design and Information Design in developing this guideline. Research has shown that parental involvement is critically important at the primary school level, and the education of immigrant students in Türkiye requires urgent improvement. Many immigrant students are unable to read or write even by the end of primary school, despite teachers' dedicated efforts. This underachievement represents a significant loss both for the students and the host community. Active parental support has a strong potential to improve these students' outcomes, which is why this research project focused on this topic.

In Istanbul, a case study was conducted at a primary school with a significant immigrant student population, with permission obtained from the Ministry of National Education. Relevant stakeholders at the school (teachers, parents, heads of year, school managers, and the school translator) helped identify existing problems, while experts participating in the research from various fields (e.g., psychologists, sociologists, education specialists, designers, nonprofit leaders) proposed solutions to mitigate this language barrier. A total of 60 individuals officially contributed to this development. The resulting guideline was evaluated with participants from five different schools in Istanbul, and finalised based on their suggestions.

The research findings indicated that language barriers are significant and are linked to several factors, including cultural differences, emotional challenges, and limited access to information. In this context, parents and teachers require not only specific communication tools but also diverse forms of support from the school to overcome these barriers. To address these issues, the researcher developed a guideline for school staff which includes a range of practical recommendations to be applied in Turkish primary schools.

However, certain recommendations extended beyond the immediate school context; hence, the need arose to prepare another guideline for policymakers. Given that policymakers have diverse areas of focus, the researcher provided two guidelines for top officials. One is for the Ministry of the Interior and the Ministry of Family and Social Services, focusing on country-wide implementations. The guideline currently presented is for the Ministry of Education, with a focus on school-related matters.

HOW CAN AUTHORITIES UTILISE THIS RESOURCE?

This guideline is divided into two main sections, as outlined below. The recommendations are presented under each section with bullet points to facilitate more effective use of the guideline.

Part 1. Policies outlining expectations for immigrants in the host country: This section delineates the expected responsibilities and roles of immigrants, and offers policy-level recommendations for enforcing specific obligations.

Part 2. Policies fostering a welcoming environment within the host community: This section provides recommendations aimed at enhancing social cohesion within the country, with the objective of preparing the Turkish community to effectively welcome and integrate future guests.

- Based on official sources, specialized departments have been tasked with addressing the focus of this guideline and are kindly requested to give it further attention. Within the Ministry of Family and Social Services, the **General Directorate of Migration and Social Cohesion** is specifically encouraged to review these recommendations. Similarly, within the Ministry of the Interior, the **Directorate General of Migration Management** is respectfully requested to thoroughly examine the proposed suggestions.

- This document provides key explanations for the two main topics, accompanied by supplementary suggestions. These supplementary suggestions are intended as a source of inspiration, and more contextually appropriate recommendations may be considered for the Turkish context.

- At the end of this material, there is an additional page containing web links to relevant resources, including examples from various countries. These resources are provided for further review and may offer valuable insights that could help mitigate the identified challenges.

- Although this guideline is specifically directed towards certain ministries, successful implementation will necessitate coordinated collaboration across multiple sectors. Therefore, the support of all relevant governmental bodies is crucial and greatly appreciated

- For any inquiries or potential collaboration opportunities, the researcher's contact information can be found on the back cover.

PART 1 –
POLICIES OUTLINING EXPECTATIONS FOR IMMIGRANTS IN THE HOST COUNTRY

Interview findings underscored the need for government-level strategies to foster immigrant parents' engagement in their children's education. Immigrant parents had limited engagement within the school, and this arises from various factors, such as notably financial pressures hindering educational prioritization, differing cultural mindsets, and limited adaptation efforts. The most significant obstacle, however, is the widespread language barrier among long-term immigrant residents in Türkiye, preventing effective communication with schools. This imbalance places undue responsibility on teachers and restricts vital parental interaction. Recognizing the limitations of school staff to resolve this, there is a need for broad strategies extending beyond the education system. The suggestions from participants given below could offer a valuable starting point for developing these crucial policies in collaboration with relevant experts:

'Some immigrants may hold a perspective rooted in the hope of eventual return. This can result in a perceived lack of engagement with the host country'.
A primary teacher, Istanbul

- Revision of Population Planning: Given the observed correlation between immigrant integration and population density, a thorough re-evaluation of population planning strategies is advisable. School administrators have noted that immigrant families often cluster together, limiting their integration with local communities. Conversely, immigrants who reside within predominantly local neighborhoods tend to achieve better proficiency in Turkish. In light of these findings, review of relevant policies / strategies is recommended.

'In this area, our parents can speak Turkish because there is a small number of immigrants around. In schools in high-immigration density areas, parents cannot...'
A primary school manager, Istanbul

- Establishment of clear benchmarks: Strategies could include setting clear benchmarks, such as requiring the attainment of A1 level Turkish. Examining strategies from other nations can provide valuable precedents for developing analogous policies within the country For example, visit - ↗ visit the website for the integration strategies for immigrants in Germany as an example.

'Parents should be obliged to learn the local language. No other solutions can be effective relying solely on teachers' dedication and effort'.
A primary teacher, Istanbul

'A free program is offered to foreign workers in Japan, providing instruction on Japanese culture and language up to a certain proficiency level. Those who obtain the certification typically earn higher salaries in their workplaces compared to those without it.'.
Architect with expertise in Accessibility, Istanbul

- Delivery of further support: When outlining expectations, it is equally important to ensure that the necessary support is provided to enable the fulfilment of these tasks. Such support may take various forms, including material or infrastructural assistance, financial resources, and social or relational support mechanisms.

'A hub-based information desk in each district could serve as a central resource for surrounding schools, providing guidance on processes like acquiring bus passes and enrolling in public courses'.
A primary school manager, Istanbul

PART 2 –
POLICIES FOSTERING A WELCOMING ENVIRONMENT WITHIN THE HOST COMMUNITY

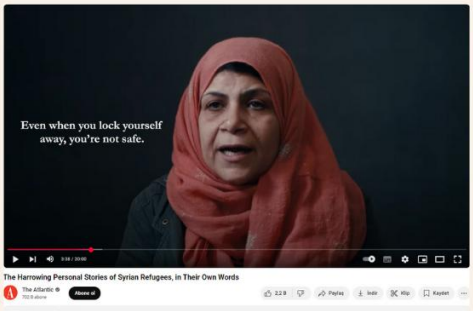
The research findings indicate a salient need for formalised welcoming policies for immigrants in the host country. Data from immigrant respondents reveal heterogeneous experiences, ranging from positive integration, such as welcoming interactions with neighbours, to challenges in establishing social connections. Similarly, school staff observations highlight inconsistencies in local community attitudes, with some individuals demonstrating open and inclusive behaviours, while others exhibit prejudicial tendencies. Consequently, there is a demonstrable need for policies to promote the equitable integration of immigrants into Turkish culture. Such policies could provide both official guidance and a framework for strategies designed to enhance cultural awareness and foster inclusivity among the host population. Insights from expert consultations during the research process given alongside could be leveraged to develop more advanced strategies.

'Teachers are so kind to everyone but they tend to expect similar performances with locals and immigrants'.
A primary head of year, Istanbul

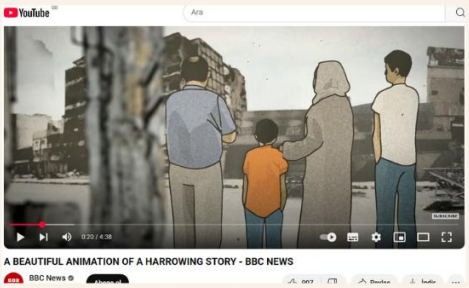
- Seminars for local communities: The research findings underscored the importance of training local communities to adopt a more welcoming attitude towards immigrant families. Within the school domain, a key issue identified was the limited inclusion of stakeholders in critical training opportunities. For instance, seminars hosted in hotels or city centres were typically offered exclusively to school managers. As reported by one school manager, multi-day seminars provided valuable insights into strategies for integrating immigrant students and their families; however, this information was not disseminated to other staff members, such as teachers and heads of year. To ensure broader impact, such educational opportunities could be extended to all relevant stakeholders, following a top-down approach that promotes inclusivity and shared responsibility.

'I wish we had received proper training or a seminar specifically focused on Syrian immigrant students. It would have been valuable to learn in advance how to support them effectively upon their arrival in Turkey'.
A primary teacher, Istanbul

- Use of Storytelling Technique: Immigrants and refugees who have experienced challenging migration journeys may be given the opportunity to share their personal narratives. These stories can serve as powerful tools to foster empathy and mutual understanding within the host society. With appropriate consent and sensitivity, such narratives could be video-recorded and disseminated through various media channels to ensure broad public engagement and to promote a more welcoming and inclusive environment (see relevant video examples).



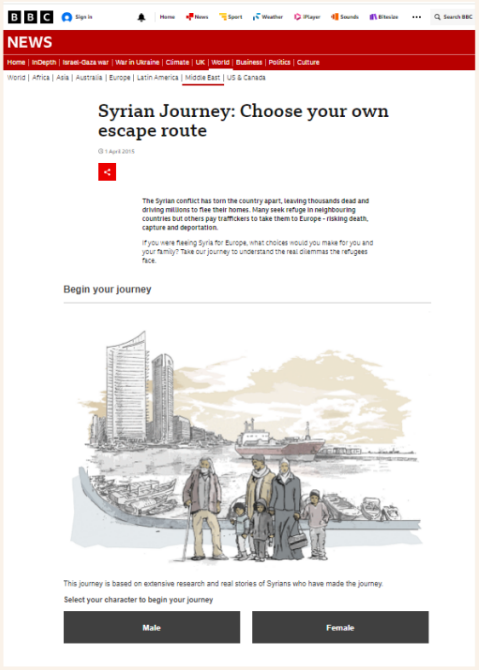
An example of a story telling. The Atlantic, 2017. ↗ The Harrowing Personal Stories of Syrian Refugees, in Their Own Words



An example of a story telling. *BBC News, 2013.* ↗ *A beautiful animation of a harrowing story.*

PART 2 – POLICIES FOSTERING A WELCOMING ENVIRONMENT WITHIN THE HOST COMMUNITY

- Use of gaming technique: This technique enhance awareness and empathy among locals. Through its use, local people are given opportunity to be observe the situation of others via gaming. For example, for refugees fleeing due to war, they are given an option to sink the boat, or they can choose people to survive them and start a good life in a new country - example is provided below:



BBC News, 2015. ↗ Syrian journey: Choose your own escape route.

'We can use gaming at schools; for example, a game could represent each student as a flower. Teachers would then make choices that either help the flowers bloom or cause them to wilt, showing the impact of their actions on their students'.

Designer with expertise in new media communication environments, Istanbul

- Integration of international models and practices: Drawing upon the policy experiences of other countries can inform the development of comparable strategies within the Turkish educational context and on a national scale - ↗ the equality and diversity policies of the UK education can be visited for inspiration.

FURTHER INFORMATION

The supplementary resources listed below may also contribute to addressing challenges encountered within the country.

- ↗ The website presents several projects from various countries focused on social cohesion. These initiatives may serve as sources of inspiration, and some could be adapted to the Turkish context.
- ↗ This website presents refugee adaptation strategies through various social cohesion initiatives. Although these examples are drawn from Germany, some may be applicable for implementation in Türkiye.
- ↗The material provided by the Australian Human Rights Commission outlines strategies for promoting social cohesion. Certain strategies may be adapted and implemented to support similar objectives within the Turkish context.
- Furthermore, two conference papers have emerged from this research and could also be reviewed: ↗ Conference paper 1, ↗ Conference paper 2.

‘If you want a wonderful garden, you need to allow different flowers to flourish and grass as well’.
An Inclusive Design expert, London

7

MEET THE RESEARCHERS

SENA BERKTAS

The researcher

The researcher completed her PhD at Brunel Design School, specialising in Human-Centred Design and Information Design. The material presented here represents a practical contribution to her research project. She has a strong interest in Social Innovation Design and aims to pursue her career in this field by incorporating other design principles as well.

BUSAYAWAN LAM

Principal supervisor

Dr Lam is a Reader and Head of Brunel Design School. She specialises in the areas of New Product Development (NPD) process, Innovation Strategy and Management, and Design Strategy. Her current research interests include co-design, community-led design and social innovation.

GULSEN TORE-YARGIN

Secondary supervisor

Dr. Tore-Yargin is a Senior Lecturer at Brunel Design School. Her current research interests include UX research methods and education and human-centred design in emerging technologies, including conversational agents, sensor-based innovations, smart products, and more.

- Webpage references within the guideline for policy makers (Ministry of Family and Social Services & Ministry of the Interior representatives):

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APPENDIX G. REFERENCES FOR APPENDIX

(Please note: Web links to the referenced guidelines have been omitted here, as they are already included in the relevant sections of the appendix.)

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