



B R U N E L
U N I V E R S I T Y
L O N D O N

**GROUP LEVEL INFLUENCE ON BLOGS' DESIGN
BEHAVIOUR**

**A thesis submitted for the degree of Doctor of
Philosophy**

by

MAIMUNAH BINTI ALI

Brunel Business School

Brunel University

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ABSTRACT

The purpose of this research is twofold. Firstly, this research aims to investigate whether the design preferences of bloggers in selected countries from different cultural backgrounds are influenced by national culture traits. The investigation involves two categories of blogs selected within a country where the bloggers share similar attributes such as language or geographical location. Secondly, simultaneously, this research intends to discover the possibility of the impact of group level influence on design preferences of bloggers who are linked together in a network through bloggers' linkage or blogrolls. To achieve the said purposes, observations on both the global and local blogs of six selected countries are conducted using the content analysis method. This method allows this research to observe web pages and rate design preferences of bloggers via a coding system, similar to the method used to analyse documents or manuscripts to find common themes or keywords. A total of 612 blogs (306 global and 306 local) are observed for a period of nine months to identify cultural traits on design behaviour based on national culture indicators chosen from prominent literatures. To prevent a systematic error, an independent second observer was appointed and the results obtained are compared using a statistical methodology. In addition, translators were also engaged to verify that the translations are of a correct meaning and comprehension since blogs use various national languages on their web pages. The data were statistically tested using SPSS engaging in statistical analysis of frequency table, Cross-Tabulation and cluster analyses and MANOVA. Results shown that design preferences between both the global and local blogs in each country, has significant differences in most of the design indicators chosen. The findings indicate that the national culture influence on design preferences in linked networks of blogs is weakening indicating another type of influence might be in existence. The results also provide evidence that blogs in linked networks are statistically significant as a cluster or a group by themselves and are independent from one cluster to another. The research, however, studies only six countries from six different cultural dimensions. The inclusion of other countries, similar to or different from the countries under investigation, would be an added advantage. Furthermore, the use of only a single type of global blog provider (blogspot.com) in this research could be extended to other global blog providers such as wordpress.com to give fairer coverage of major and popular global blogs as well as providing a wider generalisation effect of the research findings.

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DECLARATION

This is to declare that:

- I am responsible for the work submitted in this thesis.
- This work has been written by me.
- All verbatim extracts have been distinguished and the sources specifically acknowledged.
- During the preparation of this thesis, some papers were prepared as listed below. The remaining parts of the thesis have not yet been published.

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CHAPTER ONE: INTRODUCTION TO THE RESEARCH

1.1 Introduction

The design of the web is a new area of design practice of the last 20 years (MacDonald, 2003). Designing in this new medium can be challenging especially when the medium possesses a more fluid and prominent role in society. It is fluid since it is not a fixed entity but changes with the device by which it is accessed. It may also change as a result of user interaction and with the passing of time. The beauty of the web lies in its dynamisms and interactive function; both contribute to the quality of users' experience. Because of its fluidity, its role as a medium of communication and interaction span far more than the traditional media such as television, telephone and newspaper. Although web design has an approach that is in common with other areas of design, differences inevitably exist in the challenges that web design possesses. Since web design is about creating the interface between people and computer, one of the tasks is to explore the relationship of influential items whose inputs are keys to the design success. These influential items affect design processes and design trends which, in turn, reflect on website usability and accessibility.

MacDonald (2003) notes that in human-computer interaction design; people influence a system to achieve a purpose and feedback is supplied by the system to their users in the form of their success and the new state of the system. The influences include human cognition and emotion, context of use, task analysis, user experience and learn ability, understanding of functions, error feedback and failure recovery. The quality of users experience depends on the quality on interaction design. Poorly designed things undermine people's perceptions of an organisation or the designers. Since interaction design quality shapes effectiveness, and efficiency of all those who use information technology, poor design could distract from function, undermine morale and lead to costly errors. It is valuable to examine the influence people exert on user-interface design and to understand how this influence is interwoven into architecture interface of the World Wide Web.

The element of culture had long been recognised as one of the deciding factors in web design. Scores of researchers and studies provide empirical evidence that people from various nations and ethnicity display different preferences for design of the web in

terms of metaphors, mental models, navigation, interaction and appearance. Singh et al. (2008), Fink and Laupase (2000), Fraternali and Tisi (2008), Cook and Finlayson (2005), Robbins and Stylianou (2002) all conclude that cultural diversity in user interface design has a significant influence on web design perspectives be it consumer or corporate websites, across and within nations, among ethnic groups and among cross-cultural representations. Although culture is one of the influential factors in web design, it entails a substantial contribution to the quality of users' experience. Therefore, it is interesting to know whether culture will also affect the design behaviour of blogs as blogs have different ways of usage by visitors that are distinct from the general web sites.

1.2 The nature and characteristics of blogs

One of the potent drivers of change is technology. Technological advancement, specifically the World Wide Web and Web 2.0, has enabled easier communication among people across the globe, allowing exchanges of potential ideas, goods and services. The advent of Web 2.0 has turned the mass information customer into information producer through participatory applications. The impact of the internet as the most global medium has shaken the traditional distinction and distribution of information. The definition of information has changed in terms of context and dimensions.

Over the last 20 years, cyberspace has enabled a variety of text-based, digital types of communication ranging from chatrooms and multiuser domains to file-sharing networks (Hookway, 2008). The development allows internet users to write, communicate and interact with each other. The latest invention in web-based experience is the blog, with Web 2.0 features. The popularity of blogs has changed the structure of news distribution from radio, television and the press to news originated from websites. As a result, it challenges four components of geo-spatial issues of information, namely source of production, the text itself, the distribution and the audiences (Berger, 2009).

Blogs and their links form a dynamic network. The dynamic characteristics of blogs mesh together the interpretation of transnational, international, local and foreign aspects of information by having numerous sources of production. News can now be produced from anywhere through blogs as any household or individual with computer-mediated

media is a news correspondent and akin to a news producer. The content of the news is not bound by geographical boundaries or national dimensions. News is categorised as homogenous and the content serves worldwide readers irrespective of nation. The global topic has global issues with a variety of stakeholders and characters that have captured the common interests of global communities in matters ranging from the environment to the football news. Blog usage as an information medium signals the change in the distribution of news from the mainstream media to an individual news distributor. Since anyone or any individual with internet access is a distributor, the distribution of news spans across the globe from any internet point, from almost anywhere. The audience who are blogs readers are communities based on shared interest, bound by neither national characteristics nor identities but have common concern and preferences (Berger, 2009). As an information medium, blogs serve as a popular outlet to express opinions and views without fear of censorship. Thus, blogs have become very powerful in shaping influences in social and cultural landscapes.

A computer network links people as well as machines. These connections are recognised as social networks with their own characteristics and features. Although it has unlimited social presence, its online communication has become more important than personal face-to-face communication (Wellman et al., 1996) since computer-supported social networks accomplish more broad and encompassing relationships. A blog is typically a personal online journal that could also function as personal diaries, technical advice columns, chatrooms, celebrity gossip or political commentary. With the increased number of online social communities stimulated by the rise in blogs, the obvious impact would be increased online social interactions among bloggers that lead to the diffusion of ideas, knowledge, experience as well as best practices, fashion and trends on the web. This is because social networks play an important part in the diffusion of information among consumers (Steyer et al., 2006). Thus, blogging serves as a platform to build communities based on shared interests that benefits marketers and educators alike.

The lack of social presence fosters online relationships among members who have diverse social characteristics rather than traditional social networks (Wellman, et al., 1996). The online social networks are complex systems where nodes represent social entities and the links connect the relationships between nodes. All blogs can be seen as

part of a set of communities with characteristics and norms of their own (Albert and Barabasi, 2002). As shown in Figure 1, the nodes and the edges (relationships between blogs) are numerous and highly interconnected.

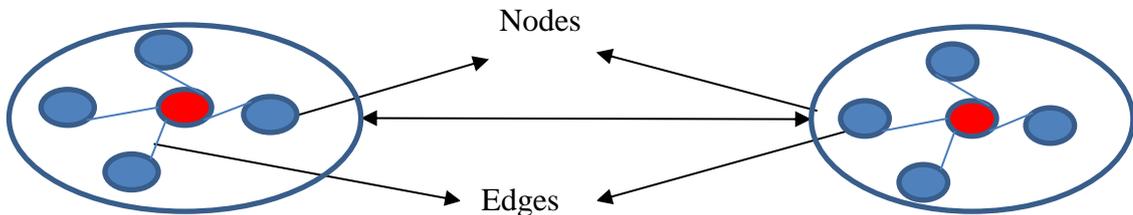


Figure 1: The Nodes and Edges of Blogs

The interpersonal interactions between blogs bring about changes in the social structure, from traditional face-to-face social groups to virtual or online social groups. These virtual communities are ‘imagined communities’ (Anderson, 2006) where members may never meet or even be in proximity to one another, yet in their minds imagine images of their own communities. The communication of virtual communities takes the form of online anonymity rather than face-to-face interactions. The issue of anonymity in interpersonal interactions could amount to possible identity play and deception.

One factor related to anonymity is autonomy (Christopherson, 2007), an opportunity to use new identities or engage in behaviours that go against social norms. Individuals could use their anonymity to become a different person unknown to the person with whom they interact. It leads to a sense of freedom and allows individuals to express unhindered expression of thoughts and feelings to others. Individual spheres in blogging communities have blurred the distinction between private and personal, thus contributing to personal deceptions and identity theft (Youngs, 2009).

Blog is a networked endeavour that relies on hyperlinks (Drezner and Farrell, 2004). The links between blogs include blogrolls, blogposts, citations, comments and trackbacks. The hyperlinks and the page view are two distinct characteristics of blogs that attract traffic and wide readership. Blogposts, articles written on blogs, may contain links to other blogs. Links in posts are not permanent when new posts replace the older one that is archived. Posts may also carry commentary and posts commenting on posts are a form of information exchange in the bloggers community. The

continuing discussion in blogs serves as an echo chamber stemming from the nature of hypertext. On the other hand, links in blogrolls are permanent and much more valuable when linked with a more prominent blog with wide readership (Drezner and Farrell, 2004). Apart from obtaining more useful information from a variety of links, blogs with links to other popular blogs could expect reciprocal linkages from third-party blogs as the edges (relationship between blogs) increase with the greater number of links (Blood, 2004). Wide readership and links in blogs amount to the power of influence in a social network community. The influence manifests itself into political debates and discussions, sways public opinions that could change loyalty and votes, persuades the public to support social movements and initiates point of view to incite tensions and hate.

According to Drezner and Farrell (2004), the network linkage of blogs offers four features that highlight their usage as a highly proficient medium for propaganda. These features are material incentives, personal network ties, expertise and speed. Blogs are often used to distribute free content on the web to maintain traffic. The more free content available, the number of readers expands simultaneously. This expansion in readers allows blogs to capture permanent and loyal readers, at the same time attracting new readers with new issues. Social and professional ties between bloggers, especially established ones are crucial to create trust on blogs. As in other media, blogs are often faced with accuracy with regard to information and participants. Wariness and suspicion would render distrust and failure of relationships. The social ties among bloggers can function to overcome fears by having a focal point, usually a prominent blogger, to publicise posts. The networked structure of blogs allows posts to wend their way to the top of the blogosphere, allowing readers to obtain statistics on the distribution of opinions. Therefore, blogs affect public debates by providing public readers with content and commentary on posts as well as collective coverage on participants.

Bloggers can be experts on substantive issues. They could serve as owners of local knowledge on current events or be highly skilled in the use of the internet to mobilise various movements such as boycotts, protests, donations and demonstrations. Blogs that specialise in certain issues will reduce search costs in acquiring information on specific topics that are of interest to the general public as well as interested individuals. In addition, blogs could be used to formulate opinions and discourses. The speed with

which bloggers post their responses and reactions to occurring events is an advantage compared to other forms of media. The rapid responses of bloggers could be completed on real-time basis and at a relatively low publication cost.

The rapid and dynamic characteristic of blogs, combined with elements from the freedom of speech, could generate disagreement and consensus on matters related to cyber hate and transgression if the mobilising structures working in a larger context at a global scale. Issues of cyber-terrorism and web-based hate involving harassment, bullying, discrimination and other degrading treatment of people are being communicated through hate related messages via online communities and networks. Although the law has been considered as a strategy to maintain order within cyber domains, geographic boundaries and physical space sometimes remain a barrier since cyberspace is an abstract phenomenon, not a physical place. The conflicts and dilemmas concerning the legal landscape are not easily solved as cases involve different countries, cultures and policies.

1.3 General web sites and blogs: Differences in usage and social application

Web sites are collections of one or more web pages that share some common theme or organising principle (Koehler, 1999). The components web pages of a web site are connected through hypertext links and the individual web pages maybe part of other web sites. In addition, these individual web pages may also be authored by others and are hosted on any number of servers. Based on this definition, blogs are similar to web sites since blogs often are long web pages that are partitioned into archives with links to other blogs on the web (Cohen and Krishnamurthy, 2006). In practice however, blogs are writings about a variety of topics that are typically updated on a much more regular basis than web sites. Different from web sites that are maintained on individual sites owned by individual or corporate users, blogs are hosted on content hosting sites that provide the space and software to maintain blogs and to generate indices and blogrolls. According to Cohen and Krishnamurthy (2006), a blog typically consists of text paragraphs with embedded internal and external links, images, archives and a set of reverse pointers to the blog itself made by other blogs, while web sites on the other hand only have a single point entry. One distinct key difference between the general web sites and blogs is the constant updating of the blog content as well the links to the other blogs that are themselves changing.

There are several distinct characteristics of blogs that distinguish them from the general web sites. Firstly, blogs are designed to allow comments on the content. The multiplicity of comments and links to new issue within blogs pages has turned the web into a two or multi-way medium of interaction. Comments feature of blogs allow readers and blogs owners to interact with each other compared to the prevalent “written by one and read by many” feature of general web sites. Unlike other web sites, blogs have referrer links which is a common blog phenomenon. A referrer link is the URL of a web page from which a link was accessed; another feature of blog that allows blogs authors to find new issues related to the news that are interested in either in blogs that are related to their own or blogs that have commented on or linked to their blogs. Secondly, a blog is a single page site similar to the format and structure of web sites. However, earlier blog entries could be archived and could be accessed from the main entry point page through linkages. The nature, number and quality of links from blogs differ from the ordinary web pages. This has enable blogs to improve its quality and richness over time since blogs are read by many readers, some of whom correspond to the authors of blogs through related links. These links that originated from blogs served as sources of communication and information that contributed toward frequent updates in blogs that are higher than typical web pages. A fraction of the links in blogs is to other blogs thus, creating a close-knit community (Cohen and Krishnamurthy, 2006). There are also links to external sites that are non-blogs, served as deeper links to specific aspect that is covered inside a site such as specific issues under discussion in news sites. Thirdly, blogs often discussed personal views and acted as discussion groups on selected topic of interest like politics, sports, parenting, etc. The whole content of blogs is virtually authored by a single author or a small group of people leading to consistency of style, appearance and quality of blogs (Cohen and Krishnamurthy, 2006) compared to web pages on general web sites. The social presence and interaction between the authors of blogs and their readers in that close-knit community may affect the style, appearance and format causing considerable uniformity to a blog’s appearance and in user’s navigation experience.

1.4 The impact of social interaction on bloggers

Face-to-face conversations represent a fundamental case of social interactions as the most natural, enjoyable and effective way to fulfil social needs (Gatica-Perez, 2009).

The increased use of computer-mediated communication tools however, has opened the doors to a number of relevant applications that support interaction and communication including training and educational tools and systems to support group collaboration through the analysis and interpretation of social behaviour. The study of social interactions according to Davis et al. (1976), is typically focused with a single individual as the unit of analysis. Therefore, group behaviour according to the authors has come to mean, largely by exclusion, the relatively free interaction of two or more actual persons. This is because according to Chiu (2000), individual actions help constitute social interactions. An analysis of individual actions could explain the simultaneous functions of a single behaviour. Chiu (2000) argued that a single individual action could perform multiple functions to satisfy multiple goals simultaneously. Thus, the impact of social interactions on bloggers will be discussed at two levels; individual and group levels impact.

The individual actions according to Chiu (2000) have three dimensions: evaluation of the previous action, knowledge content and invitational form. The evaluation of the previous action as the first dimension, show how the current speaker assesses the previous action and current task in one of three ways: supportive, critical and unresponsive. The knowledge content dimension on the other hand, characterises the problem knowledge during the interaction and involves at least three possibilities: contribution, repetition and null content. The dimension of invitation to participate however encourages participation from the audience to different degrees. It also includes at least three possibilities: statements, questions and commands. These dimensions according to Chiu (2000) capture the simultaneous multiple effects of an individual action that theoretical constructs such as roles and strategies could not capture. By capturing how individual actions cover multiple roles and strategies, group collaboration and progress could be examined and discussed through interactive social interactions. The summary of the relationships between collaboration roles, strategies and individual actions is shown in Table 1.1.

Table 1. 1: Relationships between collaboration roles, strategies and individual actions

Role	Strategy	Individual Action
Facilitator	Invite participation	Question Command
	Monitor progress	Supportive evaluation Critical evaluation`
	Softening criticism	Critical question

	Balance support and criticism	Adjacent supportive and Critical evaluations
Proposal	New idea	Contribution
Supporter	Show benefits Elaborate idea	Supportive contribution Supportive contribution
Critic	Show flaws Alternative idea	Critical contribution Critical contribution
Recorder	Summarise	Supportive repetitions

Source: Chiu (2000), pp. 36

In short, Chiu (2000) argued that in a social interaction setting, individuals play several roles and use several strategies in the accordance to the roles that an individual assumed at any one time. As a result, the impact of the role and strategies that the individuals assumed during the interactions are shown in the individual actions. These impacts of social interactions are manifested in various individuals' behaviour such as posing questions, issuing command, provide supportive and critical evaluation as well as providing supportive and critical contribution. The roles that an individual partakes are facilitator, proposal, supporter, critic and recorder. As a facilitator for example, an individual uses strategies such as inviting participation, monitoring the progress of the interactions between him or her and other individuals in the same setting, softening criticism that arises during the interactions and providing a balance support to other members in the similar social interaction group. Similarly, individual bloggers in a blogging community assume several roles and use various strategies to suit the roles that they play in the group. Consequently, their individual behaviours in the blogging group would follow closely their assumed roles in participating, monitoring, evaluating and contributing toward collaborating in the interactions within members of the blogging group.

However, there are different ways in which individuals interact within a group as argued by Stodolsky (1984). According to him, people in a group could work independently, provide information to each other, explain ideas or can be completely cooperative. The degree of cooperation between people in the group on the other hand, predicts specific group behaviours (Chiu, 2000) and can organise social interaction group. In a cooperative group, a person could address a specific target audience while cooperative audiences listen attentively and respond when appropriate. In contrast, an independent group may have a speaker who speaks to no one in particular while the audiences may

ignore the speaker or interrupt the speech with unrelated ideas. However, the nature of the relationship of the individual to the group needs to be explained.

Mead (1934), Sherif (1936), Asch (1952) and Lewin (1952) have insisted on the reality and distinctiveness of social group. These scholars believe that groups have unique properties that emerge out of the network of relations between the individual members. Asch (1952) describes this phenomenon as *“We need a way of understanding group process that retains the prime reality of individual and group, the two permanent poles of all social processes. We need to see group forces arising out of the actions of individuals and individuals whose actions are a function of the group forces that they themselves (or others) have brought into existence”* (pp. 251). Both Asch (1952) and Sherif (1936) assert that the reality of groups emerges out of people’s common perceptions of themselves as members of the same social unit, and in various relations to one another within that social unit. The perceptions are associated with various group products such as slogan, norms and values (Brown, 2000) and in turn, these products can become internalised and serve to guide people’s behaviour. Sherif (1966) endorses the concept of group by saying *“We cannot do justice to events by extrapolating uncritically from man’s feelings, attitudes, and behaviour when he is in a state of isolation to his behaviour when acting as a member of the group. Being a member of a group and behaving as a member of a group have psychological consequences. There are consequences even when the other members are not immediately present”* (pp. 8-9).

Tajfel (1978) stresses the need to distinguish interpersonal behaviour from behaviour in group settings. According to him, group behaviour is typically homogenous or uniform while interpersonal behaviour shows the normal range of individual differences. Tajfel (1978) also argues that social behaviour is lying on a continuum where at one end of social interaction, the behaviour of an individual is more decided by personal characteristics and interpersonal relationships. At the other end however, an individual behaviour becomes homogenous through social interactions determined by membership of various groups and relations between them. Turner (1982) suggests that the switching behaviour is governed by changes in self-concept where changes occur in the way people view themselves. He argues that the self-concept comprises of two components and they are personal identity and social identity. Personal identity according to Turner (1982) refers to self-descriptions in terms of personalistic characteristics such as “I am a

friendly person”. Social identity however, is denoted in terms of category memberships such as “I am a Manchester United fan”. The idea of belonging to a group he argued, forms part of people’s identity and the interactions between members of a group bring about uniformity in their attitudes and behaviour. Turner (1982) suggests the reason behind the uniformity in behaviour and attitudes of members in a group occurs when individuals define themselves as a member of a particular group and associate themselves with various common attributes and norms that are part and parcel of that particular group. Hence, the attitudes and actions of the members of a group take on the uniformity that is so characteristic of group settings.

Bloggers when identify themselves as a group would follow the similar pattern. The uniformity of their behaviours can be seen in the topics of interest, designs on blogs pages as well as links to other blogs that are similar in characteristics with them. In addition, Dholakia et al. (2004) study on social influence model of consumers in virtual communities found a significant direct relationship between group norms and we-intention to engage in joint behavioural action, such as a blogger posts blog entries and readers respond. As observed by Moon et al. (2006), social interactions through blog and its enjoyment could lead to the development of strong virtual social identity. The resulting identity is expected to lead to a strong intention to expand participants’ online social network and increase satisfaction with their life. The sense of sharing among member bloggers in a virtual community is in line with findings of Bagozzi (2007), Dholakia et al. (2004), Postmes (2001) that members of virtual communities tend to share sense of belonging, values and preferences among each other. The blogger-to-blogger communication is influential in shaping opinions and behaviours (Bagozzi et al., 2002) such that member bloggers in a same network have influence on design elements preferences in blogs. Indeed, Bagozzi et al. (2002) suggests groups that are formed through identification are very influential in shaping and changing members’ opinion, preferences and actions. This coincides with members identified with certain network in terms of blogging and membership.

To conclude, it is possible to conceive that social behaviour of an individual lies on a continuum from interpersonal settings to group settings. Underlying this continuum is a transition of psychological functioning from personal to social identity processes as a result of social interactions with other people in the group that an individual perceived

he or she belongs to. The change from personal to social identity occur when an individual's identity as a group member become more important and at the same time he or she personal identity as a unique individual become less so. Social interactions bring about the identity change resulting in the uniformity of behaviours and collective attitudes of members within a group. Bloggers in online communities behave similarly through uniform designs and collective interests, portraying blogging groups with members of similar characteristics and features.

1.5 Blogging group and culture

Culture could mean different things to different people looking from the context of use. Literally, culture means the way of life that is shared by a group of people. According to UNESCO, culture refers to;

“that complex whole which includes knowledge, beliefs, arts, morals, laws, customs, and any other capabilities and habits acquired by [a human] as a member of society”
(www.unesco.org)

Culture manifests itself in the forms of heroes, symbols, rituals, linguistics, values, arts, beliefs, attitudes and norms. The most common way in which culture are disseminated and influenced are through social influence and interactions (Axelrod, 1997, pp. 203). Castells (2001) concludes that since technological systems are socially produced, the social production influences and shapes the medium culture and its users. In fact, Castells (2001) argues that the internet culture is collectively constructed and the process transcends individual preferences as well influencing the practices of people in the culture. Hofstede (1994) uses the word ‘culture’ as “the collective programming of of the mind which distinguishes the members of one category of people from another”. The category of people according to him can be a nation, region, ethnic group, women versus men, old versus young, a social class, a profession or occupation, a type of business, a work organisation or even a family. Culture can be identified through several key indicators. They are:

(i) Vocabulary

Vocabularies are words group members use that are unique to the group. By studying the vocabulary people in a group use, it is sometimes possible to determine who is part of the group, who isn't, who is new to the group, and who the "old-timers" are.

(ii) Practices

Practices involve unique group processes. For example, the group may have written documents that detail meeting procedures, yet meetings may not follow those guidelines. Practices are how group members go about accomplishing their tasks.

(iii) Stories

Stories are narratives group members tell about the group. Stories often convey the group's values, priorities, power distribution, and member relationships. Stories often have a moral, although the moral may not be explicitly stated. Stories told to newcomers often let the rookie know how group members are supposed to interact and accomplish their tasks.

(iv) Metaphors

Metaphors deal with the way group members relate unfamiliar things to things they are all familiar with in order to describe an idea or experience. Metaphors are often implied rather than stated explicitly. For example, group members may say, "We hit some bumps in the road at first, but we finally found the right road." This suggests that the group process is an excursion or automobile drive.

(v) Rituals

Rituals provide structure for group work. Rituals include group customs, daily activities that group members perform regularly, and ceremonies, infrequent activities that mark a particular occasion. For example, groups may have parties for members who leave the group.

(vi) Objects

Objects are nonverbal symbols that represent key aspects of the group. Logos or emblems are good examples of objects that reflect the culture of a group.

(vii) Values and beliefs

Culture no longer fits into the neat boundaries it once did, when a culture's parameters were defined by a particular nation-state. The Internet and World Wide Web changed the dynamics of culture. Our ability to connect with others around the world makes the

geographical borders traditionally associated with culture all but irrelevant. As our everyday lives have changed due to new communication technologies, culture and what constitutes culture have changed as well. Thus, it is less useful to identify culture based on physical location, and more useful to identify culture based on shared values, beliefs, and ways of understanding the world.

Literally, group means a wide range of different collections of people. Buchanan and Huczynski (1997) however differentiate between aggregates of people and psychological group. They defined psychological group as any number of people who interact with each other, are psychologically aware of each other and perceive themselves to be in a group. An aggregate of people on the other hand, is a collection of unrelated people who happen to be in close proximity for a short period of time. Pennington (2002) argues that one of the important features of a psychological group is the interaction between members of the group, where the interaction may be face-to-face, through tele-conferencing with a video link or through other electronic means such as email, blogs and social networks. A more subjective definition of group is by Turner (1982) where according to him, a group exists when “*two or more individuals ...perceive themselves to be members of the same social category*” (pp. 15). However, Brown (2000) argues that groups need to also be considered in relation to other groups not just as systems in their own right. He defines group as “*a group exists when two or more people define themselves as members of it and when its existence is recognised by at least one other*” (pp. 3).

According to Pennington (2000), group is divided into two types: formal and informal groups. Formal groups are created by an organisation, set with organisational task and are held responsible for their achievements. Their purpose of existence is to help an organisation achieve its collective purpose or mission. Therefore, formal groups tend to be task-oriented, endure over time, have a formal structure and are recognised as a defined group within the structure of an organisation. Relatively, informal group are collections of individuals who have a common interest and develop interdependencies, influence each other's behaviours and contribute to mutual need satisfaction (Buchanan and Huczynski, 1997). This form of group is developed and exists to fulfil the personal needs of individuals such as belongingness, good social relationships, sharing common

interest (Pennington, 2002). Based on the above definition, blogs can be considered as a psychological informal group.

Groups tend to develop their own culture over time, based on knowledge, beliefs, practices and behaviours their members hold in common. Awareness of shared culture builds trust, cohesion, and a sense of safety among the members, thus furthering collaboration. However, group cultures are a different phenomenon from national cultures. Hofstede (1994) states the reason for this being that membership of a group is usually partial and voluntary while membership of a nation is permanent and involuntary. Hofstede (1991) argued that national cultural differences are composed primarily of differences in values while group cultures differ mostly at the level of more superficial practices such as symbols, heroes and rituals. This is because according to him, values are more important than practices in the higher-level cultures (national), and practices and norms dominate the lower level of cultures (group). Therefore, the cultures of group can be managed by changing practices. Values however, cannot be changed since the values are acquired since childhood.

National culture according to Hofstede (1984) is the level of culture shared between people in a society or a country. The notion of national culture in Hofstede's literatures is territorially unique. By definition, it culturally distinguishes the members of one nation from the other. Although the population of a nation can be differentiated on many grounds, Hofstede claims that regardless of these divisions, every national population shares a unique culture. By the term national culture, Hofstede takes into consideration the culture of a country or a state and not necessarily of a nation or ethnicity. He relies on two notions of national cultural sharedness. First, it refers to the common traits of the inhabitants of a particular nation (1991) and secondly, he characterises the sharedness of national culture as the 'national norm' (1980) or 'central tendency' (1991). In addition, Adler (1997) defines national culture as the culture that a society shares such as a set of core values, norms and practices, which shapes the behaviour of individuals within the society as well as the whole society. Therefore, it is assumed that national culture is homogenous, has the physical boundaries of nation-states and is distinct from one nation-state to the other.

Blog, as the new medium genre, has its own characteristics as a group and has its own culture. As each node acts as a position of speech, it changes the production, storage and retrieval of cultural objects. Every point in the web transaction is simultaneously a consumer and producer of culture making cultural objects easy to alter, produce and disseminate. The ownership and the stakeholders in this global media are changing the character of culture from ordinary folklore to culture based on economic interests. Cultural symbols are promoted over the media not for the sole purpose of nurturing the sense of belonging and interconnection, but for commercial and money-making exploitation (Poster, 2008). Since national boundaries appear to be invisible in the internet, the control over cultural objects and dissemination of cultural content are issues that remain in question. Poster (2008) argues that although blogs as the global media lend themselves to global cultural dissemination, blogs serve as a doubled media that not only allows greater freedom to individuals and groups but greater control over it is exerted by dominant institutions to influence global political culture.

The use of digital technology in blogs changes the ownership structure of global culture. The shift from analogue to digital technology changes the format of cultural production and storage from papers to computers. Paper format encourages originality, protects the position of the author and distinguishes the role between the producer and the consumer of culture. Since paper prevents alteration once the contents are produced, cultural objects are effectively stored and are not easily altered by the consumer of culture. Digital format has a material support that unifies the production and storage of culture. Instead of papers, digital uses computer codes and binary forms of cultural restoration. The medium plays a bigger role in defining the material nature in digital technology. Digital technology provides liquidity and fluidity to cultural objects in terms of text, images and sounds. Since cultural objects are stored in binary form and in any computer, users and consumers of culture are able to alter, use, copy, store and distribute the content, the images and the sound aspects of cultural objects. The hypertext and the hyperlink features of blogs encourage new cultural practices and new cultural objects to be produced and distributed in new ways. Cultural production and storage has shifted from elite to a mass production system where the existence of numerous producers and consumers has taken the place of one author and few consumers of culture. The mass production and distribution of cultural practices increase the diversity instead of homogenisation of culture. This is due to the rise in the

diversity of languages used, the integration of various cultures into hybrids, rising new cultures among subgroups and problems of translating and transcoding (Poster, 2008). The diversification of culture transforms every cultural object into a global context. The multicentre nature of culture, made possible by blogs, challenges the demarcation and the distinction between the First World, the Third World, the imperial and the colonials since the voices, the practitioners and inventors of culture span across the globe. This new form of culture may or may not be in conflict with the national and ethnic cultures in existence but it is certainly different from them.

Culture plays an influential role in the design behaviour of ordinary web sites. Previous hypotheses on web design behaviour adopt the Hofstede's theory of culture that consists of five dimensions; Power Distance, Individualism versus Collectivism, Masculinity versus Femininity, Uncertainty Avoidance and Time Orientation. Previous studies on the effect of national culture on design behaviour use various arguments to support their hypotheses on the influence of national traits on design features. Marcus and Gould (2001) argue that the Individualism versus Collectivism dimension reflects culture on a bipolar continuum. Individualism is define as "a situation where people are suppose to look after themselves and their immediate family only" while Collectivism is define as "a situation where people belong to in-groups or collectivities which are supposed to look after them in exchange for loyalty". The basic anthropological or societal issue is the individual's dependence on the group versus his or her self-concept (I versus we). In the individualism versus collectivism segment, metaphors used should represent the orientation and approach taken from the perspective of either self-interest or consideration of others.

The navigational aspect of design should provide links and paths that correspond accordingly to either tool-oriented or people-oriented approaches. The visual would use images, icons that show the symbolic presentation of the indicated approach. The language, terminology, content grouping and organisation would also form part of the information design markers associated with individualism or collectivism cultural approach. Uncertainty Avoidance is defined as "the extent to which people feel threatened by ambiguous situation and have created beliefs and institutions to avoid this" (Singh et al., 2003). The relative basic anthropological or societal issue is the way a society deals with conflicts and aggression. The indicators chosen in uncertainty

avoidance would involve items that deal with familiarity, risk-taking and stability. The metaphors associated with the navigational aspect of design would show links that involve options, control and simplicity. The content segment involves information that deals with consistency, complexity and ambiguity while the layout component would depict items that show the level of familiarity. Hall (2000) proposed a cultural framework that states all cultures can be situated in relation to one another by the styles in which that culture communicated. In cultures such as the German, Swiss and Scandinavian where communication occurred predominantly through explicit manners as in texts and speeches, the categorisation given is Low Context culture. On the other hand, cultures like Japan and China where messages include cues like body language and the use of silence, this form of culture is called High Context. Essentially, Low Context culture involves explicit messages and information that are clearly directed to audience. High Context culture however, involves implicit communication implying a message that is not uttered, situation behaviour and para-verbal cues (Wurtz, 2005). In the general web sites, the role of culture tends to be the deciding and influential factor that determined design preferences in accordance to the cultural background of the author.

Culture however, has a different role in blogging. Instead of functioning as the influential factor, culture evolves along with blogging technology to change practices and preferences (Graves 2007). As technology evolves in blogging, human communication influence affairs in design preferences to suit the nature and characteristics of blogs interaction. Sociologist studies on the motivation factor for blogging however, suggest that bloggers' motivation could be caused by various reasons and perspectives. Nardi et al. (2004) found that among the underlying factors for blogging is the activity is seen as a form of social activity. Bloggers create posting and the readers responded to the postings which created more correspondents and communications. Blog is also viewed as a medium of communication between a blogger and an audience (Grumbrecht, 2004). In addition, Schiano et al. (2004) found that apart from the purpose of communication, blogs are also used for five other activities such as maintaining online personal journal, conveying and convincing others about one's opinion, expressing emotions, developing one's thinking process and to build an online community. The needs for self-expression and the quest for socialisation have been repeatedly identified as the important motivation for blogging (Trammell et al., 2006).

To enable the self expression and the socialisation processes to run smoothly, features of design that allow the communication to take place should be made easy and user-friendly. To encourage public spheres engagements, blogs design should facilitate the ease of authoring and potential access to audiences and thereby encourage design menu that are opened to individuals to communicate their opinions and observe other voices and thoughts of other individuals. As the main motivation factor for blogging is communication, accessibility of information in blogs postings to audiences is of most important. As bloggers communicated among them and their diverse engagements with readers, the existence of public spheres would encourage bloggers to choose design that carry easy access to information and conduct interactions smoothly.

In addition, computer-mediated communication in blogs tends to be impersonal where information are depersonalise to encourage feedback and uninhibited messages. Social standards will be less important and communication will be more impersonal and free due to rapid exchange of information and the absence of rules governing social interactions (Kiesler et al., 1984). Thus, attention is redirected away from individuals toward the information itself. Traditional social structure provided by roles and status are made salient by communication including non-verbal involvement (Patterson, 1982). Computer-mediated groups however, diminished and unstable role differentiation in groups. Studies on group processes found that tasks requiring dependence on interpersonal or interparty considerations interacted strongly with media (Morley and Stephenson, 1970) and frequency of equal participation is much higher in electronic media than in face-to-face mode (Krueger, 1976). Williams (1977) observed that communication through computer-mediated form was both egalitarian and disorganised.

Similarly, blogs provide bloggers with anonymity that they may incline toward the self that they do not openly exhibit in real life. The identities and the roles that they projected online would be blurred through their expression of virtual identities that might be different from the identities that they assumed in the real world. The formation of blogger virtual identities showed that individuals possessed various roles in life and is likely to extend these roles into the virtual world manifested through their blogs (Wee-Kek and Hock-Hai, 2009). Stryker (1980) noted that one's identity could be perceived as the expressive behaviour of an individual's role in society. Furthermore, an

individual's identity is a collection of socially accepted behaviour that arises from the role an individual occupied in the society. Given that there is a reciprocal link between an individual and the society, an individual's identity is likely to affect a person social behaviour (Hogg et al., 1995). The individual behaviour however, is affected by the social structure and culture in the society. Since blogs and computer-mediated-communication are basically not organised around social structure, roles based on gender, occupation and position as well as culture are not prominent among members in the virtual world (Stryker, 1980). Therefore, design behaviour as the self-expression of individual's traditional culture will not be exhibited in groups using blogs as a medium of communication. On the other hand, the psychology of blogging are found to transform some of the traditional cultural norms (Gurak and Antonijevic, 2008) blurring between the private and public domain (Youngs, 2009). In return, the design features chosen in blogs are those that illustrate the human desire for communication in terms of expressing one's identity, creating a community and to structure the past and present experiences combined with the technological features of blogging like speed, accessibility, anonymity, interactive, broadband and wide user base (Gurak and Antonijevic, 2008). The design choices therefore, are influenced from within the blogging community rather than national cultural background of the author.

Friedkin and Cook (1990) discuss on the theory of social influence and how a network of interpersonal influence enters into the process of opinion formation. Social influence refers to actions and communications made by individuals or groups that change the beliefs, attitudes, values or behaviours of others (Pennington, 2000). Individuals who interact in groups often try to influence and change the attitudes, views and of others in the group. The reason is these individuals wish to arrive at a consensus, group view or decision. According to Friedkin and Cook (1990), network models of social influence are based on episodes of dyadic interaction. They argued that individuals' opinions are influenced by the opinions of others. Thus, researchers on social psychology tend to estimate the impact of the influence on two levels: interpersonal and group levels. Interpersonal refers to individual influences (blogger to blogger) in a group and the influences depend on the social structure of the group (Sih et al., 2009). This is because social structure quantifies the pattern of interactions and relationships among individuals in a social group (Hinde, 1976). Sih et al. (2009) argued that an individual's social network position can have important effects on social dynamics, individual

fitness and group function. Therefore, individual influences on members of the group vary according to the four general aspects of social network structure (Sih et al., 2009) as follows: (i) The differences in individuals' social experiences; (ii) Indirect connections that the individuals have are important; (iii) The levels of individuals importance in the social network; and (iv) Social network connections in one context influence the social dynamics in other context.

Group level influences (several bloggers to a blogger) compose of several types of influence that carries impact on group members. Social influence in a group may be achieved through majority and minority influences (Pennington, 2000). When the majority influence prevails, members of the group conform to the group norms and thus, it is also called normative influence. This occurs when there is a pressure on dissenting individuals in the group to conform to the views of others to avoid conflict. Minority influence may happen as a result of informational influence, where individuals in a group change their views as a result of new or different information made known to them. This study however, would focus on the social influence in a group that produces uniformity in the behaviour of members in online groups and ignore the interpersonal influences of individuals in group. The reason mainly is to study the cultural conformity on design behaviour that produces commonality at group level rather than studying each individual bloggers influence on others.

1.6 Research Formulation

The research is formulated in line with the intention to add knowledge on the effect and influence of the type of culture on the design elements of blogs. The motivation is to fill the gap in the literatures as to identify if group culture has stronger impact on design preferences of blogs compared to national culture elements. To do so, Hofstede's theory on national culture is challenged by assessing design elements on blogs and investigating the design differences across culture in six countries.

1.7 Research Design

1.7.1 Research Motivation and Justification

For the last decade, cultural influence on web design has captured the interest of many researchers in the field of information systems (Ning Shen and Khalifa, 2007). However, the studies have mainly been focusing on finding cultural traits in static web sites (so

called Web1.0) in different countries (Fink and Laupase, 2000; Singh, Zhao and Hu, 2003; Park, 2004; Marcus and Alexander, 2007). Most IS research assumes that an individual living in a particular place belongs to a single culture where the culture is classified as national (Straub et al., 2002). Thus, the design behaviour of most web sites in a particular country or nation would follow the single cultural traits identified with the particular nation.

However, Straub et al. (2002) suggest that an individual's social identity represents a cumulation of cultures across the boundaries of nations, organisations and professions which combine together to create one's overall culture. At any particular time, an individual behaviour is a result of national, group and other sub-culture levels of influence (McSweeney, 2002). The ways different levels of culture make an impact on individual behaviour are different from each other. McSweeney (2002) concludes that within and outside the management disciplines, characteristics of individuals, organisations, societies, nations and regions have high considerations and influence on individual behaviour complexity and variability. This is consistent with the social psychology approach on its subject matter i.e. social behaviour. According to Abrams and Hogg (2004), social behaviour can be explained in terms of various theories. They are theories of individual cognition, social interaction, group and intergroup processes and social structure. The central idea of social behaviour is that both behaviour and identity could exist side by side with unique and personal aspects at one end, and extremely common and collective aspects at the other end. Such is true with personal blogs which are unique to individual bloggers.

Blogs are individually owned and maintained. Unlike other static web pages that have limitation in supporting interactions among users, blogs are online groups where new relationships are developed, sustained and strengthened through communication and social involvement (Ali-Hasan and Adamic, 2007). In addition, Bagozzi et al. (2007) and Dholakia et al. (2004) found that members of virtual communities tend to share sense of belonging, values and preferences. The blogger-to-blogger communication is influential in shaping opinions and behaviours. This coincides with Mead's (1953) definition of culture as a "shared pattern of behaviour" which implies that culture is a group level construct; an indicator between the individual personality and human nature. Therefore, blogs are one of the groups apart from societies, organisations and professions

that could be considered to have their own cultures. Karahanna et al. (2005) theorise that the relative influence of the different levels of culture on individual behaviour varies depending on the nature of behaviour under investigation. Values and behaviours combined with other influences form the culture of people in a particular country (Fink and Laupase, 2000). Sun (2001) found that culture is an important design consideration that increases usability of multilingual web sites. Although culture on its own is a determinant of web design variations and preferences (Marcus, 2001), the question arises whether the attitudes and preferences towards the perceptions of personal blog design could be attributed to group culture. The blog as a medium of interaction is also a group with its own characteristics and the issue is whether **blogs as clusters show similar design behaviours and share similar design characteristics to each other.**

1.7.2 Research Question

This research has been formulated to provide an answer to one main research question:

“Does group culture have stronger impact on design preferences than national culture in a linked network of blogs?” With the following sub-questions:

- Do national cultural elements influence design preferences of bloggers in linked networks of blogs?
- Does group influence reflects in similar design preferences among bloggers within each network?
- Does group coherence reflects in the design differences between networks?

1.7.3 Research Aim and Objectives

The aim of this research is **“to examine the design preferences of bloggers in a linked network of blogs focusing on the influence of national and group culture on design behaviour”** with the following objectives:

- (i) To investigate and evaluate design preferences on two categories of blogs, global and local blogs, according to countries.
- (ii) To conduct a comparative analysis on blog design preferences between countries based on the selected sample.
- (iii) To conduct a cultural analysis on blog design preferences across countries using cultural indicators.
- (iv) To conduct a statistical analysis on blog design preferences to verify similarities and differences based on country analysis.

1.8 The Significance and Impact of Research

Culture entails a substantial contribution to the quality of users' experience. Since The population of bloggers span across the globe, culturally influenced design features would attract users from different cultural backgrounds. Local and global blog hosting providers should tune their services to cater for these different cultural design features of the web. Design patterns would comprehend elements that appeal to customers across cultures and fit with functions that enable consumers to share information or participate online regarding buying patterns and habits. Websites with design elements that balance the needs of both social and cultural characteristics would be of added value to both the marketers and the online consumer. The research could be adopted and applied as follows:

1.8.1 To the Academic Community

The element of culture had long been recognised as one of the deciding factors in web design. Scores of researchers and studies provide empirical evidence that people from various nations and ethnicities display different preferences for design of the web in terms of metaphors, mental models, navigation, interaction and appearance. The idea that cultural and social factors influence web design could be helpful to researchers in enriching the perspective of design that could either be culturally bound or transcend across culture over to the world of social online groups; a prospect that will have a large impact on the quality of user experience and interaction. As more products will have digital components and since users largely determine the demand and the market prospect of product, knowledge on the elements of design practices of the web would provide insights into design preferences of individuals.

1.8.2 Blog Hosting Services

It allows web designers greater understanding of how people's influence is interwoven into web interface design by highlighting the very nature of that influence on design practices. Well designed interfaces improve the performance and appeal of the web, converting visitors to customers or members. Cultural diversity in user interface design has a significant influence on web design perspectives be it consumer or corporate websites, across and within nations, among ethnic groups and among cross-cultural representations. Although culture is one of the influential factors in web design, it entails a substantial contribution to the quality of users' experience. Local and global

blog hosting providers should tune their services to cater for these different cultural design features of the web.

1.8.3 Online Advertisers

Blogging on its own is powerful in brand-building and serves as a connecting link between producers and customers. Blogging helps web users to speak on the latest events, product launches in the business community and build trust in the user community. Blogging is also a very effective, affordable way for small and medium sized businesses to communicate information, news, offers, and updates to their customers. The blogging network allows the addition of multiple users, so more than one person can add entries. This is ideal for businesses with more than one department. Many businesses use their blogs to write about their brand, provide greater detail and tips, and to give in-depth views of their products, services and company philosophies. Passworded areas can also be set up on the blog for internal company communications. Blogs are easy to update and can often be more effective than email marketing, particularly if readers can subscribe to the blog's feed.

On the other hand, for marketers targeting opportunities on online networking sites, be it commercial or personal, design apprehension must be attractive enough to create customer loyalty and repeat buying. Design patterns would comprehend elements that appeal to customers across cultures and fit with functions that enable consumer to share information or participate online regarding buying patterns and habits. Websites with design elements that balance the needs of both social and cultural characteristics would be of added value to both the marketers and the online consumer.

1.9 Outline of the Thesis

The thesis is structured and composed into seven chapters that are designed as follows:

Chapter One

This chapter comprises of the introduction to the research providing background information on the concept and nature of culture, culture dissemination and the relationship between blogs and culture. In addition, it also covers information on the research gap; the effect of national culture on design elements of blogs, a new form of web sites innovation that is dynamic and popular as a medium of communication. The chapter also includes the research formulation, research design, research question and

aim to give the readers a clear picture regarding the research. Lastly, it highlights the issues to be discussed and considered in the subsequent chapters of the research.

Chapter Two

The second chapter discusses the integrative perspective of the concept of culture used in Information Systems research. This is completed by conducting a literature review on the levels of culture used, the type of behaviour under investigation, the model and the cultural dimension identified. Specifically, the cultural influence studies on web design is discussed in detail through highlighting past and recent literatures as well as criticisms and support of the model and theory used in web design evaluation. To complete the review, the concept and the theory of Social Identity Theory is analysed to explain fundamental social behaviour and its significance on design behaviour from the perspective of culture.

Chapter Three

Chapter three of the research contains the conceptual framework of culture and the research model that drives the hypotheses of the research. Furthermore, details on how sample countries and networks of blogs are chosen is explained and derived. In addition, this chapter also discusses the types of national culture models that have been validated and verified in Information Systems research.

Chapter Four

This chapter explains the research philosophy, research approach and research strategy. It also shows the data collection, the coding of variables and the measurements that have been employed to identify cultural elements on blog web pages. It is then followed by the data analysis method and hypothesis testing using statistical techniques to explain and validate research results.

Chapter Five

This chapter presents the findings of the research from results obtained through the content analysis method using observation and various statistical applications. The frequency counts of blogs observation in six countries are highlighted, comparing them with the cultural dimensions identified earlier to show the effect of national culture on design elements of blogs. The statistical applications used in this research are frequency,

Cross-Tabulation analysis, cluster analysis and MANOVA, and are applied to ascertain the cross-cultural differences among blogs of six countries. National culture is not found to be the dominant factor that influences the design preferences in blogs. Group influence may be the other decisive factor of design preferences in personal blogs.

Chapter Six

Chapter six provides the discussion of the research by highlighting the findings and arguments in the previous chapters, and links them to the aim and objectives of the research. It explains the implications of the research findings and articulates the contributions of the research to the body of knowledge and to the practice of the world.

Chapter Seven

This chapter includes the conclusion of the research. It explains in summary the results and the implications of the research as well as putting forward the limitations of the research, recommendations and future research direction in the discussion part of the chapter.

1.10 Conclusion

The concept and nature of culture that are dynamic and constantly changing are essential features of how cultural aspects are forming and developed. Using social influence as a medium and various drivers for dissemination, cultural change entails a unique part of the history of man. Understanding the various forms in which cultural aspects can manifest themselves in the civilisation of man, studies on culture in all aspects of human life would provide enlightenment on the way how culture influences life. The next chapter will discuss the literature review pertaining to the aspects, types and models of culture used in Information Systems research. The justification of using Hofstede's model of culture and the need to prove that the use of a national culture model to assess web sites particularly blogs, is a rather biased and one-sided argument will also be supported through the literatures. The research gap will be highlighted as blogs as personal sites use web 2.0 technology whereas most studies of web sites focus on commercial sites that use web 1.0 technology. In addition, the elements of social psychology to explain social behaviour of individuals will also be discussed in detail to introduce the theory of group and social processes into the realm of Information Systems research.

CHAPTER TWO: LITERATURE REVIEW AND ANALYSIS

2.1 Introduction

The concept of culture has various dimensions and definitions according to whom defined and interpreted the cultural concept. However, the form and concept of culture have developed and progressed along with the history and civilisation of man. As culture progresses with time, culture affords a variety of forms through space and time. Discussions on the concept of culture have been continuous and progressing. Extensive works on culture have produced various literatures to explain culture from various perspectives and various fields. In this chapter, the concept and nature of culture are discussed and analysed according to the view point of anthropologist and sociologist. Furthermore, an analysis and a review of studies in Information Systems (IS) focusing on culture will be highlighted and explained. The scope and focus of studies, the nature and levels of culture that have been adopted by scholars in IS research will also be reviewed and analysed, providing an overall picture and general background on the research gap through examining recent and past literatures on IS in general and web design behaviour in particular. In addition, literatures also focused on the theory of group behaviour through examining the characteristics and nature by which the group process takes place in social groups and organisations. Furthermore, studies on the social behaviour in online social communities are also explained to obtain an insight on how humans behave similarly in traditional society as well as online.

2.2 Theoretical framework

Culture encompasses various dimensions and different levels according to the interpretation given by anthropologist and sociologist. Culture has been defined by Groeschl and Doherty (2000) as complex and very difficult to define. They said that *“Culture consists of several elements of which some are implicit and others are explicit. Most often these elements are explained by terms such as behaviour, values, norms, and basic assumptions”* (pp.14).

There are also definitions given by scholars like Kroeber and Kluckhohn (1952) and Triandis (1972) that enfold various levels of culture although the definitions tend to be complex. Kroeber and Kluckhohn (1952) defined culture as *“..patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting*

the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values” (pp.86).

Culture defined by Triandis (1972) as “*(Subjective) Culture is defined as an individual’s characteristic way of perceiving the man-made part of one’s environment. It involves the perception of rules, norms, roles, and values, is influenced by various levels of culture such as language, gender, race, religion, place of residence, and occupation, and it influences interpersonal behavior”(pp.4).* Herkovits (1955) even argued that “*There is a general agreement that culture is learned; that it allows man to adapt himself to his natural and social setting; that is greatly variable; that it is manifested in institutions, thought patterns, and material objects” (pp.305).*

There is also scholar that arrived at a cross-disciplinary definition of culture as “*..transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour”(Kroeber and Parsons, 1958, pp. 583).*

Despite having various definitions on culture, the concept of culture could be classified in three main groups (Straub et al., 2002). They are *definitions of culture based on shared values, definitions of culture based on problem-solving and definitions of culture that are general and all-encompassing.* The definitions of culture based on shared values are the most common view regarding culture. The definitions in this group have focused on shared values as the central feature and distinguish characteristic to describe culture. Value is defined by Rokeach (1973) as “*an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or en-state of existence” (pp.5).* Most common definitions of culture based on values have described culture as a set of value patterns that are shared across individuals and within groups. Among those who are prominent to describe culture as a set of values and a pattern of thinking are Geertz (1973) and Hofstede (1991). Geertz (1973) defined culture as “*an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life” (pp.89).* Culture furthermore is being

defined by Hofstede (1991) to be *“the collective programming of the mind which distinguishes the member of one human group from another”* (pp. 260).

The second group of scholar defined culture based on its composition and outcomes in form of problem-solving and how this defines a particular group of people. Ford (1942) defined culture as *“traditional problem-solving through accepted responses that have met with success. It consists of learned problem-solutions”* (pp. 546). Scholars in this group perceived culture as a mean to deal with the environment and a goal-oriented end, as seen in Schein (1999) definition of culture as *“the sum total of all the shared, taken-for-granted assumptions that a group has learned throughout its history”* (pp. 29) and Moran and Stripp (1991) description of culture to be *“a group problem-solving tool that enables individuals to survive in a particular environment”* (pp.43).

The third group defined culture to encompass a general definition, viewed culture to be more abstract and sometimes spiritual in manner. Sheldon (1951) for example, splits culture into two categories, explicit and implicit culture. The explicit and implicit parts are defined as *“Culture is a theoretical model, and the abstractions and principles from which it is made up are free creations of the mind. Some of these abstractions and principles deal with matters that are close to the minds of the individual culture bearers. This aspect of culture is usually called explicit culture or some similar term. Other aspects of culture, the implicit culture, are so generalized that in many cases, the cultural bearers are unable to formulate them”* (pp.39). In addition, Hall (1976) enhanced the concept of the unconscious culture by describing this aspect of culture as *“these out-of-awareness cultural systems that have yet to be made explicit. Such systems have various features and dimensions which are governed by the order, selection, and congruence rules. These rules apply to the formative and active aspects of communications, discourses, perception (in all modalities), transactions between people, and the action chains by which humans achieve their goals in life. Significant portions of extension systems still function out of awareness. Much of the formation, development, use, and change processes of these extension systems, therefore, fall within the scope of out-of-awareness culture and not only exert a hidden influence on life but are subject to the same rules and laws...Culture is therefore very closely related to if not synonymous with what has been defined as mind”* (pp. 146-147).

The definitions of culture vary from the inclusive, human-made part of the environment to the highly focused in seeing culture as a shared meaning system (Ali and Brooks, 2009). Some are concerned with the institutions, norms, roles and values while others concerned with the individual's perception of the elements of the culture system. Mead (1962) definition on culture as a shared pattern of behaviour for example, has two implications. First, it implies that culture is a group-level construct where societies, organisations and professions are included as groups that have their own cultures. Secondly, it also implies that the study of culture involves more than observing and describing behaviour (Davison and Martinsons, 2003). Although there are differences in the definitions given, these various definitions of culture tend to include references to some form of common rules to which people behave accordingly.

Taking into consideration the above discussion, the definition of culture that will be adopted in this study is:

Culture is a shared pattern of behaviour of a group of people where it shapes the way people behave, view the world, express themselves and think. It is formed by sharing experiences, values, knowledge, tradition and surroundings through interactions and communications.

All the above approaches to culture are based on the idea that there is a commonality in people that makes them a group. The commonality exists not only on the lifetime of one individual but the lifetimes of many individuals as an aggregate that form the basis of a culture. The sharing of experiences, trends, fashion and other similar behaviours occur during social interactions between the individuals irrespective of the medium of communication.

Although the above definitions of culture could explain macro-level behaviour, most definitions rely on assumptions that an individual's participation in a cultural group such as their national culture, defines the nature of values they embraced (Straub et al., 2002). They argue that an individual's values are influenced and modified by his or her membership in other professional, organisational, ethnic, religion and various other social groups. Each group has its own specialised culture and value set. Therefore, individuals vary greatly in degree by which they advocate values that are dictated by a single cultural group such as their national culture. Hofstede (1991) further suggests that

several layers of cultural programming exist to encompass the range of cultures operatives on one's behaviour. These layers of culture are identified as national, regional, ethnic, religious, linguistic, gender, generation, social class, and organisational cultures.

Based on these identified layers of culture, Karahanna et al. (2005) created a hierarchy of cultural layers that consists of five levels of culture; supranational, national, professional, organisational and group. The cultural layers are shown in Figure 2.1.

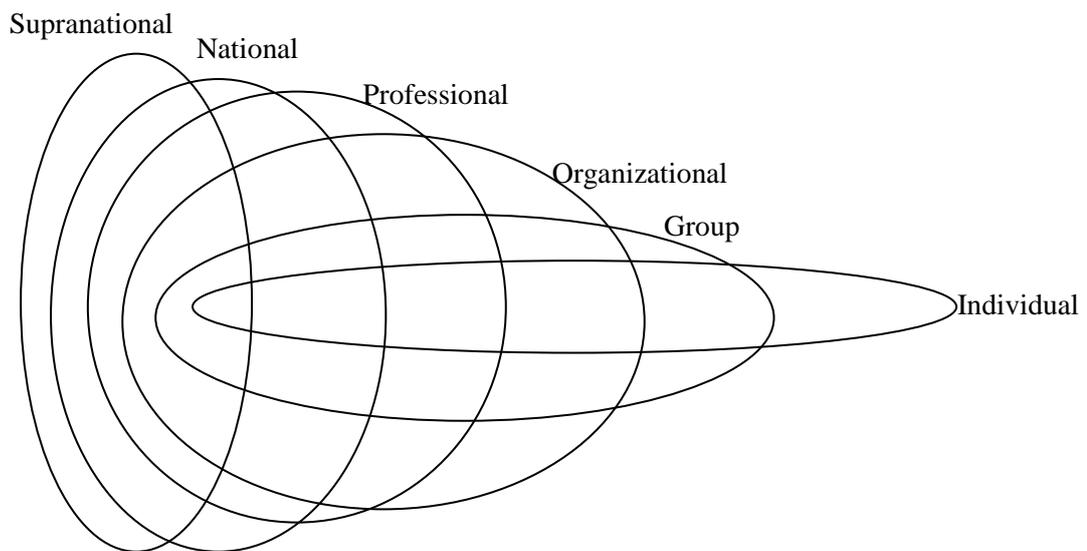


Figure 2. 1: Interrelated levels of culture
Source: Karahanna et al. (2005), pp. 6

The supranational level of culture is defined as any cultural differences that cross national boundaries or can be seen to exist in more than one nation. Among the cultural differences included in this layer of culture are regional, ethnic, religious and linguistic. For example, the Chinese people communicate and use the same language irrespective whether they live in the US, UK, Malaysia or in Hong Kong. Similarly, Muslims practice the same religious rituals everywhere in the world regardless of their countries. The second level of culture is national, described as the collective properties that are ascribed to citizens of countries. Malaysians for example, would greet each other with 'Apa Kabar' as the salutation that is familiar among the citizens of Malaysia. In addition, Malaysians recognise Yang Dipertuan Agong as the head of state.

The next layer is professional level of culture; defined as the distinction between loyalty to the employing organization versus loyalty to the industry. Professionals such as lawyers, doctors, engineers and surveyors are bound by their code of ethics. Their professional behaviours would follow the good practices as stipulated by their professional bodies. Organisational culture is the fourth level of culture in the hierarchical layers of culture, defined as the social and normative glue that holds the organisations together. Organisations such as IBM, Microsoft and Apple have different ways in which they manage their employees and staff. Each organisation has their own way of doing things which is different from each other, and the employees in each organisation will behave in accordance to the manner that is expected of them by their organisations. The last level of culture is group. Group level of culture is defined as the cultural differences that are contained within a single group, workgroup, or other collection of individuals at a level less than that an organization. One famous example of group level behaviour is a football fan club. A Manchester United fan would wear shirts or any symbolic items that represent the Manchester United football team, which is different from Manchester City or Arsenal or Chelsea football teams.

Individual is not a culture since culture is behaviours that are shared by a group of people. Therefore, the individual level according to Karahanna et al. (2005) does not represent another level of culture but to show how an individual's culture is the product of several layers of culture. Each individual may belong to a specific ethnic, linguistic and national culture, and at the same time also have a religious orientation, professional membership and work in an organization. Depending on the situation, the culture that dominates the individual at any particular time will interact and derive the individual's unique culture that eventually influences the individual's subsequent actions and behaviours.

2.3 The Dynamics of Culture

According to Vermeersch (1977), the first clear scientific meaning of "culture" was made by Taylor in 1871 with the following definition:

"Culture, or civilization....is that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society."

However, the concept of culture encompasses bigger and dynamic aspects that evolve around man and his history. Vermeersch (1977) classifies the concept of culture into five groups in accordance with the important and current terms that are used to describe culture. These five groups are:

(i) Cultural concepts that may be described as “mental states and processes”. These are entities that are present or postulated in the minds of the people and are only detectable when they influence behaviour or are expressed in language, are cognitive, emotional and normative in nature. Culture in this sense is in the form of knowledge, ideas, beliefs, attitudes, values and morals.

(ii) Culture as regularly repeated patterns of behaviour of individual or groups, irrespective of times and situation. This form of culture is seen in habits and customs and to a lesser degree could be termed as behaviour, acts and responses.

(iii) The third concept of culture consists of part-mental, part-material acquisitions that enable man to achieve some specific aims. This form of culture could be classified into language (mental) and skills (material) with examples given by art and the use of tools.

(iv) Cultural concepts could also be defined as the products of human activity. These products are material products (equipment, goods), tools (utensils, instruments) and artefacts (books, buildings). In addition, non-material products could also be termed as cultural products with examples ranging from song to music and stories.

(v) The last group of cultural terms used in defining culture includes everything related to the concept of institution. According to Vermeersch (1977), it refers to the conglomerate of standardised patterns and mutual attitudes of a group of people. The examples of this form of culture are social and political organisations, law, marriage, property system and religion.

The five above classifications of the cultural concept practically covers everything that belongs to the class of cultural objects that have been accepted by anthropologists,

sociologists, economists, psychologists, archaeologists and philosophers (Vermeersch, 1977). He further argues that any cultural objects whether in the form of statues, buildings, tools or masks are created by a “form determined by man” and thus, are cultural objects. Therefore, it follows that artefacts are cultural objects, not as particular entities in themselves but because they represent a form created or modified by man. However, not every particular specimen is a cultural item. A specimen that could be considered a cultural object is an object that can be distinct, distinguished and imitated by other people (Vermeersch, 1977). This argument provides the dynamic process of culture since forms determined by man are subject to cultural change. The change of form and subsequently cultural change is possible because identification of cultural objects is not necessarily transitive. Furthermore, form could also change through cultural diffusion and innovation. Cultural diffusion occurs because material objects of culture are transmissible. This happens when individuals and societies learn to discriminate and identify in the same way as others causing cultural forms to be transmitted from individual to individual, from society to society. Innovation on the other hand, is based on the fact that man can create new forms, produce new objects or choose a new form. Disappearance and reappearance of cultural objects in a given society would follow a similar process of innovation.

The dynamism of culture could be explained through the homogeneity between Hofstede (1991) cultural dimensions and Karahanna et al. (2005) cultural layers. The definitions regarding culture cover two major critical components: values and practices (Karahanna et al., 2005). Values are a set of beliefs concerning preferable mode of conduct or end-states of existence with relative importance (Rokeach, 1973), acquired early on in life (Hofstede, 1994) and provide people with fundamental assumptions (Karahanna et al., 2005). Practices however, are learned through socialisation with other human beings (Karahanna et al., 2005) and provide people with the learned ways of doing things. Among the examples of practices are symbols, heroes and rituals. According to Hofstede (1994), practices can be altered whereas values are fairly hard to change. Literatures on culture suggested that these two components are interconnected (Karahanna et al., 2005).

Hofstede (1991) argues that values are more important than practices in the higher level cultures such as supranational and national levels. Practices and norms on the other

hand, dominate the lower level cultures such as organisation and group. Karahanna et al. (2005) suggest that an individual's values are predominantly influenced by supranational and national levels culture, while an individual's practices are influenced primarily by professional, organisational and group cultures. Since it is argued that various levels of culture would interact to form an individual's culture and in turn will shape behaviour, different levels of culture will have a dominant influence on an individual's actions depending on the context of behaviour under consideration. The continuous shifting from one level of culture to the other typically occurs when an individual's behaviour is dictated by either practices or values at a time or at odds with each other. For example, an individual is an American who lives in the United States where individualism is a national culture value. He or she may work in Apple Inc an IT-based company as a software engineer, where software development programmes are typically developed by project teams. The organisational practices in this case take precedent over the national culture with individualistic values.

The autonomy for culture goes beyond its individual members (Bernardi, 1977). Although the contribution of the individuals to culture is pertinent, culture becomes an integrated whole when it grows beyond its individual sources and becomes a common value of the collective. It implies a sense of participation in which all members of a culture share. At this level, culture becomes the force that shapes the personality of its members into a coherent form that conforms to its shared pattern of behaviour. Every individual in a definite culture is expected to conform to an accepted model that is seen as ideal and to adhere to it consistently throughout one's life. Strengthening the culture-making processes between members of a collective society are the elements of identification and partnership, made possible by language and territory. Furthermore, social institutions can also be considered as constituent elements of the collective nature of a culture. Identification and partnership of a culture combined with social institutions allows members of any collective, group, family, people or nation to associate them with and distinguish themselves among each other. This distinction is not of isolation but rather of relationship, where each collective interacts and communicates in a way that is essential to the dynamic phenomena of culture. Axelrod (1997) asserts that the most generic term for the things that people influence amongst each other is culture. Therefore, understanding how culture is being disseminated, spread, established and sustained is important in understanding the dynamics of cultural difference.

2.3.1 Culture Dissemination

Despite the various definitions of culture given by Kroeber and Kluckhohn (1952), the most common understanding is that culture is something people learn from each other; the process of social influence where the interactions and communications between people, is the very process that spreads and disseminates culture, not only in the form of language but also beliefs, attitudes and behaviours. Axelrod (1997) argues that the process of social influence applies to everything from the style of dress to the adoption of computer standards. The idea of cultural change in a given society or group has been explored by social scientists to understand how one group might influence another or how one culture might influence another. Cultural differentiation and similarities could be explained through various processes and mechanisms. The processes within which people's behaviours are similar to each other or retain their differences could be explained as follows.

(a) Through the formation of states or nations. The formation of a national state is facilitated when its citizens have shared meanings and shared patterns of communication (Deutsch, 1953). The sense of nationalism (similarity) is essential to state and to attain nationalism, the sense of imagined community is of great importance (Giddens, 1979; Anderson, 1991).

(b) States once formed, will seek to reduce internal conflicts. Conflicts with a territorial basis could cause states to disintegrate, an example being the Soviet Union. The process by which people become similar to each other or retain their differences is vital to understand how states survive or disintegrate (Axelrod, 1997, pp. 204).

(c) On a larger scale, the process where people become similar to each other is central to establishment of transnational institutions such as the European Union and United Nations (Axelrod, 1997, pp. 204). The development of international institutions shows that there are norms and similarities that can be shared among territories beyond the borders of states.

According to Axelrod (1997), the extent through which culture could be disseminated beyond national borders and boundaries can be explained through the following mechanisms.

(i) Social differentiation

Identification to one group will tend to cause group members to emphasise and promote differences with members of other groups. There is evidence that suggests groups are actively differentiating themselves from each other (Simmel, 1955). Barth (1969) and Hannan and Freeman (1979) found that in the case of ethnic groups, the differentiation could lead to cultural and geographical boundaries between groups.

(ii) Fads and Fashions

In order to be different from others, fads (trends) will be introduced. When trends are followed, the result will be fashions. The cycle will continue and it becomes the never-ending chase of followers running after leaders (Axelrod, 1997, pp. 205).

(iii) Preference for Extreme Views

The idea that homogeneity of opinion and attitude could be counteracted if people tend to prefer extreme views on issues was first suggested by Abelson and Bernstein (1963). Axelrod (1997) suggests that there is evidence indicating this mechanism could bring about polarisation and clustering (Nowak, Jacek and Latane, 1990; Latane, Nowak and Liu, 1994).

(iv) Cultural Drift

Random changes in individual traits could result in sub-group differentiation especially when it results in the way sub-groups communicate and interact (Axelrod, 1997, pp. 205). One example is the evolution of language and how such change creates differences in the speech of users.

(v) Geographic Isolation

People tend to move to be near those who are similar to themselves. As a result, a cluster of similar people will emerge (Schelling, 1978). Cultural differences can be sustained if geographical or other forms of segregation (imposed or voluntary) are imposed by reducing interactions between members of different groups.

(vi) Specialisation

In some cases, there are people who are resistant to social influence either due to personal or other interests. Friedkin and Johnsen (1990) and Marsden and Friedkin (1993) show that resistance has a persistent effect on an individual reluctance to cultural change, despite the existence of social influence.

(vi) Changing Environment or Technology

In an environment or technology within which cultural change occurs, the response to cultural change could be constantly changing as well. However, differences may persist if the environment or technology changes faster than the people's response to change. There would also be cultural differences if different groups or people change in different ways in response to the changing environment or technology.

The fundamentals of human communication should be taken into account although various mechanisms exist to facilitate cultural similarities or differences. Rogers (1983) notes that the transfer of ideas occurs most frequently between individuals who are similar in certain attributes such as beliefs, education, social status and the like. Therefore, the fundamental principle is that communication is most effective between similar people where the likelihood that a given cultural feature will spread from one individual (or group) to another depends on other features they may have already in common. With the advances of technology and mass media, interactions and communications are now largely independent of national boundaries. The heterogeneity of local interactions cannot be sustained due to global and long-distance interactions. Electronic communications have developed interaction and communication patterns that are chosen rather than imposed by geography. Should individuals be linked together randomly, substantial commonality in culture could be expected over time (Axelrod, 1997). Since interactions are based on self-selection, individuals will tend to interact with others who are similar to them creating a tendency towards local convergence and global polarisation (Abramson, Aterton and Orren, 1988; Resnick et al., 1994). One of the implications would be emergent patterns of communications and interactions between people of similar interests that transcend beyond geographical boundaries. One particular example would be blog-type communication that serves as an online personal diary or journal.

Straub et al. (2002) emphasise that literatures focusing on the definitions of culture could be classified in three main groups: shared values, problem-solving and general definition. The first group consists of scholars that define culture based on shared values. They argue that shared values are the central feature and distinct characteristic of culture, stating that values that are acquired and learned early in life are integrated into a system of value. This value system is relatively stable in nature but could change over time. Hofstede's (1980, 1991) dimensions of culture falls under this category. Scholars in the second group view culture based on the perspective of culture outcomes and its accomplishment. Culture, according to this definition focuses on problem-solving and how this defines a particular group of people. Moran and Stripp (1991) for example, define culture as a group problem-solving tool that enables individuals to survive in a particular environment. The third group defines culture in ways that tend to be more abstract and implicit. One example is Hall (1976, 2000) where he states that all culture can be situated in relation to one another through styles in which they communicate.

Based on the above-mentioned definitions, scholars in Information Systems (IS) adopted the various concepts of culture into understanding cultural differences in global organisations. The increasing interest in the IS research literature on the impact of culture on the development and use of information and communication technologies (ICT) is due to the fact that many organisations are now operating beyond their national boundaries. Furthermore, these global activities are facilitated and supported to a large extent by ICT. Therefore, the success of deploying ICT and in turn the success of global business activities depend largely on understanding the impact of cultural differences on the use of ICT (Tan, Watson and Wei, 1995; Harris and Davidson, 1999). The majority of IS studies focused on the various cultural aspects of the development, management and implementation of ICT which involves the interaction between people and technology, between culture and ICT and the transformation of both.

2.4 Culture in Information Systems Research

Interest in the information systems literature research particularly to the impact of cultural differences on the usage and development of ICT has been increasing tremendously. Studies on cultural perspective in the area of information systems focus

on a wide variety of issues, ranging from general management issues, information systems and infrastructure, to the issue of cultural transfer and culture in systems analysis and design. Burn et al. (1993) for example, use the dimensions of culture to study the relationship between information systems and culture with a focus on the top management issues in Hong Kong. Cummings and Guynes (1994) on the other hand, study the variation of culture among staff at the headquarters and subsidiaries of multinationals corporations. Researchers have also conducted studies on the comparison of culture in the usage of information systems tools, design and implementation between countries.

Though most studies define culture in terms of certain models and dimensions, there are some that take no predefined cultural characteristics. Robey and Rodriguez-Diaz (1989) for instance, discuss culture in general looking into the MNC operation in Latin America. In addition, Garfield and Watson (1998) studied on the effect of culture on national information infrastructure. Hill et al. (1998) on the other hand use a critical approach to study the information technology transfer in Arab culture without mentioning any predefined cultural dimensions. Furthermore, Luna et al. (2003) studied cross-cultural and cognitive aspects of web sites navigation while Fang and Rau (2003) discuss cultural differences in the design of portal sites with no mentioning to any particular culture.

Looking from another perspective, Dirksen (2001), Straub et al. (2002), Myers and Tan (2002) and Karahanna et al. (2005) discuss culture in terms of a more general approach to research by examining culture from the methodological and ontological perspectives. Straub et al. (2002) explore an alternate theory-based view of culture using social identity theory while Karahanna et al. (2005) discuss an overview of methodological issues and reviews prevention methods in cross-cultural research. On the other hand, Myers and Tan (2002) criticise the approach of using existing models of culture in the study of information systems as being too simplistic in nature since culture in its sense is contested, temporal and emergent. They however do not propose another model of culture in place of the existing cultural models.

Researchers in IS understand that in an organisational setting, national culture is not the only culture that influences managerial and work behaviour. Hofstede (1991) agrees that

culture can be defined on different levels of analysis ranging from the national level through the professional and organisational, to group level type of culture. Therefore, studies on cultural differences and their effect on work behaviour have focused on other levels of analysis. Schein (1985) found that organisational culture can have a strong effect on beliefs, attitudes and behaviour of individuals within organisational boundaries. This finding was strengthened by studies of Schein (1990) and Martin (1992). Schein (1990) stresses that within one nation or one organisation, there can be many sub-cultures such as, political parties, ethnic groups that may influence individuals' work behaviour through norms and values. Similarly, there are researches that question the assumption that organisations comprise of monolithic cultures (Gregory, 1983; Martin and Siehl, 1983; Rose, 1988; Jermier et al., 1991). They argue that contemporary organisations are better represented by multicultural models that consist of multiple cultures and sub-cultures.

Cultural issues in IS thereon span various types and levels of culture. Apart from national culture, studies also focus on organisational culture and professional culture. Ford et al. (2003), Loch et al. (2003) and Rose et al. (2003) discuss on the effect of national culture on information technology (IT) and IS related issues. In addition, Tan et al. (2003) focus on the impact of organisational climate on two different national cultures. Weisinger and Trauth (2003) argue on how the IT management issues are affected by various types of culture in the form of nation, profession and organisation. Table 2.1 shows various types of culture under study in IS research.

Table 2. 1: Types of culture in IS research

Author	Level of Culture studied in IS
Menou, 1983	General
Couger, 1986	National
Schein, 1990	Organisational
Martin, 1992	Organisational
Burn et al., 1993	National
Straub, 1994	National
Watson, Ho and Raman, 1994	National
Tan, Watson and Wei, 1995	National
Jarvenpaa and Leidner, 1998	National

Author	Level of Culture studied in IS
Grover, Teng and Fiedler, 1998	Organisational
Hasan and Ditsa, 1999	National
DeLong and Fahey, 2000	Organisational
Png, Tan and Wee, 2001	National
Gold, Malhotra and Segars, 2001	Organisational
Jarvenpaa and Staples, 2001	Organisational
Hwang et al., 2003	Organisational
Loch, Straub and Kamel, 2003	National
Tan et al., 2003	National and Organisational
Weisinger and Trauth, 2003	National, Professional and Organisational
Karahanna et al., 2005	Supranational, National, Professional, Organisational and Group

Cultural studies in information technology and information systems focus on the impact of cultural differences on the development and usage of these technologies cross-culturally and across national boundaries. Although the concept of culture remains contentious, there is some common ground in understanding the principles of culture. Among these are: culture is shared by one two or more people; it is defined by values, attitudes and behaviours and can be characterised by a variety of indicators (Davisons and Mattinsons, 2003). These indicators include relationships with the environment and other people (Schein, 1985) and the relevant assumptions in the forms of language, space and time (Schneider and Barsoux, 1997). Culture is thus characterised by the behaviour of those in groups as a whole or part thereof that function in a coherence form (Davisons and Mattinsons, 2003). Therefore, the behaviour, attitude and expectations that shape people's thoughts and actions have to be observed and understood to study a particular culture.

Since culture matters in information systems and management (Marcus, 2006), cultural influence understanding on design elements should be locally situated, grounded in actual behaviour and firmly fixed in social practices of everyday life as suggested by Weisinger and Trauth (2003). This coincides with Walsham's (2002) structural analysis approach to cross-cultural studies. The theoretical foundation of the structural analysis by Walsham (2002) is based on the Structuration Theory by

Giddens (1979). According to Walsham (2002), structure defined in the said theory is seen as rules of behaviour and the ability to deploy resources which exist in the human mind itself. These structures are the rules and resources that are being reinforced in the minds of individuals as standards of appropriate behaviour. In accordance to these structures, Giddens (1979) introduced three dimensions: systems of meaning, power relations and set of norms. Although there are a number of attempts to incorporate the framework of structuration theory in information systems, the theory itself has not been widely referred to in the information systems literature (Walsham, 2002). However, it is of considerable theoretical value in the study of cross-cultural research (Giddens, 1979) and in this particular interest, the cultural influence on web design elements.

The invention of the World Wide Web and its implementation at the end of 1990 (Rettberg, 2008) has shifted the focus of studies from the general IS issues toward web browser and the internet. On the web, user experience becomes more important compared to other communication products. Researchers in IS recognise user experience is essential since it forms customers' expression of the ICT facilities. It is user experience that differentiates one product from the other and in turn, creates loyalty. With the advent of commercial interests on the internet, the web developed a more complex and robust feature, and eventually became more interactive in form. The new feature found a wide range of uses in electronic commerce, community forums and online banking. As the web continues to flourish as a publishing medium across the globe, culture becomes a functional issue. Different cultures involve different ways of communicating and different cultures use different data to make decisions (Marcus, 2001). The issue now is on application design since web design is about creating the interface between people and computers. As such, studies in IS focus on cross-cultural theory effects on user interface design elements.

2.4.1 Cultural Studies on Web Design

Understanding cultural characteristics of websites is becoming increasingly important in a global context. From the United States to China, from Europe to South America, cross-cultural variation on web design had captured the interests of various researchers across the globe. Marcus (2001, 2006), Fink and Laupase (2000), Robbins and Stylianou (2002), Ross (2001), Simon (2001) and Singh et al. (2001, 2003, 2008) are among the few researchers that had acknowledged and discovered cultural diversity in

user-interface design for the web using different culture as validation points. These studies take into account the cultural differences in the design of metaphors, mental models, navigation, interaction and appearance. Culture characteristics of websites in this paper refer to the computer interface design features that are especially related to national culture. Evers (1997) relates the importance of culturally interface design features since cultural preferences interface design would reflect acceptance and influence attitudes as well as understanding towards computers and interface design features.

Sackmary and Scalia (1999), Harvey (1997), Robbins and Stylianou (2002), Park (2004), De Troyer et al. (2004), Cyr and Trevor-Smith (2004), Callahan (2005), Ford and Kotze (2005), Tan, Lin and Urquhart (2006), Gorman (2006) focus on the cross-cultural variation design preferences between nations across the globe. Singh et al. (2008), however, conducted a study of design preferences of a distinct culture within a nation, focusing on the Hispanic ethnic group in the US.

Analysing the cultural impact on web design, Hofstede's dimensions of culture had been applied into user interface design cultural variation in various countries and among various ethnic groups, into different types of websites illustrated in terms of metaphors, layout, appearance and navigation. Singh et al. (2008) discovered that in a Latin American group where there is high uncertainty avoidance, high power distance, and greater sense of collectivism as well as masculinity, the design of websites should take into account characteristics that appeal to the preference of such a group. Marcus and Gould (2000), Marcus (2006), and Marcus and Alexander (2007) used a multi-dimensional web interface approach to identify and validate user interface design based on Hofstede's model of cultural analysis. Similarly, Zhao et al. (2003), Cook and Finlayson (2005), Wan Mohd Isa, Mohd Noor and Mehad (2007), Robbins and Stylianou (2002), Cyr and Trevor-Smith (2004), Lo and Gong (2005) and Singh et al. (2003) adopt Hofstede's cultural dimensions model to provide both tools and insights into cultural representation in user interface architecture. Depending on the cultural environment of the user and the context of use, studies on cultural indicators on web design largely confirm that culture had indeed, had become a necessity and not an option as a successful input to design practices of the web.

Depending on the cultural environment of the user and the context of use, studies on cultural variation on design variations have been biased toward national culture and Hofstede’s concept of national culture. The majority of studies concerned with cultural aspects of the development, implementation and management of IS have relied on Hofstede’s model of national culture. According to Straub et al. (2002), Hofstede’s model of culture is unique because it offers a mechanism whereby a culture value can be assigned to a particular group of people determined by national boundary. This categorisation of culture suggests that culture consists of patterned ways of thinking that are shared across people in a society, based on values. From Table 2.2, it can be seen that the majority of the IS research into the effects of culture on web design behaviour relies on Hofstede’s concept of national culture to validate propositions and arguments on variety of design issues. Hofstede’s model therefore has a significant influence on IS research and web design variation studies in particular.

Table 2.2: Levels and models of culture in web design research

Author	Level	Cultural Model
Shore and Venktachalam, 1995	National	Hofstede
Khaslavsky, 1998	National	Hofstede
Gould et al., 2000	National	Hofstede
Marcus, 2001	National	Hofstede
Ross, 2001	National	Hofstede
Simon, 2001	National	Hofstede
Marcus and Gould, 2001	National	Hofstede
Robbins and Stylianou, 2002	National	Hofstede
Sun, 2002	National	Hall
Singh et al., 2003	National	Hofstede
Cyr and Trevor-Smith, 2004	National	Hofstede
Marcus and Baumgartner, 2004	National	Hofstede
Park, 2004	National	Hofstede
Singh and Baack, 2004	National	Hofstede
Callahan, 2005	National	Hofstede
Cook and Finlayson, 2005	National	General
Wurtz, 2005	National	Hall
Marcus, 2006	National	Hofstede
Marcus and Alexander, 2007	National	Hofstede
Okada and Castillo, 2007	National	Hofstede
Singh et al., 2008	National	Hofstede
Tong and Robertson, 2008	National	Hofstede
De Angeli, 2009	National	General

Hofstede’s typology of culture has been of the most popular in many different fields of management (Myers and Tan, 2002). Hofstede defines national culture as “the collective programming of the mind which distinguishes the members of one group or

category of people from another” (Hofstede, 1991, p.5). A fundamental assumption of Hofstede’s work is that there is such a thing as national culture. He argues each nation has a culture of its own and the culture of each country could be summarised across five dimensions namely, power distance, uncertainty avoidance, masculinity versus femininity, individualism versus collectivism and time orientation. Despite its popularity, Hofstede’s model is not without criticisms and weaknesses especially with regard to the model’s unit of analysis i.e. the nation-state and the assumption that each nation has its own culture.

2.5 Criticisms of the Hofstede’s Cultural Model

Anthropologist and other researchers like Tayeb (1994), Avison and Myers (1997), Billig (1994), Winch et al. (1997), Harvey (1997), Yeh and Lawrence (1995) criticise Hofstede’s model of culture. The criticisms are centred on two fundamental features of Hofstede’s cultural typology. They are the concept of national culture and each nation having its own single culture. Hofstede’s unit of analysis is the nation state and he argues that people in a nation share a collective national character. This national character represents the people’s cultural mental programming that shapes their beliefs, values, assumptions, expectations, perceptions and behaviours (Hofstede, 2001). The notion of national culture however, is argued to violate the dynamic concept of culture since it depicts culture as static (Myers and Tan, 2002).

The first fundamental assumption of Hofstede’s model of culture is the concept of national culture and its unit of analysis i.e. the nation state. McCoy (2003) rejected Hofstede’s findings based on one organisation (IBM) to represent nation states since it neglects other levels of culture. Myers and Tan (2002) argue that the use of the concept of national culture could be questionable and problematic. Among their arguments is that the emergence of nation states is relatively new in the history of mankind. Since culture evolved together with human existence, there is a mismatch between the concept of nation states and culture based on time of existence and the development of both phenomena in human history. Furthermore, the nation states that is in existence experience continuous change in form and development. New nations tend to form, old nations break up and existing nations undergo transformation in terms of population and ethnic composition. Therefore, within nation states, various cultures meet and are being

shared along with the host culture taking into consideration the effect of globalisation (Groeschl and Doherty, 2000).

Subsequently, Hofstede's second notion that each nation state is composed of one distinct culture would be in error. The idea of homogeneity of culture country is questionable, as many nations are composed of more than one culture or many sub-cultures (Peppas, 2001). The sub-culture influences are often assumed non-existent in Hofstede's taxonomy as a national culture is supposed to be homogenous and static (Straub et al., 2002). Furthermore, Straub et al. (2002) argue that national culture is not the only level of culture that influences individual behaviour, proposing that there are other levels of cultural interactions that influence behaviour in the forms of national, group and other sub-cultures depending on the situation and their own personal values. McSweeney's (2002) criticism of the Hofstede model raises doubt that national culture is implausible as a systematic causal factor of behaviour. He argues that individual differences could also be the result of other different levels of culture that interact with the individual at the same time. He even suggests the abandonment of the notion that there is a mono-causal link between national cultures and actions within nations.

Ali and Brooks (2008) criticisms of the Hofstede model of culture focus on five issues. Firstly, the authors refute Hofstede (2001) argument that the differences in individual behaviour are the result of national culture. Individual behaviour, the authors claimed, is the result of various levels of culture that are influencing an individual at any particular time supported based on the arguments of various authors such as McSweeney (2002), Straub (2002) and Karahanna (2005). Secondly, Hofstede's notion of national culture defies the dynamic nature of culture. Culture, the authors argue, is interpreted and reinterpreted, constantly produced and reproduced in relations. Culture by nature is not constant but evolves along with humans and their environment. Thirdly, an individual may or may not be identified with the national culture where he or she resides according to the authors. The concept of cultural homogeneity may not hold since individuals may assimilate themselves with other types of culture that they may encounter. Therefore the assumption that national culture is homogenous is denying the existence of other sub-cultures that play a role in an individual behavioural perspective. Fourthly, the authors argue that Hofstede himself agrees that the unit of analysis could only be used to test culture at the national and sub-culture levels. The proposed cultural model cannot be

used to test individual level relationships. The cultural dimensions are national level measures. Therefore, using the cultural model to examine individual behaviour would be futile and useless. Lastly, the authors question the comprehensiveness of the dimensions of the Hofstede cultural model. The initial model contains four cultural dimensions namely power distance, masculinity versus femininity, uncertainty avoidance and individualism versus collectivism. The fifth dimension, time orientation, was added later and the inclusion of this last dimension is controversial. The issue in question is what other dimension or dimensions are missing and would be included in the existing cultural dimensions in future.

Depending on the relative influence of the different levels of culture on individual behaviour, the nature of behaviour under investigation (Ali and Brooks, 2009) will have to be taken into consideration. Therefore, examining cultural influence on the web will have to take into account the context within which the influence occurs. The context within which this research is undertaken is personal blog, a form of online social network where the ownership of the site is individual. Further information on online social network and relevant literatures on the new media will be given the next focus and attention.

2.6 Online Social Network Sites: History and Evolution

Social network sites (SNS) are web-based services that allow individuals to connect and communicate in a public discourse and to establish networking. Boyd and Ellison (2007) describe SNS as web-based services that allow individuals to:

- (i) Construct public or semi-public profile within a bounded system.
- (ii) Articulate a list of other users with whom they share a connection.
- (iii) View and traverse their list of connections and those made by others within the system.

SNS are unique since they permit individuals to befriend strangers whom they may or may not meet face-to-face, articulate their connections and make visible their social networks. Haythornwaite (2005) describes these connections as 'latent ties' which may share some offline interactions. One basic feature of SNS is the user profile which contains a unique page where one can type oneself into being (Sunden, 2003). Upon joining a social network site, a user profile is created and an individual is prompted to

identify others in the system whom they have a relationship using profiles of other users within the system. These relationships are referred to as friends, contacts or fans differ from one site to another and are usually made public. The public display of relationships form the crucial component of SNS since they contain links to each contact profile allowing viewers access to vast networks of profiles in the friends list. Apart from profile, SNS also offer other features and user bases. Photo-sharing, multimedia capabilities, built-in blogging, mobile-specific and instant messaging are among the technological features associated with SNS.

Although SNS are often designed to cater for the larger population, some SNS target groups from specific regions (Orkut) or linguistic groups, specific ethnicity, religions, sexual orientation, political interest or other identity-driven categories. By attracting homogeneous populations, SNS are being used to segregate groups using the sites by nationality, age or other factors that segment society (Boyd and Ellison, 2007). This defies the initial purpose of the designers of SNS. According to Boyd and Ellison (2007), the first recognisable social network site, SixDegrees.com was launched in 1997. It contains features such as profile creating, friends listing and surfing. Although each of these features has existed separately on other sites, SixDegrees.com was the first site to combine all these features in one page. The site became popular among users since it helped people to connect with and send messages to others until the year 2000 when it was closed down. From 1997 to 2001, various other online social communities have emerged offering combinations of profiles and publicly articulated friends. AsianAvenue, BlackPlanet and MiGente are among the examples of SNS that offer personal, professional and dating profiles that users could use to identify friends (Boyd and Ellison, 2007). Likewise, blogging sites mushroomed with LiveJournal launched in 1999, Swedish LunarStorm in 2000 and Korean Cyworld in 2001. Table 2.3 depicts the timeline of major SNSs according to their launch dates. Despite having various online social sites, only three prominent sites emerged to shape the business, cultural and landscape of SNSs (Boyd and Ellison, 2007) during the period from 1997 to 2006. They are Friendster, MySpace and Facebook.

Table 2.3: Timeline of major SNSs according to their launch dates

Launch Date	Social Network Sites
1997	SixDegrees.com
1999	LiveJournal AsianAvenue BlackPlanet

Launch Date	Social Network Sites
2000	LunarStrom MiGente
2001	Korean Cyworld Ryze
2002	Fotolog Friendster Skyblog
2003	Couchsurfing LinkedIn MySpace Tribe.net Last.FM Hi5
2004	Orkut Dogster Flickr Mixer Facebook (Harvard-only) Dodgeball Catster Hyves
2005	Yahoo! 360 Youtube Xanga Chinese Cyworld Bebo Facebook (High school networks) Ning
2006	Facebook (Corporate networks) Windows Live Spaces US Cyworld Twitter Facebook (Everyone)

SNS have been in existence for more than ten years in the form of communities, forums and chat services. However, as time evolves, the social networking world has undergone three evolutionary phases (Smith, 2010). The first phase is called the walled gardens since social networking sites were totally separated from the outside web with no interactions between the service and external websites. The first phase, from 1997 until 2006/2007, saw many social sites evolved (as shown in Table 2.3) and became popular with users. Many of these sites later became huge such as Friendster, MySpace, Netlog, Hi5 and Bebo. The early version of Facebook, though it was only opened to students of Harvard University, was launched during this first phase. The online social networking sites were competing with each other to attract as many registered users as possible to

enable them to reach the mass population. The aim was to leverage the network effects that were necessary to reach exponential growth.

The second phase, called platform, began when Facebook introduced its developer platform in 2007 (Smith, 2010). The Facebook platform encouraged external services to be part of Facebook by using its platform to launch applications. The launching of the Facebook platform marked the second evolutionary step of social networks. The success of the Facebook platform has encouraged other relevant sites to develop similar platforms and to open up to external developers. Although the walled gardens sites still existed, these social sites made it easier for others to leverage users' social patterns that could be accessed through external tools. Google even launched its own platform initiative, called OpenSocial, aimed at standardising applications (Smith, 2010). It allowed developers to push the same applications into several participating social networks. The third evolutionary step started when social networks encouraged other websites to be part of the platform outside of the networks' own destinations. Initiated by Facebook by launching 'Facebook Connect' in late 2008, it was closely followed by Google in introducing 'Google Friend Connect' (Smith, 2010). Although 'Google Friend Connect' was not as successful as 'Facebook Connect', Google together with other social networks developed XAuth which aimed at providing users the option to log in to external websites of participating social networks with their identity.

Weblogs or blogs however, are part of the social network but vary in terms of characteristics. Unlike other social networks, blogs are relatively free-form types of social software. They are decentralised and often run on their author's own domains while connecting to other blogs. Social networks are often centralised on a single server such as Facebook, where all users have profiles on the same domain. The system then automatically links the profile of a user to profiles of others designated as friends. One major defining feature of blogs is that they are frequently updated and the content does not stay the same compared to early websites which were stable products (Rettberg, 2009). Although personal homepages are seen as a precursor to blogs, homepages were portrayed as complete presentations of the users' interests. Rettberg (2009) argues that the history of blogs started in 1994 by some pioneers who started online diaries; one of these pioneers is Justin Hall. In 1996, Hall started publishing diary entries using his website; links.net to tell his autobiography via hand-coded entry. In 1999, the first free

weblogging tool, Pitas, was launched followed by the introduction of Blogger in the same year (Rettberg, 2009). The establishment of these weblogging systems saw the tremendous increase in blogging and blogs became part of the fundamental shift in communication, interaction and publishing. The media culture which was once dominated by one-to-many communication (few producers, large audiences), had moved to participatory media through many-to-many communication (large producers, large audiences).

Blogs have in common similar aspects to other forms of communication. Communication, started with orally, is transformed into literacy and distributed through printing. The transition from oral to literacy, from speech to writing is the most common form of discourse. Blogging is both conversational and social. Bloggers write on their blogs with a clear expectation of having readers and blogs support a dense network of small audiences and many producers. Blogs also increase the potential for direct communication between readers via the central hub of blogs. To understand how blogs and social networks serve as a modern public sphere, the interplay between social behaviour and the media could explain how technology determines social and cultural patterns. Chandler (1996) argues that technology does not appear unexpectedly but is shaped by cultural developments. He calls this phenomenon ‘technological determinism’, a term that emphasises the mutual dependencies between technology and culture.

Blogs as social groups, therefore, are not immune from aspects of group behaviour and group process of social networks. Most research on social sites and blogs focus these sites in relationship to social networks. In fact, the sociological theories of social networks form the background that shape current theories of social software.

2.7 Affiliation and group

Affiliation refers to a group or community whose members join voluntarily (Khaled et al., 2006). In this type of group formation, members take pride in the characteristics of the group and these characteristics contribute to the feelings of affiliation. Members of an affiliation are likely to be engaged with the thoughts and actions of other members in the same group (Yuki, 2003). Since computer networks are social networks, the existence of social awareness and social influence are inevitable. McKenna and Bargh

(1999) found that social interactions on the internet inflict two distinct types of motivations that drive social internet behaviour, self-related and socially related. For an individual, belonging to an online group brings about one's identity and self-esteem as well as reducing feelings of social isolation in the individual. In terms of social framework, individuals form bonds with others who share their interests and become accepted members of that social group. It also provides them with the opportunity to widen their social spheres and integrate the relationships into their offline lives. Baumeister and Leary (1995) assert that the concept of belonging in human beings is a motivation that pushes them to establish and maintain a certain amount of satisfying interpersonal relationships. It is a fundamental need that has survival and reproductive payoff. According to Baumesiter and Leary (1995), the need to belong surpasses the need for mere social contact. The need to belong depicts that social relationships are mutually desired and seen as part of a long-term commitment. In addition, the sense of belonging encourages activities that are designed to satisfy those commitments. This leads people to cultivate social attachments that solidify social bonds that are stronger than the need for affiliation and intimate connections (Baumeister and Leary, 1995).

Osterman (2000) notes that in general, the experience of belonging or relatedness is associated with positive attitudes toward self and others. Furthermore, these positive attitudes are also reflected in the individuals' interaction with others by being supportive of others, more acceptance and more considerate of others. In addition, Johnson and Johnson (1983) found that when people have social attachments or perceive themselves to be part of a group, their helping behaviour increases leading to increased cooperation as well as promoting situations toward more positive interpersonal relationships as they view friends and members of their group more favourably. The sense of community also highlights the importance of peer acceptance. Wentzel (1998) found that perceived peer support is the only source of support that independently predicts students' prosocial behaviour. Peer acceptance is associated with positive social behaviour while peer rejection is consistently associated with anti-social behaviour. Peer acceptance, on the other hand, leads to another important social behaviour, that is involvement and participation. Finn (1989) found that students' participation in school is shaped by their experience as being part of a supportive community and peer acceptance. Studies also emphasise how peer acceptance affects involvement and participation. Jones and Gerig (1994) found that people are reluctant to participate or engage in the interactions with

others if they anticipated negative reactions from peers. There are also concerns about peer judgement and fear of criticisms when people gauge peer acceptance on matters that they think are risky and would jeopardise the interpersonal relationships with others in the group (Alleman, 1997).

Vittengl and Holt (2000) support Baumeister and Leary (1995) hypothesis through a study of an association between social relationship facilitation and affect. They found that the positive effect experienced before and after conversations combined with social attractions and self-disclosure, results in participants achieving a more positive feeling in relationships. This in line with Baumeister and Leary's suggestion the need to belong will encourage people to form and strengthen relationships. In online communities and in computer-supported networks, solidification of bonds is done through rapid transmission and communication among and between individuals shown through similar design preferences.

Group or community according to McMillan and Chavis (1986) refers to two meanings. Firstly, it refers to a territorial or geographical unit. The second meaning is used in describing relations based on the quality or character of human relationships. A community exists when its members experience a sense of belonging or personal relatedness (Osterman, 2000). In a community, the feeling of importance between the group and the members is mutual where members feel they are important to the group and the group is important to them. In addition, the community has a shared and emotional sense of connection (McMillan and Chavis, 1986), a sense of feeling that members matter to one another. A virtual community refers to a community where members interact virtually with each other, through the use of electronic networks or internet (Moore and Serva, 2007). Virtual communities consist of those who use traditional virtual communications that are text-based like e-mail, chat, text or instant messaging, electronic bulletin boards and forums. There are also virtual communities that use newer and less-traditional communication methods such as multi-user dungeons (MUDS), virtual worlds, video mail, online journals, weblogs, podcasting, video chat and collaborative web spaces. Blogging communities are networks that affiliate and connect people (Wellman et al., 1996). These connections are social networks with their own characteristics and features. Computer-supported social networks gain more importance than face-to-face networks since it accomplishes broader and encompassing

relationships. Furthermore, the computer-supported social networks are not immune from the typical group process and group dynamics.

2.8 Group process and group dynamics

Group process and group dynamics reveal the relationships within and between groups, as people's lives are bound with the groups which they belong, irrespective whether at home, at work or in public. Group process refers to the way how groups function and behave. Hogg and Terry (2000) describe this intergroup phenomenon as a focus on what happens within groups, have indicators or variables such as attitudes, behaviour and norms (Terry and Hogg, 1999), solidarity and cohesion (Hogg, 1992), group motivation (Hogg and Abrams, 1993) as well as group structure and leadership (Hogg, 1999).

Levine (1999) mention there are three assertions about group processes that originated from Solomon Asch's work on group research. Firstly, shared understanding is a necessary precondition for group action in particular and specifically a necessity for effective group performance. Klomoski and Mohammed (1994) note that the underlying fundamental assumption in how shared mental models affect team performance is the notion that "collective thinking is for collective doing". Secondly, group phenomena have important emergent properties that arise through social interaction. Therefore, the rules regarding group behaviour are not reducible to the rules regarding individual behaviour. Thirdly, emotions as well as cognitions play an important role in groups. Asch (1959) maintains that shared understandings have emotional and cognitive components where members must agree emotionally and have a cognitive consensus in a joint and collective action.

Brown (2000) stresses that the group process begins when both the prospective group members and the group they aim to join, engage in mutual fact finding. The motivation to perform initial assessment is to evaluate the costs and the benefits associated with joining the group. Among the rewards and the costs that have been identified are the positive or negative consequences of self-esteem depending on attractiveness of the groups. Initiation and entry to the group may be marked by ritual (Moreland and Levine, 1982). Entry could also be symbolic with the main function of ritual being to alienate those who belong to the group from those who do not. Undergoing the initiation process has been argued to bolster the group loyalty and group cohesion (Brown, 2000). Lewin

(1948) proposes two underlying elements of group processes i.e. interdependence of fate and task interdependence.

Lewin (1948) argues that groups exist when the members of the group realise that their fate depends on the fate of the group as a whole, not because they are necessarily similar to one another. This refers to the perception that one member's outcomes are bound up with other members of the group. Therefore, Lewin concludes that group formation shared a common fate in terms of reward or deprivation associated with the group. In addition, Lewin (1948) argues that from sharing a common fate, each member's achievements have implications on the achievements of other members of the group. The implications may have positive or negative consequences. A positive consequence sees that a member's success will facilitate other members' success in the form of cooperation, while a negative consequence of a member's success will result in other members' failure, as in competition. The positive consequences will bring members of the group into strong relationships, cooperation, cohesion and eventually enhanced group performance (Brown, 2000). The negative consequences will lead to competition, weak relationships and lower the overall performance of the group.

One of the important group behaviour is group cohesion, defined by Lott and Lott (1965) as the sum of interpersonal attractions among members of the group. A cohesive group is a group where members like one another and the degree of cohesion could be measured by how much they like each other (Brown, 2000). Brown (2000) states that group cohesion have been observed to be associated with physical proximity, frequency of interactions, similarity among group members and a commitment to a group's goal. Conflict between groups usually leads to increased cohesion within each of the competing groups (Sheriff, 1966; Julian et al., 1966), and further observations found that group failure does not always lead to lower cohesion especially when group memberships are voluntary (Taylor et al., 1983; Turner et al., 1984; Yee and Brown, 1992). As important group behaviour, cohesion is often thought to enhance group performance. However, researchers found that there is stronger evidence that enhanced performance leads to cohesion, not the reverse (Berkowitz, 1954; Bakeman and Helmreich, 1975; Mullen and Cooper, 1994). Furthermore, researchers found cohesion leads to increased adherence to the group norms instead (Newcomb, 1961; McGrew, 1972; Feldbaum et al., 1980; Putallaz and Gottman, 1981; Harris, 1995).

Norm is paraphrased as scale of values which defines a range of acceptable as well as unacceptable attitudes and behaviours for members of a social unit (Sherif and Sherif, 1969). It normally means certain rules concerning how members of groups should behave and is a basis for agreed expectations among group members. Norms provide a means by which group members are regulated and facilitate the achievements of the group goals (Brown, 2000). Brown (2000) also states that group norms express aspects of group identity and norms could be stable over time or may change with changing circumstances and environments.

Lewin et al. (1939) in Dion (2000) define group dynamics as the positive and negative forces within groups of people. Group dynamics may cause a group to change or be changed by its environments and by the passing of time. Bion (1961) proposes three basics of group dynamics namely membership, social influence and intimacy. Of the three, social influence constitutes the biggest discussion in group dynamics in terms of the crucial role it plays in group norms (Brown, 2000). Festinger (1954) suggests that groups are motivated to establish and maintain uniformity of the group. He also predicts that most of group cohesiveness and communication patterns in groups are consequences of the majority in the group seeking to influence the minority into similar pattern of thinking. This phenomenon of individuals conforming to the attitudes and behaviours of the majority is the most easily observed kind of social influence (Brown, 2000). Brown (2000) argues that the practice is widespread and has been observed in many different countries. When majority influence prevails, members of the group conform to the group norms. This form of social influence is called normative influence due to the pressure asserted individuals who disagree to conform to the views of others in order not to upset the group or cause any conflict. Another type of social influence is informational influence (Donnington, 2002). This sort of influence occurs when individuals change their views privately as a result of new or different information. It may occur in situations where the minority in the group could exert influence and change the views of the majority.

Individuals that interact within a group often try to influence and change the attitudes, views and judgements of others in the group in order for members to conform to a consensus or group view. Researchers have found that there are several factors

contributing to produce normative conformity to the group. Asch (1955) argues that conformity to a group could be increased if members felt the group to be attractive to belong to. In addition, Stang (1972) found normative influence is more acceptable to members of groups that are high in self-esteem than those with low self-esteem. Researchers have also found that conformity to a majority view is more likely to happen in collective cultures than individualistic cultures (Bond and Smith, 1996) and conformity to the group is actually higher when members believed that the group would last longer and there would be opportunities to interact with other members of the group (Lewis et al., 1972). On the other hand, factors leading to informational conformity are more related to task and perception. Baron et al. (1996) found that when tasks are easy, judgements made are more influenced by information. However, when tasks are difficult, the views of the group are more susceptible to view of the majority.

In other circumstances, the view of the minority in the group may prevail and change the view of the majority. Minority influence is different from majority influence by the way in which the former and the latter produced conformity. Majority influence produces conformity through normative influence while minority influence would produce personal acceptance or agreement through informational influence. Nemeth (1995) explored the different methods of how the minority used various cognitive effort and systematic thought when presenting their views. He notes that the minority will put effort into understanding the arguments and the views to see weakness or lack of evidence. By doing so, they are encouraging the majority to think about the arguments or explanations that the majority may have missed. On the whole, social influence in a group may be achieved through majority or minority influence.

In understanding the comprehensiveness of social influence, Latane (1981) proposes the psychology of Social Impact, a theory that specifies the effects of other persons on an individual. Social Impact Theory (Miller and Brunner, 2008) states that in understanding social influence one should take into account the salient features of the independent variables central to the theory. These variables are strength, immediacy and number (Latané, 1981), where strength refers to a source's influential factors such as age, socio-economic status, title and power over target. Immediacy on the other hand refers to the influence of time and space as well as the absence of filters between source and target. In addition, number implies to the quantity of influential sources. Taking

into account the characteristics of social interactions in online networks, an indicator that could be adopted to leverage the level of interactions between bloggers is friends, expressed by the number of friend-links. As online networks get bigger, the levels of social interactions become stronger. This is supported by Miller and Brunner (2008) in that an online participant's total number of contributions illustrates a consistent presence throughout the interaction while the participant's number of words demonstrates an immediate physical presence.

Aspects of group process and group dynamics are presented equally on online communities. However, the influence of social interactions on a large scale social context may not be simple and straight forward. In a complex system such as online communities, social processes tend to create dynamic phenomena when the processes are observed across time and space. Two fundamental features of social influence are multiple sources and targets, and influence extending over time (Miller and Brunner, 2008). Social influence in online communities is in the form of peer influence and sense of belonging, disseminated through online interactions. One explanation for group behaviour is the Social Identity Theory.

2.9 Social Identity Theory

According to Social Identity Theory, an individual perceives that he or she belongs to a group or not (Tajfel, 1978). The social identity of an individual refers to the characteristics of the social category which an individual perceives to be a member of. That identity prescribes the attributes as a member of a particular group in terms of what one should think, feel and behave. Hogg and Abrams (1988) argue that having a social identity requires an individual to regulate his or her behaviour in a manner that complies with the goal or image of a whole group or a category of people that the individual belongs to. The social identification process provides the motivation for groups and their members to adopt strategies for achieving or maintaining in-group or out-group comparisons that favour the in-group and the individual (Straub et al. 2002). The in-group comparison is the mechanism where the individuals evaluate themselves and others to whether the groups norms are comply with and follow accordingly. The out-group comparison would involves evaluation on how different their particular groups are compared to other groups. The in-group or out-group comparison showed how similar the individuals within a group feel to other members in the same group.

According to Straub et al. (2002), the strength of feeling the cultural similarity depends on how many characteristics the individuals believe they have in common with others in the group.

The socio-cognitive processes involve in the individuals comparison and evaluation are self-categorisation and self-enhancement (Hogg et al., 1995). Self-categorisation involves perceptions and actions by individuals that are stereotype and normative, unique to a particular group that differentiate the group from others. Self-enhancement on the other hand, suggests that individuals tend to view members within the same group more favourably than non-members. A deeper level of the individual evaluation is the internalisation process where the perceptions of group norms are internalise and incorporate into one's sense of self (Turner, 1982). According to Turner (1982), the internalisation process goes beyond what other members do or say and how a member of a group responds to them. It is a proactive psychological process in which members of a group attribute values to their own and other members within the group future actions. This attribute would show how as a member of a particular group, he or she would act and think in a certain manner, which Brown (1996), Hogg (1996) and Tajfel (1978) conclude as 'what define us in a real sense'. An example given is of a professor, who is believes to feel, think and act in a certain manner. An individual who identify him or herself with this particular category would determine some of the attitudes and behaviours of members within the same group as well as its culture (Straub et al. 2002).

In order to understand the identification process and the collaborative effort in group, focus should be given on the interactions between cognition and social processes. Research in Social Psychology found that there is a strong relationship between social interaction and cognitive change (Fernandez-Berrocal and Santamaria, 2006). Schwartz (1995) argues that collaborative effort of teams requires that groups create a common ground, a common representation that serves as the touchstone for coordinating members' different perspectives. Fernandez-Berrocal and Santamaria (2006) described this phenomenon as the development of shared cognitions or shared mental models. Mohammed and Dumville (2001) refer shared mental models as shared representations of tasks, equipment, working relationships and situations, conceptualise as a group-level phenomenon (Klimoski and Mohammed, 1994). Lewis (2004) found that a shared mental model in a group is achieved when behaviours indicate that there is a team-wide

consensus on interpretation of task-related information and mutual awareness of group member held knowledge and needs. This happens when interacting individuals in groups develop similar understandings and interpretations of events (Rentsch, 1990).

According to Beers et al. (2007), the process of building mutual understanding between members of a group starts with the articulation of personal meaning in the social setting. It starts when one member of the group describes a situation and how to deal with it which in turn gets the attention of fellow members. Van den Bossche et al. (2011) refer the articulation process as the construction of meaning, where fellow group members who are listening and trying to understand, make their personal meaning regarding the situation at hand. The process of construction of meaning would evolve into collaborative construction where there involve a mutual process of building understanding among group members by refining, developing or modifying the original situation in some way (Baker, 1994). The result of the second process is a new meaning or understanding that emerges from the collaborative effort. Shared mental models are developed when agreement is reached around the constructed understanding. The constructed understanding must be clarified and accepted before they form the basis for action (Alpay et al., 1998) and become the common ground as the agreed-upon understanding of the situation. Van den Bossche et al. (2011) found that groups with greater levels of shared mental models will be more effective since effective groups are able to build a shared conception of the situation at hand (Dillenbourg et al., 1996). Therefore, group outcomes and performances are directly related to shared mental models (Mathieu et al., 2005) where knowledge and information are transferred during the social interaction phase within members of the group.

The Social Identity Theory (SIT) propagates that individuals tend to classify themselves and others into various social categories such as memberships, clubs, religious affiliation, gender and age cohort (Tajfel, 1978). Therefore, people may be classified in various categories and different individuals may use different categories at any one time. Turner (1985) suggests that these categories are defined by typical characteristics abstracted from the members themselves. According to Ashforth and Mael (1989), the social classification serves two purposes. Firstly, it cognitively segregates and arranges social environment in a manner that provides individual with a systematic methods to define others. Once an individual is classified, he or she would be assigned the typical

characteristics identified to the segment that they are categorised. Secondly, social classification allows an individual to identify and define him or herself in the social environment. The self concept embodied in SIT is comprises of both personal identity and social identity. The personal self includes distinctive personal characteristics such as abilities, psychological traits, interests and hobbies while the social identity encompasses salient group classifications; the perception that an individual belong to some group or society.

Tajfel (1978) argues that the concept of social identification bring about three perspectives that could be applied to group identification. Firstly, social identification is a perception of oneness or belonging with a group of persons. Secondly, social identification blooms from the classification of individuals, the distinctiveness and prestige of the group where the individual belong, salience of out-groups and factors that are associated with group formation. Lastly, social identification leads to activities that specified with the identity, activities that supported the group that carries the identity, stereotyped the perceptions of members in the group, produced outcomes that are associated with the group and strengthened the background of the identification. In SIT, individuals perceived that they belong to a group or not. By classifying themselves into a group, they had identified themselves as part of the 'in-group'; if not they belong to the 'out-group'. The 'in-group' becomes the referent by which individuals evaluate themselves and others in terms of group norms, beliefs, attitudes, values and behaviour (Turner, 1982; Deaux, 1984; Hogg, 1996).

Ashforth and Mael (1989) suggest that the social identification theory derived its root from the group identification concept proposed by Tolman in 1943. They argued that literatures on group identification suggest four basic principles that described how identification evolved in groups. Firstly, identification is perceived as a cognitive construct that is not necessarily associated with behaviours. An individual only have to perceive that they belong to a group and their behaviours are viewed only as a potential consequence (Gould, 1975). Secondly, social or group identification is an individual personal experience with regard to group success or group failure. Literatures found that identification is maintain even in the event of great loss or suffering (Brown, 1986), missed potential benefits and task failure (Tajfel, 1982; 1981). The third principle suggests that social or group identification could be distinguished from internalisation.

Hogg and Turner (1987) and O'Reilly and Chatman (1986) found that although certain values and attitudes are associated with members of a group, acceptance as memberships does not necessarily mean acceptance of those values and attitudes. Since identity refers to self in group classification (I am), internalisation refers to the incorporation of values and attitudes within the self (I believe). Therefore, an individual may define him or herself in terms of the group where he or she belong, he or she can disagree with the prevailing values, strategy or system of authority (Martin and Siehl, 1983). Fourthly, group identification is similar to identification to a person or in defining relationships. Kelman (1961) argued that group identification could be based on the desire for self-definition; an individual identification could be based on the desire to emulate or appease others.

In the context of IS and organisations, the concept of SIT have been applied to study the relationships between IT vendors and their clients (Gefen and Straub, 2001) in terms of cultural similarity. In this study, the authors found that client attitudes toward software are related to the cultural similarity they feel toward the vendor. The strength of feeling of cultural similarity depends on how many characteristics an individual believes he or she has in common with others in the group. The more the commonalities clients find with the vendor support personnel, the more positive they are toward the software products associated with the vendors. In addition, Gefen and Straub (2001) also found that there is a strong empirical evidence for SIT to be used as a theoretical base for individual cultural similarity. They argued that the use of SIT to enhance the definitions of culture is consistent with the majority of studies that defined culture as shared values. Their argument is based on two reasons. The first reason is that SIT provides a theoretical framework that could explain the existence of several layers of cultural influence on behaviours and the second reason being that SIT acknowledges that members of a group vary in their behaviours to the extent which they hold the values of the group.

Karahanna et al. (2005) supported the use of SIT in IS research by propagating that in an organisational setting, national culture is not the only culture that influences managerial and work behaviour. The authors argue that the SIT proposes that different levels of culture interacts to influence individuals' work behaviour and each individual is influence more or less by these levels of culture depending on the situation. Based on

this argument, the authors suggest that these different layers of cultural influence should be integrated by explicitly recognising that individuals' workplace behaviour is a function of all different cultures simultaneously. They went further to define these layers of culture to be supranational, national, professional organisational and group. Supranational is defined as any cultural differences that cross national boundaries or can be seen to exist in more than one nation. Examples of this level of culture are regional, ethnic, religious and linguistic. The national level of culture is defined as the collective properties that are ascribed to citizens of countries while professional level is the focus on the distinction between loyalty to organisation versus loyalty to industry. Organisational type of culture refers to the social and normative glue that holds the organisations together and group type of culture composed of cultural differences that are contained within a single group, workgroup or other groups of individuals at a level less than that of the organisation. Although the study proposed a theoretical model to test the various layers of culture involved in influencing individuals' behaviour, the study and the proposed model are not backed by empirical data to confirm the validity of the conceptual framework and the theoretical model through cross-cultural assessment at different levels of culture and in different types of behaviours.

Depending on the cultural environment of user and the context of use, studies on cultural indicators in IS implementation and adaptation particularly on web design had largely confirmed that culture indeed has become a necessity to design practices of the web. Using SIT would allow different levels of culture and different types of behaviour on IS related studies to be discussed and examined appropriately from various perspectives. An explanation into how the social identity process works in groups could give a clear picture on the mechanisms and parameters of this social phenomenon.

2.10 Social Identity Process and Parameters

Social Identity Theory (SIT) is an attempt to explain the relationship between collective self and social group. According to this theory, the self is reflexive that it could take a form as an object and can be categorised, classified or named itself in particular ways in relation to other social categories or classifications (Turner et al., 1987). The process by which an individual self classified itself is called self-categorization. The main feature of SIT is to understand intergroup behaviour and to conceptualise the social group in terms of the collective (Hogg and Williams, 2000). SIT proposes that social perception

and behaviour are continuous from personal and interpersonal at one extreme, to group and intergroup at the other end (Abrams and Hogg, 2004). At the group extreme, people judge and treat one another as representatives of social groups and categories rather than as individuals. The central idea is that social structure influences people's actions through social psychological medium of social identity. Identification by use of ethnic, gender and status existed not due to the distinct characteristics of the members of the different groups, but because people identified with groups that existed in relation to one another.

Tajfel and Turner (1986) propose that there is a distinction between personal and social identity. Personal identity they argue resulted from interpersonal situations in which an individual behaviour is mainly under the control of personological variables, while group situations caused individual behaviour that is determined largely by category-based process. In SIT, a social identity is a person's knowledge that an individual belongs to a social category or group; a set of individuals who hold a common social identification or view themselves as members of the same social category (Stets and Burke, 2000). There are two important processes associated with social identity formation. They are self-categorization and social comparison (Hogg and Abrams, 1988). These two processes produced different consequences. Self-categorization occurred people perceived themselves in terms of shared in-group where it created an emphasis of the perceived similarities of the self and other in-group members. This emphasis is reflected in all the attitudes, beliefs and values, affective reactions, behavioural norms, styles of speech and other attributes that are believed to be associated with the relevant intergroup categories (Stets and Burke, 2000). Social comparison process on the other hand, is a process where persons who are similar to the self are classified with the self and label the in-group while persons who differ from the self are categorized as the out-group. The result of the social comparison process is the selective application of the emphasis effect through self-evaluation of the in-group and out-group on dimensions that eventually lead to the in-group being judged positively and the out-group to be judged negatively.

SIT deals more with the intergroup relations, where the primary focus is on how people see themselves as members of one group (in-group) in comparison with another (out-group). It explained how being in one group, being like others in the group and seeing

things from the group's perspective created the basis for the uniformity of perception and action among group members. Oakes et al. (1994) stress that in group-based identities; the uniformity in perception can be manifested into the cognitive, attitudinal and behavioural undertakings. One of these manifestations is social stereotyping. Haslam et al. (1996) found that stereotyped perceptions of in-group members and out-group members are enhanced and are more homogeneous by identification with the in-group. Similarly, Hogg and Hardie (1992) found strong evidence that group identification influences the view of self as prototypical in the group. Simon et al. (1995) study shows that the in-group homogeneous is especially strong in the event where there is no motivation for the self to distinguish itself from the group. Furthermore, there are researchers who found group-based identification leads to greater commitment to the group and less desire to leave the group (Hogg and Hardie, 1992; Ellemers et al. 1997). There are also studies which propagate that people behave in concert within a group that they identified with. Ethier and Deaux (1994) argued that individuals who used group to categorize themselves are more likely to participate in the group's culture in order to distinguish themselves from the out-group and to show attraction to the group in their behaviours.

In describing various intergroup phenomena, SIT have contributed significantly in explaining intergroup bias, responses to status inequality, intra-group homogeneity and stereotyping, and changing intergroup attitudes through contact. SIT seems to provide a good explanation for in-group favouritism through prototypical manifestation for positive distinctiveness. This biased intergroup evaluation is the common observation that such minimal intergroup discrimination often involves a maximising difference motive (Brown, 2000). Researchers also found that group members seem to feel better after engaging in such discrimination (Oakes and Turner, 1980; Lemyre and Smith, 1985; Rubin and Hewstone, 1998). To SIT, membership in social groups or collectives provides an important basis for self definition. To the extent of whatever traits or characteristics people used to describe themselves as unique individuals, they tend to locate themselves in the social context through their claims to social categories. These categories include demographic categories (gender, ethnicity), social role (parent, spouse) and membership organisations (conservatives, soldier, republican). Deaux et al. (1995) argue that identities are developed and adopted within a common cultural context and as such represent a culturally shared form of social representation.

Therefore, the application of SIT in studies of cultural attitudinal and behavioural would generate better predictions and analysis. This is because attributes for behaviours and outcomes would differ in the individualistic function compared to the collective basis of identity. Since all identities are different and they resulted in important consequences, studies of identities and groups will benefit from continued consideration in identity categories variations (Deaux et al., 1995). Table 2.4 show various studies where SIT is applied to explain group behaviours.

Table 2.4 Application of SIT in groups

Author	Social Identity Theory Categorisation	Focus Group
Abrams and Brown, 1989	Self-consciousness and self regulation	Students
Ashforth and Mael, 1989	Organizational socialization, role conflict and intergroup relations	Organisation
Brewer, 1991	Depersonalization and group size	Group membership
Jackson & Smith, 1999	Intergroup perception, in-group attraction, interdependency beliefs and Depersonalization	Groups of students
Hogg and Williams, 2000	Social identity and collective self	Social groups
Lea et al., 2001	Social Identity Model of Deindividuation Effects (SIDE)	Online group discussion
Postmes et al., 2001	Social identity approach to communication and commitments	Organisations
Ellemers et al., 2002	Group commitment	Social groups
Michinov et al., 2004	Social identity and group process	Computer-mediation communication group
Reicher, 2004	Social identity	Group domination, resistance and change
Hogg et al., 2004	Intergroup relations and self-conception	Small groups
Hogg et al., 2007	Group identification	Group uncertainties

Personal blogs are a social system that a close-knit community interacts and communicate with each other. Bloggers in linked networks are members of online groups where the virtual world emphasises members' online identity and the associated relationship with other members in the online groups. The Social Identity Theory could be used to deal with the underlying mechanisms of group identification and influence in blogging networks.

2.11 Social Identity Theory and virtual social identity

The Social Identity Theory has been examined in many situations surrounding the IS environments concerning cultural and group similarities as well as to the processes of communication in computer-mediated communication (CMC). Spears and Lea (1994) suggest the use of social identity model of de-individuation (SIDE) to argue SIDE is able to account for both the liberating and repressive potential within CMC systems. The main idea of SIDE is that under the condition of anonymity, a user's personal or social identity can be more or less salient. When social identity becomes salient and the person identified to the group, conformity to an internalized group norm will be strong. Therefore, the normative and stereotyping effect is thought to be more emphasised in CMC group than in face-to-face interaction because individual characteristics of other users cannot be identified. Based on the above arguments, future research on IS on the effect of culture on behaviour should be more focused on various levels of culture thereby enhancing the possibility of finding more significant results on cross-cultural behaviour. Evaristo et al. (2000) argue that the majority of IS cross-cultural research focus on behaviour, belief or attitude under study without employing corresponding measurements of culture. The issue in hand is to develop and adopt a theory-based conceptualisation and measurement of an individual's culture and how a particular cultural feature could be measured as part of data collection in positivist research (Straub et al., 2002). Karahanna et al. (2005) suggest that the different levels of culture could be broken down into cultural values indicators that could be associated with the level of culture identified. For example, the authors propose that organisational level of culture could be indicated into values like involvement, consistency, adaptability, and work practice. Assigning values to each of the sub-cultures would indicate which level of culture is prominent to the behaviour in context.

Gefen and Straub (2001) study on cultural similarity between the IT vendors and clients found that there is strong empirical evidence for the Social Identity Theory as a base for studying culture since the theory is consistent with the definition of culture based on shared values. In the computer-mediated communication (CMC) system, the Social Identity Theory has been used to explain the behaviour, actions and norms of online groups based on anonymity and the internalisation process. Spears and Lea (1994) use the Social Identity model to capture the potential of the CMC system on group level behaviour and process, while Michinov et al. (2004) discover that in CMC group, the

social identity and group process are similar to face-to-face group communication. Since this research involves blogs and its communities, the underpinning identity related to the blogging context is explained in term of the virtual identity of bloggers.

Bloggers are found to incline towards expressing their identities in blogs. Huffaker and Calvert (2005) found that apart from personal information like age and location, bloggers also disclose their identity through the use of linguistic styles and emoticons. Van Doorn et al. (2007) found that another area in which bloggers identify themselves is through 'representational domains' where male bloggers prefer the occupational disclosure while female bloggers disclose domestic interests or hobbies. Cerulo (1997) argue that the new communication technologies have an impact on the formation and development of online communities and the virtual social identity. Furthermore, Dholakia et al. (2004) found that social identity can exist in both the real and virtual world. In the blogging context therefore, bloggers in linked networks of blogs can develop virtual social identity as a commitment to their blogs communities which consist of bloggers and their readers (Moon et al. 2006).

Bloggers as individuals occupy various roles and groups identities in real life and are likely to extend these identities into the online virtual environment as virtual social identities, which are manifested through their blogs (Wee-Kek and Hock-Hai, 2007). It is believed that the notions of the real world identities and the salient features of virtual identities are dependent on similar set of factors (Nuttbrock and Freudiger, 1991, Haslam et al., 2000). Therefore, an individual commitment toward his or her real world identity results in the similar commitment in the virtual world identity, in this instance in the manifestation of blogs. Researchers found that the virtual identities could be manifested in various forms. Moon et al. (2006) develop the virtual social identity constructs into three aspects; cognitive, affective and evaluative. Gross and Acquisti (2005) used demographic and personal information including image, to evaluate the virtual social identity aspect of online social communities. This research however, emphasises the preferences of blogs design elements as reflected in the blogs content to show bloggers virtual social identity.

To understand the group behaviour process in online communities, studies of online social behaviour would be analysed and explored. In explaining design variations and

changes on the web, culture alone may not be the determining factor without taking into consideration the social characteristic nature of web interface.

2.12 IS Research on Online Social Behaviour

Studies on social behaviour in online networking and virtual communities are a recent phenomenon, mostly capturing the interests of sociologists and marketers. Literatures on online communities' social factors and behaviours started in the 1990s with researchers like Keisler et al. (1984), Galletta et al. (1995), Dormann (1997), Kraut et al. (1998), Marc (1998), McKenna and Bargh (1999), Compeau et al. (1999) propagating the ideas that social interaction on the web is an area of research that has vast potential to be explored and examined. Currently, virtual communities are perceived as an interest group that interacts online to achieve personal or shared goals of members. Recent studies of online networking focus more on the influence social interactions has on particular actions and behaviours of members through understanding the nature and the role of the influence. Postmes et al. (2001) for example, argue that in groups that used computer-mediated communication, the existence of group norms is significant and influential. Dholakia, Bagozzi and Pearo (2004) examine the effects of group participation of online communities from the perspective of marketing on two different online communities i.e. network and small-group-based. In a study of online interaction of Facebook, Ellison, Steinfield and Lampe (2007) found that the use of Facebook as a medium of interaction has a strong association with social capital and encourages psychological well-being.

Studies on social behaviour at the early stage focus on individual intention and normative influence. Azjen and Fishbein (1980) and Azjen (1991) working on individual behaviour stipulate that one's decision to act will depend on the individual's evaluation of the situation and by interpersonal pressure to perform a personal act (Bagozzi and Lee, 2002). This forms the foundation for the theory of reasoned action and the theory of planned behaviour. Alon et al. (2004) explain that group intentions and group behaviour came much later when researchers considered that a commitment of an individual to participate in joint action is taken as a social representation. Therefore, an individual views a group activity in a holistic manner in which he or she is a part of that group act or representation. However, the group action and representation will materialise when members explicitly understand that group

membership yields beneficial outcomes (McKenna and Bargh, 1999). This argument forms the effects of social influence on group behaviour and intentions.

The idea that online social networking functions as a group has become prominent due to the increased number of online communities and the rapid growth of social networking sites (Backstrom et al., 2006). The processes by which these online communities behave and develop over time become an interesting research issue in the social sciences domain. Researchers find that online memberships are playing bigger and wider roles in various aspects of members' lives from friendship, learning, giving advice and opinion, purchasing and consuming products and obtaining services (Bagozzi and Dholakia, 2002). Indeed, Bagozzi et al. (2002) suggest groups that are formed through identification are very influential in shaping and changing members' opinions, preferences and actions. Dholakia et al. (2004) found that decision-making in online membership is a direct function of social influence and indirect function (through social influence) of value perceptions. Given that personal weblogs are social groups, social interactions may induce changes in design based on users experience and usage and as frequent interactions among the same individuals result in greater knowledge and interpersonal relationships, ideas and knowledge are exchanged frequently among regular groups of friends. Furthermore, Wellman et al. (1996) found that the lack of social presence in online networks allow relationships between members to develop based on shared interests rather than social status. When shared interests are important to members, those in the same online communities may have more in common than those who live in the same physical area. Walther (1994) stresses that people have strong commitments to their online groups when they perceive those groups to be long lasting. In fact, various studies have been conducted to explain the social behaviour of online groups from the perspective of social psychology and social communication as shown in Table 2.5

Table 2. 5: Studies on online group social behaviour

Authors	Social Factors Explored	Topic Studied
Marc, 1998	Sociology, anthropology and social philosophy	Social theory and technological design
Posmes et al., 2001	Social influence	Anonymity and group behaviour
Friedkin, 2001	Attitudes and social comparison	Norm formation in social influence networks
Bagozzi and Lee, 2002	Social influence: Individual and shared intentions	Compliance, internalization and social identity
Dholakia et al., 2004	Group norms and social identity	Consumer participation in virtual network and small group

Authors	Social Factors Explored	Topic Studied
Lee et al., 2004	Information sharing social interaction	Awareness and social interaction
Miranda and Carter, 2005	Social proximity	Innovation diffusion and e-collaboration
Karper, 2005	Approaches to web design	Examinations of novice web design
Kim and Srivastava, 2007	Social influence	Social influence and e-commerce decision making
Ellison et al., 2007	Social capital	Social capital and online social network sites
Lu and Hsiao, 2007	Behavioural motivations	Intention to share information on weblogs
Miura and Yamashita, 2007	Private self-consciousness, reassurance-seeking and information need	Psychological and social influences on blog writing
Song and Walden, 2007	Social exchange	Network size and social interactions
Bauer, 2008	Social influence	Social influence by artefacts
Anagnostopoulos et al., 2008	Social influence and social correlation	Influence and correlation in social networks
Kervenoael et al., 2008	Social capital	The influence of social e-atmospherics in practice
Kim and Fesenmaier, 2008	Persuasiveness of destination web sites	Persuasive design of destination web sites
Singh, et al. 2008	Social influence	Social influence marketing

The focus and purpose of social networks are social interaction and social communication irrespective whether the group is a normally formed or group formed through computer-based communication. Furthermore, McKenna and Bargh (1999) found that social interaction on the internet inflicts two distinct types of motivations that drive internet social behaviour, self-related and socially related. For an individual, belonging to an online group brings about one's identity and self-esteem as well as reducing feelings of social isolation in individuals. In terms of social framework, individuals form bonds with others who share their interests and become accepted members of that social group. It also provides them with the opportunity to widen their social spheres and integrate those relationships into their offline lives. On the other hand, social influence is exerted differently in groups with different cultural backgrounds. Bagozzi and Lee (2002), in a study that involves groups consisting of Koreans and Americans, found that culture served as a moderator to the different effects of personal and social factors on intentions. The modes of social influence in decision-making depend on one cultural background since social influence operates differently as a consequence of differences in values and norms. Since blogs are individually owned,

the types of influence on design elements of blogs should take into account the level of influence at the micro (individual) rather than the macro (nation) level.

2.13 Studies on Blogs

For personal blogs, maintaining interpersonal connectivity and social interactions are coherent attributes that emphasise the types of influence available in online communities. Bagozzi et al. (2007) establish that in online high-interactivity groups, social influence effects incorporated into the values and goals of decision makers are shared with members of their group. The longer the existence of the group, the level of interactions between members becomes stronger resulting in a collective behaviour among members. The longer they are in groups, the stronger the impact of group norms on intention (White et al., 2009). The norms of social groups should influence the willingness to engage in behaviours according to the group interactions rather than individual intention (Terry and Hogg, 1996). Similarly, the choice of design on personal blogs will be determined by either culture or social depending on how that choice is influenced by other bloggers through online interactions.

The popularity of blogs as social networks research is reflected in their growing presence in scholarly studies (Wang et al., 2010). As a new technological innovation that has influential capacity, the growing research on blogs and blogging centres on blogs and their hyperlinks. Blogs and their links form a dynamic network. Since culture is socially acquired rather than logically transmitted (Davisons and Mattinsons, 2003), studies on cultural influence on blogs therefore, are undertaken within a network capacity since all blogs can be seen as a part of a set of communities with characteristics and norms of its own (Albert and Barabasi, 2002). In addition, Drezner and Farrell (2004) explain the types of links in blogs and how those hyperlinks are interconnected in a networked endeavour amounting to wide readership and influence. The networked endeavour that encompasses the social capacity and social capital of blogs are two distinct characteristics of blogs that attract traffic and influence (Drezner and Farrell, 2004). Furthermore, Wellman et al. (1996) describe the importance of online communication venue compared to personal face-to-face communication since computer-supported social networks accomplish a broader and encompassing relationship. McPherson et al. (2001) indicate that other types of network either based on advice, friendship and association respond to the principle of homophily despite

different networks having different structural characteristics based on age, religion, education, race, space, ties and roles. Blood (2004) for example, found that traces of social relationship and influence on blogs are conducted based on blog ties namely blog rolls, comment, citation and trackback. Recuero (2008) on the other hand, shows the relationship between bloggers' motivation and perceived social capital have influence on the flow of information on blogs. The relationships and the influences on blogs therefore operate in a networked model of social ties in a system that increase, reduce or eliminate individual differences in a group (Friedkin and Cook, 1990).

In a network of blogs, the social foundation for influence links the structure of social relations to attitudes and behaviours of the actors in a network (Marsden and Friedkin, 1993). Friedkin and Cook (1990) stress that network models of social influence are based on episodes of dyadic interaction. The two way communication between individuals in groups may increase, maintain, reduce or eliminate individual differences of opinion in a group. In addition, influence does not require face-to-face interaction (Marsden and Friedkin, 1993). The precondition for social influence is information and awareness. The homogeneity effect of social influence networks they argue, is by the selection and association of members based on similarity response on certain issues. The process itself involves some cognitive process followed by outward behaviours. Cohen (1977) shows that similarity breeds friendships and selection into relationships with others with similar interests appears to be stronger than interpersonal influence in a friendship network. Kandel (1978) demonstrates that the behaviour patterns of the selection into relationships members are homophilous in nature because the friendship cliques entail behavioural influence. Therefore, the types of influence on personal blogs could be initiated by other individuals within the network as influence does not require deliberate or conscious attempts to modify actors' attitudes and behaviours. Since the level is individual, influential factors in a network of blogs are micro rather than macro in nature.

Therefore, determining the level of analysis as the focus of research is important to ascertain the correct layer of influence that interacts within the scope of investigation. Several mechanisms and approaches had been utilised in the studies of influence on blogs. Most of these studies examine and investigate individual intentions, participation and blog links to a particular online behaviour, focusing on the nature and roles of social

influence. Interestingly, the issue of different levels of cultural influence mechanisms on web design has not been touched by any researchers so far. The determinants of web design changes as a result of group-level influence on weblogs are not known in the literature of information systems and social network.

2.14 Conclusion

Several mechanisms and approaches have been utilised in the studies of cultural and social influence on web communities and behaviours. The review can be summarised as follows:

- The cultural studies focus on the national level influence on commercial and corporate sites focusing on design variations according to the cultural dimensions stipulated by the Hofstede model. Most studies confirm that there are, indeed, significant design differences in websites according to countries under investigation. However, findings would be true to represent a segment of websites which consist of commercial and official sites.
- In addition, the level of examination with regard to the cultural assessment of websites has, so far, been national level type of influence. Many researchers have criticised this national level approach calling for the use of other types or other levels of culture to be taken into consideration (Myers and Tan, 2002; Straub et al., 2002). Some have even suggested the use of Social Identity Theory as the new framework to assess the cultural influence aspect in IS research.
- Studies on SNS and online social behaviour focus primarily on user intention and motivation with regard to the use of IS application tools. Most of these studies examine and investigate individual intentions, motives and participation of web users to a particular online behaviour, focusing on the nature and roles of social influence. Interestingly, the issue of different levels of influence mechanisms on web design have not been touched by any researchers so far.
- Thus, the approaches involving the influence of different types and nature of different levels of culture spread through social interactions on design behaviour on blogs are not known in the literature of information systems. The literatures are less informative on how these different levels of culture persuade design preferences in larger scale social contexts over time. Rather, the studies focus on the explicit behaviour of online communities' members ranging from buying decisions to offline interaction behaviour (Dholakia et al. 2004; Bagozzi et al.,

2007) leaving the implicit behaviour of design preferences an area of potential research interest.

- Furthermore, the use of group behaviour theory in this particular case is inevitable since blogs involve group level-based networks and membership.

To seek answers to the research problem and question, the next chapter will focus on presenting the research model and framework to provide this research with the necessary researcher tools and methods. Interpreting the design behaviour on the web should be focused on the design choice. Design preferences are usually visualised through choosing preferred design components on the web. Therefore, a suitable tool would be the content analysis method that has already been widely adopted in studies that aim to investigate the cultural impact on web design.

CHAPTER THREE: RESEARCH MODEL

3.1 Introduction

In-depth discussions on culture in the Information Systems (IS) research and literatures have been provided in Chapter Two. The discussions revolved around the use of cultural traits influence and application on IS development, implementation and suitability in multinationals and international firms' operations. There are abundant of literatures focusing on how IS appliances are interpreted and functioned across the globe in a variety of different ways and manners from the cultural perspectives. This is to show that cultural aspects played an important part in the history of technology since technological aspects also covered humanistic approach. In addition, the application of cultural markers on the web with regard to the human-computer interactions has also been highlighted in Chapter Two. Researches on social behaviours on the web that focused on the cognitive and psychological perspectives have also been discussed according to the sociological and behavioural aspects of online social networks. Chapter Two concluded with highlighting the research gap that studies on blogs as a group with its own culture, with regard to the cultural influence on blogs design elements are not discovered in any literatures of IS and social networks.

Chapter Three will present the research model and research hypotheses to provide provisional answers to the research question mentioned in Chapter One. The development of the research model and hypothesis would touch on design aspects of blogs as the focus of study in particular, testing for national cultural traits and group level traits on design elements from the culture perspectives. In this chapter, a theoretical framework are built upon the variety definitions of culture and how these definitions are conceptualised into various levels of cultural influences taking into consideration the effects that different types of culture have on values and practices. The hypotheses are then developed based on these cultural effects on the assumptions that design preferences in linked networks of blogs are not influenced by national culture. Rather, these linked networked of blogs are clusters of similar design characteristics and are different from one network to the other in term of their design behaviour. Furthermore, the hypotheses would be derived through detailed assumptions on the nature and characteristics of blogs as a social group. The intention to build the theoretical framework is done to ensure that the relevant concepts of the research

subject related to cultural influence and social behaviour can be developed, explained and reviewed to support hypotheses assumption and formulation.

3.2 Web Design Components

Interpreting the design behaviour on the web should be focused on the design choice, which is the explicit representation of individual design preferences (Kryssanov, Tamaki and Kitamura, 2001). Design preferences are usually visualised through choosing preferred design components on the web. According to Garret (2003), design choices are determined through three different scenarios. They are:

- (i) In situation where design choices are by default. In this case, design choices are made in accordance to the structure of the underlying technology or an organisation.
- (ii) Design choices are made by mimicry. When users followed familiar conventions from other sites, other publications or software applications, a familiar adoption of a web feature (for example, tabs, tag) could be a widespread phenomenon.
- (iii) In cases where design choices are considered through fiat. Should this happens, personal preferences of users become the prominent driver instead of the user needs or site purpose. Preferences like choices of colour or layout would the main goal in deciding how a web page should be developed.

By highlighting the three scenarios, the author wishes to highlight that design preferences of blog users would follow similar pattern since blogs are web pages that allow users to choose their own design elements. Blogs however, are different from the standard websites since blogs users are allowed to change design features at whim. Unlike the static web pages, the decision to choose design elements for personal blogs can be conducted at the beginning when blog user starts a new blog page or at any time that the blog user wishes to change design elements. This phenomenon in blogs happen due to use of web 2.0 technology that enabled features that could be customised according to blog users' preferences like colour, layout, content and personal information, while at the same time blogs contained features that are static. The static features include search engine, chat box and site metres are among similar items that are

being offered to all users by blogs providers. The static items could not be customised according to the users' preferences.

Existing studies on web pages design classify weblog contents into three design categories: information design, visual design and navigation design components (Garret, 2003; Cyr, 2008). These components, according to Cyr (2008), represent key elements of web sites usability. Blogs are a form of web page that is similar to other text-based, digital-typed web sites in terms of layout. The difference between the two is blogs have dynamic features that allow blogs users to personalise and customise blogs layout according to individual preferences where as web sites have static layout once they are created. Therefore, design components in web sites could be used in similar analysis in personal blogs since blogs share similar general characteristics with web sites. However, design components that are taken into consideration consist of three elements. They are information design, visual design and author's profile. These components are chosen since they are design choices made through mimicry (follow others) and fiat (personal choice) by blog users. Since they are personal choices made by blog users, these components contain design elements that share similar pattern with other users based on individual selection. The navigation design on the other hand is not considered since the design choice of this type of design component is made by default.

The content or information design constitutes design elements that state either the accurate or misguided information about the blog. It could be in the form of icon, structure of the information, the focus and the emphasis of the blog. It constitutes the presentation of information for effective communication. It involved communicating ideas to the users and concerns arrangement of communicating information to the users. The visual design elements on the other hand, deal with the outlook of the blog in terms of colour, photograph, shapes, animation, artwork and symbol. The aesthetic aspect of this type of design elements tend to appeal to the emotional side of the blogger by capturing the beauty characteristics of the web (Cyr, 2008). In addition, navigation design refers to navigational functions that help blogger access different sections of the blogs (Cyr, 2008). The design feature could either aid in or hinder blogger from getting and searching the required information on the blogs. In fact, navigation design is the interface that is specifically tailor designed to present information spaces (Garret, 2003).

It provided users with the ability to go ‘places’ across a web page and concerned with the arrangement of elements to enable movement through a web site.

Another feature of blog is the author’s profile, chosen from Bonhard and Sasse (2006). They argued that profiles and the information that they carry are often perceived as virtual social capital in social systems. As the main aim of social networking is connecting people who are similar, profiles serve as a basis for personal references since users express their individuality and interests that other users may be interested in. Author’s profile is a section where an individual blogger state his or her personal details in terms of name, age, gender, where the blogger is located, blogger’s occupation and level of education. The degree of exposure i.e. the extent to which a blogger will reveal oneself at the discretion of the blogger. Therefore, weblog design as a set used as the model of this research would be explained and showed in the following paragraph. The design components categories chosen are shown in Figure 3.1.



Figure 3. 1: Blog design component categories

Based on the above discussion, weblog design is defined as follows.

Definition 1: Weblog Design $\Omega = \{AP, IDC, VDC\}$ where;

$AP = \{ \langle ap_attr, ap_val \rangle \}$ where ap_attr is an author profile attribute name and ap_val is the value of the attribute,

$IDC = \{ \langle idc_attr, idc_val \rangle \}$ where, idc_attr is an information design component attribute name and idc_val is the value of the attribute;

$VDC = \{ \langle vdc_attr, vdc_val \rangle \}$ where, vdc_attr is a visual design component attribute name and vdc_val is the value of the attribute.

From above definition, each subset of Ω has any number of elements which is a 2-tuple (attribute and value). For example, AP may have one element of author name as $\langle name_revelation, "Full Name" \rangle$ and $\langle name_revelation, "Nickname" \rangle$. Let say the "Full Name" attribute is given the value of 1 while the "Nickname" attribute is given the value of 2. Should the author of the blog only reveal his or her nickname, the attribute that contain the author profile attribute name would be given a value of 2. Similarly, the IDC and VDC attributes are assigned with categories and values associated with the selected attributes.

Definition 2: *The weblog design space* is a Cartesian product of subsets of the design components.

$$\text{Weblog Design Space } \Xi = AP \times IDC \times VDC$$

Each weblog user has a choice of choosing one point in Ξ that characterise the user's preference on the weblog design.

In addition, blogs are chosen according to countries of interest. Hofstede's cultural dimensions divided countries into twelve clusters:

- (i) The Anglo cluster: Australia, United States, Canada, United Kingdom, Ireland and New Zealand.
- (ii) Nordic cluster: Denmark, Sweden, Netherlands, Norway and Finland.
- (iii) German cluster: Germany, Switzerland, South Africa and Italy.
- (iv) Latin American cluster: Ecuador, Venezuela, Colombia and Mexico.
- (v) Former British or American colonies: Malaysia, Phillipines, India, Hong Kong, Singapore and Jamaica
- (vi) Odd cluster: Korea, Peru, Salvador, Chile, Portugal and Uruguay.
- (vii) Central American cluster: Guatemala, Panama and Costa Rica.
- (viii) Austrian cluster: Austria and Israel.
- (ix) French cluster: France and Belgium.
- (x) Mediterranean and South American cluster: Greece, Arabic-speaking countries, Turkey, Yugoslavia, Argentina, Spain and Brazil.

- (xi) Mixed cluster: Pakistan and Iran, Indonesia, Thailand and Taiwan, East and West Africa.
- (xi) Japan.

Such clustering of countries according to Hofstede (2001) are based on two factors: clear historical and/or linguistic culture areas, and brought together in the same cluster by factors such as comparable economic development and/or political systems. Therefore, these cultural values and differences are stable and they are based on cultural commonalities and similar histories (Robbins and Stylianou, 2002).

The identified clusters have been explored by researchers to study cultural differences and, thus, the choice of countries that represent the chosen clusters is shown in Table 3.1. The six countries are chosen based on the significant differences in terms of each cultural dimension and economic consideration of time and money. For example, Sweden is the country that has the highest score in femininity while Japan has the highest score in masculinity. China is among the countries with a low score in individualism and uncertainty avoidance, compared to Germany which is a country with a high score in individualism and uncertainty avoidance. South Korea on the other hand, is a collective society but has a high score in power distance and uncertainty avoidance. In comparison, France is an individualistic country with a high score in power distance and uncertainty avoidance. The comparison of countries based on cultural scores untries is important because comparison would allow countries that are chosen in this study to represent various ranking in cultural dimensions given the limited time of the study.

Table 3.1: Sample countries

Cultural Dimension	China	South Korea	Japan	Germany	France	Sweden
Power Distance	High	High	High	Low	High	Low
Individualism versus Collectivism	Collectivism	Collectivism	Moderate	Individualism	Individualism	Individualism
Masculinity versus Femininity	Femininity	Femininity	Masculinity	Masculinity	Moderate	Femininity
Uncertainty Avoidance	Low	High	High	High	High	Low

3.3 Conceptual framework

This research suggests the bloggers virtual social identities could affect design preferences within the bloggers' linked networks. In addition, bloggers social identities induce the socialisation behaviour and commitment that lead the selection of similar design features within the same network that differentiate the chosen design characteristics from other blogging networks. Researchers found that virtual social identity serves as a mediator to explain the effect of blog usage on the future intention of bloggers. Moon et al. (2006) observed that blogs social interactions lead to the development of strong virtual social identity and the identity in turn expand the online social network of members. The expansion of the online social network of members could be seen through the choice of design features that would ensure smooth and effective communication between members are in place. Therefore, design preferences among members are influence by participants of the same group. This notion differs from the suggestion that design preferences of web pages are influence by national cultural traits.

Furthermore, the use of mass media such as online computer-mediated groups is known to influence and change the culture of participants. Mazzitello et al. (2007), and Peres and Fontanari (2010) proved that the mass media effects tend to destabilizes cultural homogenous and create cultural drift. Using the Axelrod's model, they showed that the medium of transmission is capable of affecting the cultural traits homogeneity in a society. Straub et al. (2002) stressed that the cultural values of an individual can be calibrated by the extent to which an individual identifies with a social group in certain settings. Therefore, personal blogs in a network is a social group with its own settings and there are studies that showed blogs have the capability to change the culture of those that interacted within the setting. Gurak and Antonijevic (2008) showed that blogs transformed some of the traditional cultural norms by observing the way people currently use digital technologies. Mohler (2005) found that the rise of blogosphere has changed the American culture with the elimination of widely shared values and knowledge that unite Americans for generations. Schmidt (2007) on the other hand found that there exist communities of blogging practices which he described as groups of people who share certain routines and expectations about the use of blogs as tool for information, identity and relationship management. In studying the blogosphere community in China, Sima and Pugsley (2010) showed that the Chinese youth used

their blogs as their symbol of identity construction and self-presentation based on the notions of individualism and consumerism. Therefore, this research hypothesises that:

H1: There is no association between bloggers' design preferences and national culture.

Design acts as self-representation of oneself in virtual world that connect individual users to one another (Raento and Oulasvirta, 2008). Turner et al. (1987) offer insight into when and why people's emotions will be influenced by the group to which they belong. Blogging communities are networks that affiliate and connect people (Wellman et al., 1996). These connections are social networks with their own characteristics and features. The computer-supported social networks gain more importance than face-to-face network since it accomplish broader and encompassing relationships. In reviewing J.R. Harris's group socialization theory, Vandell (2000) found that peer groups are the primary environmental influence on psychological functioning. She argued that these forms of relationships are potential influences on psychological well-being, motivation and the development of competencies.

Furthermore, Wellman et al.(1996) found that the lack of social presence in online networks allow relationships between members to develop on the basis of shared interests rather than social status. When shared interests are important to members, those in the same online communities may have more in common than those who live in the same physical area. In the context of blogs, the social ties between bloggers are illustrated through online interactions. Social psychology research on small group interactions found that group identification in online groups is crucial for individual members that are located across diverse geographical locations and how this identification affect group processes and collective action. Michinov et al. (2004) observed that mere categorisation of people into a group would be sufficient to create a sense of belonging in online groups that are geographically separated.

Reicher et al. (1995) argued that anonymity accentuated the effects of group influence in computer-mediated groups and enhanced conformity to group norm. Studies that showed the anonymity feature in the computer-mediated group could enhance normative behaviour have been conducted in intra-group setting (Spears, Lea and Lee, 1990) and in intergroup situation (Postmes, Spears and Lea, 1999). According to Kiesler

et al., (1984), online groups differ from other communication in time, space, speed, ease of use, audience and opportunity for feedback. Individual members are differentiated from each other based on their background and they are joined in a group by a property that they have in common with the group. The property could be attribute (political view), common interest (parenting) or attribute (ethnic group).

However, members of computer-mediated groups recognised and shared a common attribute that carries certain meaning within an intergroup context. The individual group members then deduced the common attribute to construct an internalised group identity comprising of stereotypes and norms (Postmes et al., 2005). The norms in many groups could be obvious and explicit to group members while in others, the norms are not clearly specified. When norms are not known as in many computer-mediated groups, group members have to rely on the inductive construction of social norms (Postmes, Spears and Lea, 2000; Postmes, Spears and Changir, 2001). In this case, norms are inferred from the common behaviour or predominant attributes of typical members. In blogs, the norms could be in form of commonalities of design elements displayed on web pages to show solidarity and cohesiveness, where solidarity can be achieved and promoted through intergroup interactions (Postmes et al., 2005).

In blogs therefore, conformity and differentiation could be reflected in the elements of design choices whereby local blogs users followed their own local culture characterised by design elements displayed on their blog pages, the global blog users followed the design standards of the international blogging community. Each blogging community bear design characteristics that are unique to their norm and standard. The propose hypothesis therefore is:

H2: There is no significant difference in bloggers' design preferences within each network of blogs.

The social identity theory stipulates that people use group as a premise for information sourcing about their self-worth (Tyler and Lind, 1992). This is especially true for people who identify strongly with a group. In this case, it is argued that people want to belong to groups that they view better in comparison to others. They therefore behave in ways that help the group more effectively including cooperation, work performance

and compliance with group rules. Their willingness to behave is seen by one's effort in engaging in behaviours that promote the group's goal (Tyler and Blader, 2001). In online communities, one of these forms of behaviour could be seen through design preferences. There exist different group behaviours among different group membership. Online social grouping tend to share similar sense of belonging, values and preferences among members of the same online community. Hinkle and Brown (1990) argued that according to social identity theory, people who identify strongly with a particular group are more likely to differentiate their group from other groups in a positive manner. This dimension of group value clarified the relationship between social identity and attitudes towards other groups in terms of pride and respect. The higher the feelings of pride and respect within the group, the more distinct the group will be from other groups in particular. The coherence behaviour represented an important aspect of group identity. Similarly, in online group where group coherence existed, group identity comes in the form of similar design preferences that distinguish one network to the other. This research suggests that:

H3: There is a significant design differences in bloggers' design preferences between networks of blogs.

3.4 Conclusion

The author can conclude that the research conceptual framework is constructed based on previous research which provide the foundation for the identification of design components that are considered in this research. Furthermore, the development of the hypotheses was also discussed whereby the intention is to test whether national culture is the type of culture responsible to affect the design preferences of blogs users. Based on the literature, the characteristics of blogs as social networks and the interplays of social structure and social behaviours in social groups have been discussed and explained. Testing the hypotheses will provide alternative views on the possibility that national culture is not the only type of culture that could have influenced individual preferences on web design. Another important aspect is the method and operationalisation of the research model that will be discussed in the next chapter. As mentioned, the next chapter will describe in details the research methodology that will be applied in this research. It will involve explaining the method of data collection, how the proposed hypotheses will be tested and the tools for data analysis.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

The aim of this research is to examine the design preferences of bloggers in the same network focusing on the effect of culture on design behaviour. However, IS literatures on the effect of national culture on web design preferences as well as social psychology studies on group level effects in online social networks have been silent on the effect of group culture on design behaviour in blogs. In this chapter, the author will review the research methodology and approach for this research. The review will be conducted in accordance with the aim and objectives, hypotheses, sample description, measurements and variables used, and issues pertaining to the research design. A pilot study will also be included involving a pre-test assessment of design behaviour of selected networks of blogs from Malaysia from the perspective of national culture. The study provides an initial insight into how national level culture is not the prominent factor that determines design preferences of blogs users.

4.2 Research Philosophy and Methodology

The methodology decided upon in this research is quantitative. The philosophy adopted by this research is positivism in accordance with the quantitative methodology decided upon this research. According to Easterby-Smith et al. (1991), the aim of the social sciences should be to identify the causal explanations and fundamental laws that explain regularities in human social behaviour. Therefore, problems as a whole are better understood if they are reduced into the simplest possible elements since knowledge is only of significance if it is based on observations of the external reality. As the purpose of positivism is to generate hypotheses that can be scientifically tested, the truth and the reality can be revealed through empiricism. Following suit, the most suitable approach is deduction.

4.3 Research Approach

As mentioned, the research approach in line with quantitative methodology and positivism philosophy is deduction. In the deduction approach, hypotheses are drawn from theory through logical reasoning. The use of empirical data is to determine whether the hypothesis generated is to be 'accepted' or 'rejected'. In the deduction approach, theory precedes the data in the flow sequence of the research. Figure 4.1

depicts the flowchart associated with the deduction approach that will be used in this research.

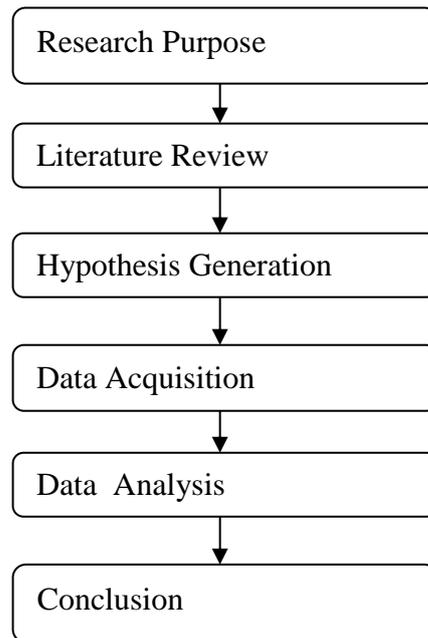


Figure 4.1: Deductive approach flowchart

There are three hypotheses associated with this research. The first hypothesis is to test for the relationship between blogs design preferences and the type of culture that influence those preferences. Since data are categorical, the relationship between blogs design preferences and cultural influence involve is analyse using Cross-Tabulation analysis. The Cross-Tabulation analysis involves testing for design similarities and differences between two categories of blogs, global and local, based on the cultural indicators found in the literature review. The results from the hypothesis testing would indicate the type of cultural influence on blogs design preferences. The second hypothesis is to test for the existence of group influence on design preferences within each network of blogs. Group influence on blogs design preferences within each network is assumed to be depicted through design similarities among bloggers in the network. Each network of blogs is a matrix with blogs as the line and design indicators as the column with a total number of 51 blogs and 11 design indicators on display. Therefore, to test for the variation of design preferences within each network, a multivariate analysis of variance (MANOVA) is applied since the test involves 12 networks of blogs (more than two). Similarly, the third hypothesis objective is to test for the existence of group coherence between networks of blogs. Group coherence is assumed to be shown in the form of design differences between networks. Therefore,

the MANOVA is applied to analyse whether 12 networks of blogs show the existence of group coherence by testing for design differences between networks. All the three hypotheses testing involve the significance of the probability test using p and the F-test.

4.4 Research Method and Technique

The research employs a content analysis method to study the level of cultural influence on weblog design. Content analysis is a research tool that is applied to determine the existence of certain concepts, elements or words that is of interest to the research within texts or set of texts (Bryman and Bell, 2000). Text can be defined broadly as books, book chapters, essays, interviews, discussions, newspaper headlines, articles, documents, discussions or any form of communicative occurrence in paper or web forms. Content analysis has been widely adopted in studies that aim to investigate the cultural impact on web design (Simon, 2001; Robbins and Stylianou, 2002; Singh et al., 2003; Marcus, 2006). Web design involves articulation of visual, textual and audio technology to create interfaces that allow people and the ICT to interact either with the hardware aspect of technology or with other people that use the similar technology for communication. Therefore, content analysis is the most suitable tool to be employed since it allows the visual, textual and audio aspects of the web to be analysed and investigated by detecting and sorting design features on the web pages in a systematic manner. So far, the use of any other method apart from content analysis to detect and sort the cultural influence on web design features is non-existence. Cultural influence on design behaviour on the web is best capture by the content analysis method. Data collected via content analysis is preferred to the data collected from interview or questionnaire survey as it reflects end user's views after specific behaviour rather than their intention to behave which is not always implemented in the real world.

Content analysis has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding (Krippendorff, 2004). According to Stemler (2001), content analysis could be applied to various practical applications. Firstly, content analysis could be used to determine authorship by compiling a list of suspected authors, examine their prior writings and correlate the frequency of nouns or function words to help build a case for each person's authorship of the data of interest. Secondly, content analysis is also a useful tool for examining trends and patterns in documents. Stemler and Bebel (1998) use the content

analysis method to make some inferences about programme effectiveness based on schools mission statements. In addition, content analysis could be applied to provide an empirical basis for monitoring public opinions. Data from documented publication could be compared to data collected in the future to determine if policy changes have manifested themselves in accordance to the written documents. Krippendorff notes that “content analysis is an unobtrusive technique that allows researchers to analyse relatively unstructured data in the view of meanings, symbolic qualities and expressive contents they have and of the communicative roles they play in the lives of data sources” (2004, pp.44). This research will be conducted in accordance to the components of content analysis as described by Krippendorff.

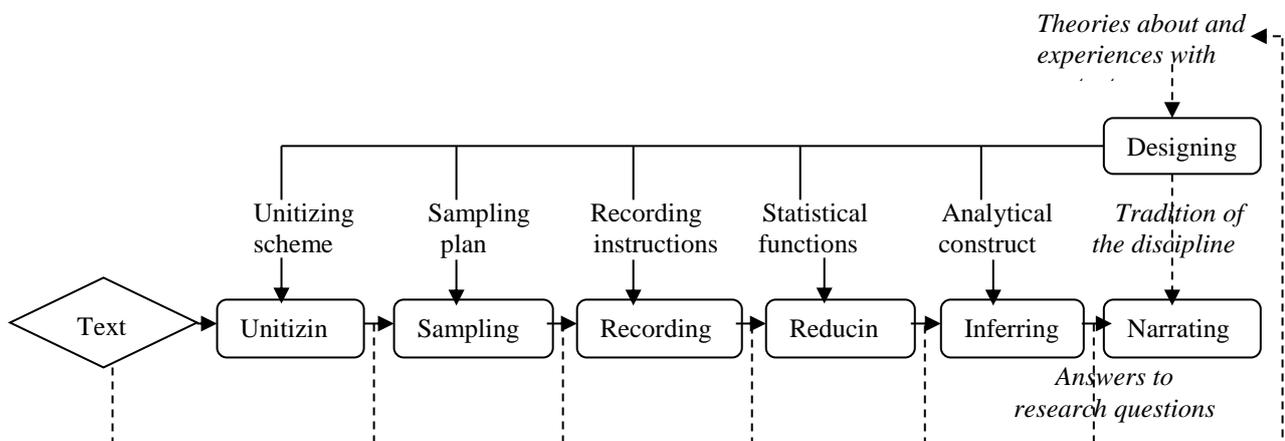


Figure 4. 2: Components of Content Analysis
(Source: Krippendorff (2004), pp.86)

Observation of each weblog will be undertaken over a period of time. The flowchart on the processes involving blogs selection, coding and analysis is shown in Figure 4.3.

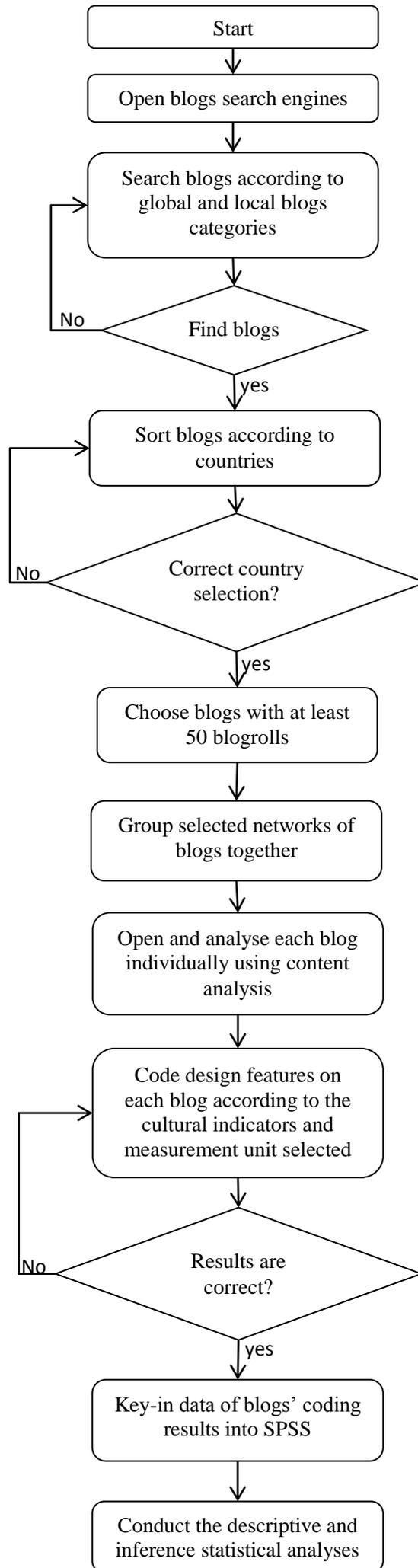


Figure 4. 3: Flowchart on the process of blogs selection, coding and analysis

4.4.1 Unitising

According to Krippendorff (2004), unitising refers to the systematic separation of segments of texts into categories such as images, voices and other observables that are of interest to an analysis. The unit of analysis can be in the form of sampling units, recording units, context units, units of measurement and units of enumeration. For the purpose of this research, the unitising units are the units of measurement used to observe variables and measurements in weblogs.

Models of national culture with different levels of cultural dimensions and cultural facets have been identified. Singh (2003) classifies them into three categories: single dimension, historical-social dimensions and multiple dimensions. Hofstede's five dimension model falls into the third category and it is chosen since it is the most verified model of culture in information systems research (Singh et al., 2008). Hofstede's cultural model consists of five dimensions namely power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance and time horizon. From these five dimensions, two dimensions are selected based on the visibility and suitability of indicators to the nature and characteristics of blogs. Corresponding to each cultural dimension, a broad range of design features have been identified by various researchers to show the significant representation of cultural markers. The use of symbols, graphics, colour, language, site features and content are design features that are commonly employed to compare and contrast various web pages across different virtual communities (Cyr, 2008).

Apart from Hofstede's cultural model, Hall's (2000) cultural framework has also been selected. This cultural model is selected since it contrasts Hofstede's cross-cultural approach visual web design study and Hall's focus on communication is particularly relevant with regard to web design (Wurtz, 2005). Since culture is asserted by Hall (1976) as the system of beliefs and values that dictate the way people think, behave, solve problems, make decisions, plan and lay out their homes and cities, the effect of culture will be pronounced on individual journals and personal thoughts. The indicators and the variables that have been chosen by this paper follow the cultural framework as indicated by Marcus and Gould (2000), Singh et al. (2003) and Wurtz (2005) are shown

in Table 4.1. These indicators are chosen based on their suitability to the nature and characteristics of blogs.

Table 4. 1: Indicators and variables of weblogs design components

Hofstede's Cultural Dimension	Level	
Individualism versus Collectivism	Individualism	Collectivism
	Personal award Disclosure of personal information	Traditional or group image Restricted personal information
Uncertainty Avoidance	High	Low
	Simple layout Statement of disclaimer or copyright	Complex layout
Hall's Cultural Dimension	Level	
High Context versus Low Context	High Context	Low Context
	Extensive use of image and multimedia (Implicit communication)	Less use of image and multimedia (Explicit communication)

4.4.2 Sampling

To economise research efforts, sampling is done by limiting observations to a manageable subset of units that is a statistical representation of the population or universe of interest. Sampling in this research would be conducted at two levels; sampling of blogs and sampling of countries.

In order to examine the influence of culture on blog users' design preferences, sample blogs will be identified to ascertain the effect on individual design preferences. There are various types of blogs according to Bar-Ilan (2005) based on blog postings. The first type is a filter blog where the individual entries contain links to web sites or blogs. The purpose of this type of blog entry is to discuss the contents of these links or to inform the readers of the existence of these sites. Blood (2004) refers to these blogs as 'link-driven sites'. The second type is blog with postings that has no links at all or almost no links. The blog in this case is a personal diary or online journal on the web that serves as self-expression. Although almost all blogs' primary purpose is to list new and interesting websites, most blogs have a personal side based on the choice of the issues in discussion as well as their evaluations reflected by the author's personality and personal opinion (Bar-Ilan, 2005). The next type of blog is community blog or group blog where anyone can be a member. The blog functions through a moderator or moderator that reviews blog postings from a very large community. The types of blogs chosen in this

research as samples will reflect the nature of blogs' influence from the perspective of culture or social. Herring et al. (2004), on the other hand, distinguish blogs according to purpose and categorise them into five: filter, personal journal, K-log, mixed, or others. In addition, Blood (2002) uses blog content to distinguish three types of blogs namely filters, personal journals and notebooks. For the purpose of this research, target blogs are online journals and community blogs where characterisation is based on postings and links rather than purpose alone to evaluate the span and strength of influence on blogs.

The sample will constitute groups of weblogs where each group consists of 51 blogs. For the purpose of sampling, firstly the main blogger will be chosen at random. Secondly, the other 50 bloggers have been identified through the main blogger's blogrolls link. Only bloggers with a friend link of 50 or more are considered to ascertain the strength of influence the main blogger has in determining design preferences of those within a network. Two types of blogs are identified in this research: global and local. These two types of blogs are chosen for the purpose of this research to show that should national culture determine the design preferences of blogs, network of blogs irrespective of whether local or global within a country would have similar design preferences.

The criteria used in choosing the sample blogs are as follows:

- (a) Individual blogger with 50 blogrolls or friend links. This is to ensure that the selected blogs have sufficient span of influence among members of the network.
- (b) Bloggers are active and frequently update their blogs. The time lapse given between updates is two weeks. Blogs that are not updated for more than two weeks are considered non-active. Active blogs show active interaction and communication.
- (c) The content of blogs is of personal nature, highlighting blogs authors' interest. Blogs that contain documentary, online trading and visual only items are not included since interactions may be limited to facts, sales and visual only that may be sensitive to the rules and regulations in a particular country.

For the purpose of this research, the following blogs in Table 4.2 are considered as sample networks since they are among networks of blogs with huge numbers of users in

countries and are easily accessible for evaluation. As control group, the blogs chosen are those that are picked at random with no particular links between them to show that interaction plays a role in influencing the behaviour of members in a group.

Table 4. 2: Sample global and local blogs

Countries	Global Blog	Local Blog
China	Blogspot.com	Sina.com
South Korea		Naver.com
Japan		Ameba.jp
Germany		Blog.de
France		Blog.fr
Sweden		Blogg.se

A comparison analysis on the global and local blogs used in this research is conducted to show the compatibility between the two categories of blogs. The analysis is based on design components that are under study, namely the layout structure, widget, plug-ins and add-on as well as the profile section. Each feature of the design components is detailed to show comparability and standard of the blogs are of equal footing. The analysis is shown in Table 4.3.

Table 4. 3: Compatibility analysis between global and local blogs

Items	Global Blog	China	South Korea	Japan	Germany	France	Sweden
Name	blogspot.com	Sina.com	Naver.com	Ameba.jp	blog.de	blog.fr	blogg.se
Layout structure	Themes-based Customisation Personalisation	Categorisation Personalisation Customisation	Categories / topics Customisation	Use themes Customisation	Templates design Personalisation Customisation	Templates design Customisation Personalisation	Templates Personalisation Customisation
Widget and add-on	Picture widget Multimedia Gadgets Add-on	Picture widget Multimedia Gadgets Add-on	Package deal	Package deal	Picture widget Multimedia Gadgets Add-on	Picture widget Multimedia Gadgets Add-on	Picture widget Multimedia Gadgets Add-on
Author's profile	Title of blog Nickname Gender Location Age Self-photo Hobby Link to other blogs Contact info Period of blogging Introduction Astrological sign Zodiac year Industry Occupation Favourite movie Favourite music Favourite book Interest	Title of blog Nickname Gender Location Date of birth Self-photo Hobby Link to other blogs Contact info Period of blogging Introduction	Title of blog Nickname Gender Location Age Self-photo Hobby Link to other blogs Real name Personality	Title of blog Nickname Gender Date of birth Blood type Interest Link to other blogs Location Hobby Like or dislike Other information	Title of blog Nickname Gender Age Location Self-photo Introduction Personal photos Personal videos Interest Link to other blogs Member since Recent media	Title of blog Nickname Gender Age Location Self-photo Introduction Personal photos Personal videos Interest Link to other blogs Member since Recent activities	Title of blog Nickname Gender Age Location Self-photo Introduction Personal photos Personal videos Interest Link to other blogs Member since Other information
Language	Multi-lingual	Chinese	Korean	Japanese	German	French	Swedish

Groups of blogs selected in this research are obtained from a variety of sources. The global and the local networks considered as samples in the research are among the network of blogs with huge numbers of users in countries that are selected in the study. The search is organised according to location (country wise), relevant blogs (up-to-date entries), links and friends (suitable number of linkages) and types of blogs (online journal and community blogs). Once a target blog has been identified, an initial examination is conducted to ascertain that the blog chosen is suitable and relevant to the purpose of the research. The initial examination involves examining the profile of the author to identify information on the geographical location of the blog, the content section to assess up-to-date entries and the correct type of blog under consideration, checking the links and paths for friendly linkages and to ensure that the blog' links have the required number of co-bloggers that have been selected for the research. Once the target blog has satisfied the initial examination, the blog's url address is saved and transferred to the research data file. This process of blog selection continues on local blogs in other countries in the study.

Blogs searching is completed through the use of blog search engine tools that are available online. These blog search engines are similar to web search engines where they automatically gather large amount of information about blogs and provide free interface for the public to access their databases. However, blog search engines have specific and unique attributes that are different from web engines (Thellwall and Hasler, 2007). Firstly, blog search engines are capable of reporting the latest posting update of blogs complete with the date and time. Secondly, compared to general search engines, date-specific search capability is a common feature in many blog search engines. In addition, the application of blogs from various countries and locations in this research has prompted the author to utilise a variety of blog search engines with different coverage and capability. Each search engine has their own limitations and reliability in line with their focus and purposes. Understanding the limitations of the blog search engines as information sources available to the author, the blog search engines that are used to sort and search for blogs in this research are shown in Table 4.4 below.

Table 4. 4: Research blogs search engines

Blog Search Engines	URL	Description
Blog Search Engine	http://www.blogsearchengine.com	A web portal that searches for various blogs based on common interests. Blogs are categorised according to the theme posted in them.
Google Blogs	http://blogsearch.google.com	A web site that searches for blogs using keywords. The search is done either in isolation from various blogs or from various webs.
Technorati	http://www.technorati.com	A search engine that collects, highlights and distributes information from various blogs.
FindBlogs.com	http://www.findblogs.com	A portal that classifies a number of blogs into various classifications.
Globe of Blogs	http://www.globeofblogs.com	A search gateway that registers blogs according to countries, birth date and other classifications according to bloggers' profile.
Bloglines	http://www.bloglines.com	A blog search engine with features that allow users to search and subscribe to blogs and news feeds.
Blog Digger	http://www.blogdigger.com	A search engine that collects a vast amount of information from various sources such as media, groups, link search and feeders.
Yahoo! Search Blog	http://ysearchblog.com	A joint venture between Yahoo! And Microsoft Search Alliance to gather a number of blogs according to a variety topics and interests.

4.4 3 Recording or Coding of Data

The purpose of recoding or coding is to bridge the gap between units of measurements and the reader, between distinct images and what people see in them or between separate observations and their situational interpretations (Krippendorff, 2004). The

reason to perform coding is to create durable records of phenomena so that analysts can compare phenomena across time, apply different methods to them and replicate the analyses of other researchers. Furthermore, researchers need to transform unedited texts, original images and unstructured data into analysable representations. Data used in this research are qualitative data consisting of words and observations. Analysis and interpretation are required to bring meaning and understanding by using a systematic approach in the form of a coding system. The coding system that describes all the measures and references in the study has been developed in accordance to selected design components and indicators. The indicators chosen are selected through literature reviews based on past studies of cultural influence on web design. Table 4.5 shows the the measurement and indicators used in past studies associated with culture.

Table 4. 5: Measurements and codification of variables

Indicators	Description	Measurement	Studies
Picture	Picture of the author of the web page as part of self-description and personal information.	No picture Own picture Picture of others	Gould et al. (2000), Marcus and Baumgartner (2004), Recuero (2008), De Angeli (2009), Chesney and Su (2010)
Name	Indicates the name that the author calls him/herself or any other preferred name.	Full name Nickname Anonymous	
Age	Describes the age of the author based on date of birth.	No Yes	
Gender	The preferred identification by which author would like to be categorised.	No Male Female	
Type of image	Photos and graphics on the web page. Buttons and menus are not counted as graphics but photos used as links are accepted.	No image Personal image Image of people or landscape National or traditional image Image of leaders	Lin (1993), Cho et al. (1999), Sun (2002), Robins and Stylianou (2002), Lo and Gong (2005), Callahan (2005), Okada and Castillo (2007), Goh et al (2009)
Number of image	Total number of pictures on the web page. It can be a single photo, pictures composed of several photos or a collage	None 1 – 3 images 4 – 6 images 7 – 10 images More than 10 images	
Type of multimedia	The use of sound, streaming video and animation on the web page.	No multimedia Video Audio Both	Cheng and Schweitzer (1996), Cho et al. (1999),

Indicators	Description	Measurement	Studies
Number of multimedia	The total number of multimedia used either as a single entity or a combination of various types of multimedia.	None 1 – 3 images 4 – 6 images 7 – 10 images More than 10 images	Gould et al. (2000), Singh (2003), Singh and Matsuo (2004)
Type of layout	The web page design organisation of the information.	Simple Complex	Marcus and Baumgartner (2004), Scheidt and Wright (2004), Lo and Gong (2005), Callahan (2005), De Angeli (2009)
Award	Description of an individual achievement in terms of the number of web page readers or traffic.	No Yes	Singh (2003), Marcus and Baumgartner (2004), Marcus (2006), Marcus and Alexander (2007), Baack and Singh (2007)
Statement of disclaimer or copyright	A statement that carries legal warning or infringement that indicates the author's privacy and intellectual property right.	No Yes	Marcus and Gould (2001), Singh (2003), Singh et al. (2003), Marcus and Alexander (2007), Baack and Singh (2007)

For the purpose of operationalisation of the variables, cultural traits observed on blog pages are codified into readable and measurable items. The codification is based on an ordinal scale of 1 to 5; 1 means no existence of the variable being observed while 5 being the type of variable that are available for the said item. The first indicator is personal information and the variables associated with this indicator are picture, name, age and gender. Picture is coded into three items; no picture, own picture and picture of others (either in the form of animation, avatar, celebrities, etc). Name is measured and labelled into three items; full name (contains first and surname), nickname (short name or childhood name) and anonymous (name that could be identified to objects other than people). Age, on the other hand, is codified into yes or no to ascertain the existence of age factor in the personal profile. In addition, gender is put into three measureable items which are none existence of gender, whether the author is either male or female.

The next indicator is image. Image on web pages is observed based on the type of images and the number associated with the images displayed on pages. Based on type, the images are coded into five items: no image being displayed, personal photo, image of people or landscape, photo bearing national or traditional image and lastly, image of leader. The numbers associated with the displayed images are measured in five scales; 0 image, 1 – 3 images, 4 – 6 images, 7 – 10 images and more than 10 images being displayed. Subsequently, the following indicator is layout. Layout on blog pages refers to the number of columns that the author uses to develop his or her web pages. The layout identified are in two forms, i.e. simple layout (layout with one or two columns) and complex layout (three or four columns layout).

Multimedia is the fifth cultural indicator identified in the study. Similar to image, multimedia is observed based on the type and number being displayed on web pages. The type of multimedia that is coded is measureable as no multimedia, video type of multimedia, audio and multimedia that contain both graphic and sound. The sixth and the seventh indicators in this study are statement of disclaimer or copyright and personal award, both are items located under web pages content. These two indicators are coded according to their existence using a yes or no scale.

4.4.4 Reduction of Data

Reduction of data serves the need for efficient and meaningful interpretations of large volumes of data. Usually, data reduction is completed through statistical techniques so that the diversity of text can be explained clearly. This research uses categorical data; values and observations that are obtained are sorted according to category. This type of data is not continuous and finding relationships through the use of mean is meaningless. This is because the numerical values attached to the different categories are arbitrary and the mean will depend on how many members each category has (Field, 2005). Therefore, categorical data uses frequency analysis to measure the number of items that fall into each combination of categories and Cross-Tabulation Analysis to establish whether there is a relationship between the categorical variables. The use of categorical data and Cross-Tabulation Analysis do not require the test of normality since the data are not continuous. Data reduction in this research will use descriptive statistics. Descriptive statistics are statistical procedures used for summarising, organising,

graphing and describing data (Bryman and Bell, 2007). For the purpose of this research, descriptive statistics employed are frequencies and percentages.

4.4.5 Data Inferring

However, descriptive statistics is unable to provide sufficient information for further hypothesis examination in this study. This is because descriptive statistics would not be able to explain the relationships between variables that underlie the basis of this research in a correct manner. Therefore, inferential statistical tests will be used to enhance better understanding and provide better evidence to derive a better conclusion. Inferential statistics represent a category of statistics that are used to make inferences from sample data to the population. In particular, these statistics test for statistical significance of results. The hypothesis testing is to find the impact of two levels of influence, that is the national and group levels, statistical testing adopted, therefore, will be the tests that examine differences that is association and comparative inferential statistics, and grouping method. Cross-Tabulation Analysis, Cluster Analysis and Multivariate Analysis of Variance (MANOVA) are suitable techniques.

Since data set are categorical in nature; a non parametric test would be used in the form of Cross-Tabulation Analysis. The Cross-Tabulation Analysis is used to observe whether there is a relationship between two or more categorical variables. Since the type of data collected in this research is categorical in nature and in frequency form, the basic idea is to compare the observed frequencies to the expected frequencies in the data. A contingency table would be used to represent the cross-clarification of the categorical variables used in this research. The relationship between the two categorical variables that is considered in this research is the relationship between national culture traits and design preferences of bloggers. The Cross-Tabulation Analysis will be used to examine the relationship under consideration across six conditions by testing for design differences between the global and local blogs. Although a Pearson Chi-Square Analysis could be used to evaluate the relationship between the global and local blogs' design differences in each single country, the application of separate analyses for six countries would incur a possibility of a Type I error. A Type I error occurs when a null hypothesis is accepted when it should be rejected, when the researcher believes there is a genuine effect on the population when in fact there is not. To avoid a Type I error, the

Cross-Tabulation Analysis would allow an evaluation of the global and local blogs design differences across six countries in a single analysis.

Multivariate Analysis of Variance (MANOVA) is a test for comparing the multiple means of several groups. In addition, it is used in testing the statistical significance of the mean differences of more than two dependent variables (groups). The second and third hypotheses are to test for group comparison. In this research, the aim is to test for variations in design preferences among groups of blogs in linked networks. Therefore, the most suitable statistical tool is MANOVA since there are more than two groups of blogs that are involved, and it is to test for the statistical significance of similarities and differences within and between of clusters of blogs. Since the objectives of the second and third hypotheses are not to test for relationship, the use of Cross-Tabulation Analysis is not relevant in this case.

Cluster Analysis is a mathematical method used to ascertain which objects in a set are similar (Romesburg, 2004). Objects with similar descriptions are gathered into the same cluster by making classifications. There are four main steps to cluster analysis and they are:

- (i) Obtain the data matrix where the column is the objects and the row is the attributes of the objects. The cluster analysis objective is to ascertain which objects are similar or dissimilar to each other. In this research, the objects are blogs while the attributes are the design preferences.
- (ii) The next step involves the standardisation of data matrix. This step concentrates on the original attributes to new unitless attributes. Standardisation steps turn the attributes measurements into dimensionless units and strip the identity of each attribute by changing its numerical value.
- (iii) The third step is computing the resemblance matrix using a resemblance coefficient measure. It is a degree of similarity between each pair of objects. Many different resemblance coefficients can be used and, for the purpose of this research, the method chosen is the Euclidean distance coefficient, a method that measures the literal distance between two objects when they are viewed as points in the two-dimensional space formed by their attributes.

- (iv) The last step is to execute the clustering method. Using the values of the Euclidean distance coefficient for all pairs of objects, a dendrogram tree depicting the degrees of similarity between all pairs of objects is drawn. The method chosen for clustering in this research is the centroid method.

4.4.6 Narration of Data

Narrating provides the answer to the research questions and contributes to the understanding and comprehension of others (Krippendorff, 2004). It means explaining the practical significance of the findings or the contributions the research makes to the existing literature. It could also include making recommendations for actions in terms of legal, practical or further research explorations. Throughout the whole process of research, the flow of information regarding the text's resistance to analysis is continuously fed at every stage to ensure that an inappropriate analytical step is not taken into account. An example of how this research will be conducted in accordance to the six components of the content analysis is shown the pilot study below.

4.5 Pilot Study and Initial Findings

A pilot study was conducted to test the commonalities of design preferences of bloggers in networks of blogs. For this purpose, four independent networks of blogs from Malaysia were observed over the period from December to April 2009. The network of blogs were examined for cultural markers on design elements based on five categorisation, namely the author's profile, blog profile, information design, navigation design and visual design. Initial findings on analysis of blogs design patterns found that there are traces of design preferences that are similar within blogs in a network and there is a significant difference of design patterns among different networks of blogs. The initial study purpose was to test two hypotheses:

- (i) Do national culture elements influence the design preferences of Malaysian personal blogs?
- (ii) Do blogs in a group share commonality in design preferences?

The summary of the cultural findings are shown in Table 4.6. Based on these findings, it is concluded that design preferences in personal blogs do not carry substantial meaning

to cultural traits or cultural markers. Therefore, hypothesis 1 is accepted; Cultural elements do not influence the design preferences of Malaysian personal blogs.

Table 4. 6: Summary of Cultural Traits Findings

Cultural Markers	Findings
Symbols	99% of blogs do not display any symbols or icons Only two blogs out of 204 display symbols of religious item
Pictures	90% of blogs display pictures of individual collection or personal Less than 1% of blogs have group picture or pictures of leaders or heroes
Colours	90% of blogs have colour combinations that are plain, with a white or black background.

Hypothesis 2 was accepted based on the calculation of design distances of blogs within a network using Mahalanobis design distance or Squared Euclidean calculation. Mahalanobis distance or Squared Euclidean method is one of the popular tools of cluster analysis. The use of Mahalanobis distance calculation is to determine whether blogs within a network are a cluster by calculating the distances between each blogs in a network. The smaller distances values indicate that blogs are similar to one another and the larger distances values show that blogs in a cluster are less similar to one another. The results are shown in Table 4.7.

Table 4. 7: Analysis of Design Distances of Networks of Blogs

Networks	$D_{ij}^2 = [(x_i - x_j)^T S^{-1} (x_i - x_j)]$
Network 1	11.292
Network 2	16.185
Network 3	12.134
Network 4	14.696
Network 5	17.353

Preliminary examination of data revealed that the design distances of a linked network of blogs show that the value for Network 1, 2, 3 and 4 are smaller than design distances of a random group of blogs, Network 5. Therefore, it can be concluded that groups of blogs share design commonality and similar design preferences. Based on the initial findings and conclusion, the research continued with assessing the determinants of influence on design preferences and evaluating the level of influence that correlates with the corresponding blogs. To explore the co-existence of culture on design preferences of networks of blogs, a comparative study between countries would provide enlightenment on design preferences in networks of blogs under different cultural values. This would

incorporate another dimension on design preferences in network of blogs under the influence of culture. It would be interesting to study the level of influence social and culture has on design preferences of blogs and compares them between countries. Findings in the second stage of the research will enrich the discussions and debates on the influential factors affecting design of blogs in online networks.

4.6 Conclusion

To summarise, the methodology and the approach adopted in this research was selected and chosen to answer the research question in an objective manner and enable the achievement of the purposed research aim. The identified methodology is best suited to the research design that constitutes the research philosophy, research approach and research method. The variables are chosen from the selected cultural framework that has been validated by literatures, based on Hofstede's cultural dimensions. Furthermore, the pilot study's initial findings on sampled networks of bogs showed there is a possibility that national culture may not be the element that influence design preferences of blogs. In addition, the initial findings also showed that there is a possibility of commonality of design preferences among blogs in a network.

In the next chapter, analysis and discussion on the research findings will be presented and explained. Details of the result on blogs from sampled countries will be highlighted to show the variety of design preferences in blogs across the globe. Based on these results, interpretation based on literatures and statistical testing will be put forward to explain the phenomena surrounding observations on blogs. Scholarly arguments will also be included to support the academic presentation and objectivity of the research.

CHAPTER FIVE: RESEARCH FINDINGS AND ANALYSIS

5.1 Introduction

This chapter will present the findings based on the research method and research approach explained in Chapter Four. The data on blogs were collected and observed using content analysis involved a number of stages and phases from data collection, data coding, data entry and analysis. Data observation and were completed online through the assessment of random blog pages according to countries and according to local and global blogs distinction. The observation and collection of blog design preferences were then coded into measurements that were assigned according to the chosen coding system. The codification of variables was applied similarly across blogs in selected countries. Once observations were completed, the collected data were entered into statistical software for the purpose of data analysis and interpretation. The statistical software application used in this research is Statistical Package for the Social Sciences (SPSS) version 15.0 with a variety of statistical techniques applied such as frequencies and percentages, Cross-Tabulation Analysis and Multivariate Analysis of Variance (MANOVA).

The analysis was then reviewed, sorted and discussed using statistical and analytical methods to provide better understanding and interpretation of the research findings. The analysis, furthermore, involved a number of stages from data analysis, data sorting and data interpretation. Various applications were employed at various stages to achieve the different purpose of data treatment at every stage. Frequencies and percentages were used to analyse and sort data according to countries based on cultural markers, Cross-Tabulation Analysis and MANOVA were used to test the association and comparative differences between the local and global blogs as well as between global blogs of different countries in terms of cultural markers on design preferences. The reason these statistical tests were chosen is that data collected were categorical in nature. Therefore, the chosen statistical methods were most suitable for the type of data on hand and for the purpose of the research. By doing so, the proposed hypotheses were able to be tested and, thus, the research question answered and research aim achieved. The findings of this research will validate the theoretical background that motivates this research and lead to new insights reflecting how web pages should be assessed and evaluated in

accordance to cultural perspectives. In addition, the findings also reveal a new dimension on the effect social interactions and communications have on people's cognitive and behaviour.

5.2 Normality and Reliability Analysis

The type of data in this research is categorical and non-continuous. Thus, the normal reliability test of Cronbach Alpha is not suitable since they are variables that describe categories of entities. Any relationship between two categorical variables could not be found by using simple statistics like mean or median since there are no variables that have been measured continuously (Field, 2005). Calculating the mean of categorical variables is meaningless since the numerical values attached to the different categories are arbitrary. Therefore, the only statistical methods to analyse categorical data are frequency and Cross-Tabulation Analysis. Frequency is used to measure the number of items that fall into each combination of categories while Cross-Tabulation Analysis determines whether there is a relationship between two categorical variables in six countries by comparing the frequencies observed in certain categories to the expected frequencies in those categories by chance (Field, 2005).

Reliability analysis, on the other hand, is conducted to test the consistency of a measure and it is usually used in questionnaires to check the reliability of the scale. In case of content analysis, reliability provides the empirical confidence that:

- (a) Data have been generated with all conceivable precautions against pollutants, distortions and bias, intentionally or accidentally.
- (b) Data means the same thing to everyone who uses them.

Therefore, reliable data are data that remain constant throughout variations in the measuring process (Krippendorff, 2004). By measuring reliability, the author needs to demonstrate the worthiness of data through performing reliability testing. According to Stemler (2001), reliability may be discussed in the following terms:

- **Stability**, or intra-rater reliability. Can the same coder obtain the same results try after try?
- **Reproducibility**, or inter-rater reliability. Do coding schemes lead to the same text being coded in the same category by different people?

Krippendorff (2004), however, rejects the term stability as a means to generate reliability in content analysis methods by asserting that it is too weak to serve as a reliability measure. He argues that stability or intra-rater reliability cannot respond to individual prejudices, ideological commitments, close-mindedness or consistent misinterpretation of given coding instructions and texts. He supports the use of reproducibility as a far stronger measure of reliability compared to stability.

The simplest method and most economics in terms of time and money of using reproducibility recommended by Krippendorff (2004), is utilising two independent researchers using functionally equal measuring units. This is done by appointing two observers who are assigned to rate available values to a common set of units of analysis. This method was adopted by this research. Reliability is then indicated by substantial agreement of results between duplication of research by measuring the percent of agreement between the two raters. According to Neuendorf (2002), two methods are used to measure the inter-raters degree of agreement: using simple agreement or using agreement-based coefficients. Simple agreement methods involve calculating:

(i) Percent agreement or crude agreement using simple percentage. The percentage of number of agreements between two raters is calculated and then divided by total number of measures. The formula is written as follows:

$$PA_0 = A / n$$

where PA_0 = proportion agreement observed

A = number of agreement between coders

n = the total number of units the two raters have coded for the test

(ii) Holsti's method. Similar to crude agreement but differing in terms of the number of units that each coder rates, respectively. The formula used is:

$$PA_0 = 2A / (n_A + n_B)$$

where PA_0 = proportion agreement observed

A = number of agreement between coders

n_A, n_B = the number of units coded by rater A and rater B respectively

However, simple methods agreement has crucial weaknesses, among which is failure to account for chance agreement and the rigid requirements for the precise matching of the

coders' score (Neuendorf, 2002). Another method to measure the degree of agreement between raters, therefore, is using agreement-based coefficients. These coefficients are more popular among researchers since they provide accounting for the chance component as well as providing beyond-chance indicators. Three agreement-based coefficients that have been identified are:

(i) Krippendorff's alpha (α)

Krippendorff's alpha takes into account the proportion of chance agreement and also the size of the number of misses. In addition, it takes into account whether the variable is measured as nominal, ordinal, interval or ratio. However, this coefficient has rarely been used as the calculation of the coefficient is tedious since it has to be calculated manually (Neuendorf, 2002). The formula for his type of α is as follows:

$$\alpha = 1 - \frac{D_0}{D_E}$$

where D_0 = observed disagreement

D_E = expected disagreement

(ii) Scott's pi (π)

To take into account the role of chance agreement, this coefficient uses a joint distribution across two raters, which means taking into consideration the number of categories as well as how these categories are used by the raters. According to Neuendorf (2002), this coefficient assumes data are nominal level; however, it ignores the differences in how two raters distribute their evaluations across coding systems.

(iii) Cohen's kappa (κ)

This coefficient is an improvement of Scott's pi by adding the differences in coders' distribution of their evaluations. Cohen's kappa is used in numerous adaptations and various sources have reported that Cohen's kappa is the most widely used reliability coefficient (Neuendorf, 2002). Therefore, the reliability test in this research is calculated using Cohen's Kappa (κ):

$$\kappa = \frac{P_A - P_c}{1 - P_c}$$

where P_A = The proportions of units on which the raters agree

P_C = The proportions of units on which agreement is expected by chance

According to Stemler (2001), the benchmarks for interpreting kappa is shown in Table 5.1, indicating values for the degree of agreement of between 0 (poor) to 1.00 (perfect agreement).

Table 5. 1: Benchmarks for Kappa Interpretation

Kappa	Strength of Degree of Agreement
< 0.00	Poor
0.00 – 0.20	Slight
0.21 – 0.40	Fair
0.41 – 0.60	Moderate
0.61 – 0.80	Substantial
0.81 – 1.00	Almost Perfect

Source: Stemler (2001) pp. 3

A kappa value of 0 does not indicate that the coding decisions are so inconsistent that it renders the data to be worthless. Rather, the 0 value means that the decisions are no more consistent than the decisions based on chance. Similarly, a negative value of kappa shows that the observed agreement is worse than expected by chance alone. Disagreements between observers are due to both intra-observer inconsistencies and inter-observer differences in the interpretation and application of given recording instructions. Wood (2000) agrees that for research purposes, the rule of thumb for acceptable value of kappa should be at least 0.6 or 0.7. Findings of this research from two raters (the author and an independent rater) were uploaded into the SPSS software for the calculation of Cohen's Kappa and the results are shown in Table 5.2 below.

Table 5. 2: Summary of Cohen's Kappa measurement results

Categories	Measure of Agreement (κ)
Picture	0.808
Name	0.746
Age	0.978
Gender	0.867
Image Type	0.774
Image Number	0.825
Colour Type	0.864
Multimedia Type	0.724
Multimedia Number	0.780
Layout	0.930
Disclaimer	0.696
Awards	0.860

5.3 Verification of Data

The data used in this research are from blogs in various countries that use local languages. To help interpret these languages into the lingua-franca language of the internet, which is English, the author applied Google translation to enable the information on blogs to be readable and understandable by the author, herself. However, the author acknowledges that there are limitations and weaknesses being dependent solely on Google translation to interpret data in blogs that use local languages. Therefore, the author applied additional measures to ascertain that the information in local languages was correctly interpreted, as a result of which there were less translation errors and fewer errors in coding.

Local languages are best understood by local people and native speakers, therefore, the author sought the help of native speakers around the university and across London to code and assess the blogs used in this research. The additional coding and assessment task, however, only involved the profile section of the blogs to verify that the authors of the blogs did not use pictures of famous people or celebrities in the selected countries with which the author of this research may not be familiar. Furthermore, native speakers would also be able to recognise the difference between real name and nickname as the common practice in local communities. The extra coding and assessment of blogs did not cover the rest of design elements such as multimedia, image, layout, award, disclaimer and copyright since they are features of blogs that are visible and non-text based. Thus, errors in the Google translation exercise were not crucial or critical. The additional coding and assessment was then compared with the original data to align the correct translation and interpretation to ensure a reliable and valid study.

5.4 Results and Findings

The findings are based on the observations on blogs from six countries (both local and global blogs). The tabulated results are taken from an observation for a period of six months January 2011 until June 2011 and the results are shown as in Table 5.3. The results are presented according to three stages of analyses. They are:

- (a) Country analysis;
- (b) Cultural analysis; and
- (c) Statistical analysis.

Table 5. 3: Frequency analysis on blogs observation according to countries

Items		Countries	China		South Korea		Japan		Germany		France		Sweden	
Design Components	Indicators	Variables	Global (%)	Local (%)	Global (%)	Local (%)	Global (%)	Local (%)	Global (%)	Local (%)	Global (%)	Local (%)	Global (%)	Local (%)
Author's Profile	Personal Information	No picture	31	4	13	4	15	0	1	0	32	22	33	37
		Own picture	46	59	37	25	39	51	65	49	28	37	59	49
		Others	23	37	50	71	46	49	34	51	40	41	8	14
		Real name	53	29	32	2	37	4	58	35	62	47	50	12
		Nickname	16	28	53	98	57	96	18	18	20	25	28	51
		Anonymous	31	43	15	0	6	0	24	47	18	28	22	37
		Age	1	2	1	0	19	37	50	100	42	84	3	6
		No gender	84	100	65	100	34	31	61	100	17	16	68	94
		Male	12	0	20	0	17	6	0	0	37	35	17	0
		Female	4	0	15	0	49	63	39	0	46	49	15	6
Visual Design	Image	No image	12	33	14	2	8	14	0	18	2	41	33	12
		Personal	74	47	70	98	53	78	100	72	98	51	51	88
		People or landscape	14	20	16	0	23	8	0	10	0	8	16	0
		Tradition or group	0	0	0	0	16	0	0	0	0	0	0	0
		Leader	0	0	0	0	0	0	0	0	0	0	0	0
	Image Number	No image	12	33	14	2	8	14	0	18	2	41	33	12
		1 – 3 images	23	20	12	10	10	39	0	43	0	12	27	6
		4 – 6 images	25	25	20	6	19	12	2	12	14	21	22	4
		7 – 10 images	20	10	14	6	4	12	0	10	17	8	6	8
	> 10 images	20	12	40	76	59	23	98	17	67	18	12	70	
Award	Yes	0	0	0	22	0	0	28	0	4	0	2	0	
Information Design	Layout	Simple (1 or 2)	82	92	94	80	94	74	69	33	100	53	94	100
		Complex (3 or 4)	18	8	6	20	6	26	31	67	0	47	6	0
	Disclaimer	Yes	4	0	0	2	0	0	73	0	43	12	0	2
	Multimedia	No multimedia	76	49	63	82	72	84	43	39	37	67	53	71
		Video	24	8	33	12	26	12	57	61	61	23	45	25
		Audio	0	33	0	6	2	4	0	0	0	2	0	2
	Both	0	10	4	0	0	0	0	0	2	8	2	2	
	Multimedia Number	No multimedia	76	49	63	82	72	84	43	39	37	67	53	71
		1 – 3 multimedia	14	27	25	14	12	12	57	41	43	17	39	21
		4 – 6	7	20	10	4	16	4	0	12	14	8	4	8
7 – 10		3	2	2	0	0	0	0	4	6	2	4	0	
> 10	0	2	0	0	0	0	0	4	0	6	0	0		

Country analysis comprises of findings based on observations on blogs from six countries. A comparison analysis between both the global and local bloggers was then conducted on each country observation based on design preferences observed on the cultural indicators. The second stage of analysis involved a mapping of cultural markers on blog design features. The mapping was sorted according to cultural indicators and cultural dimensions identified earlier by this research. The last stage of analysis was concerned with statistical testing on the categorical data to determine the relationships between identified variables and group comparison within and between groups of blogs. The statistical testing involved the use of Cluster analysis, Cross-Tabulation Analysis and MANOVA.

5.5 Country Analysis

The findings according to each individual country consist of a comparison analysis between the global and the local blogs design preferences. Based on seven indicators of design components, each indicator was analysed according to the selected variables allocated to represent each indicator.

5.5.1 China

5.5.1.1 Personal Information

The first indicator of design component is personal information of the author. Personal information consists of author's picture, name, age and gender. Both the global and local blogs show a wide disparity in terms of the level of disclosure displayed on blogs pages as depicted in Table 5.4.

Table 5. 4: Personal information disclosure of global and local Chinese blogs

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
Personal Information	No picture	31	4
	Own picture	46	59
	Others	23	37
	Real name	53	29
	Nickname	16	28
	Anonymous	31	43
	Age	1	2
	No gender	84	100
	Male	12	0
	Female	4	0

A comparison analysis of both the global and local blogs based on each individual variable show a clearer picture of the disparity in design preferences between the two blogs. Figure 5.1 below shows the differences in the design preferences of both global and local blogs based on the disclosure of blog author’s picture.

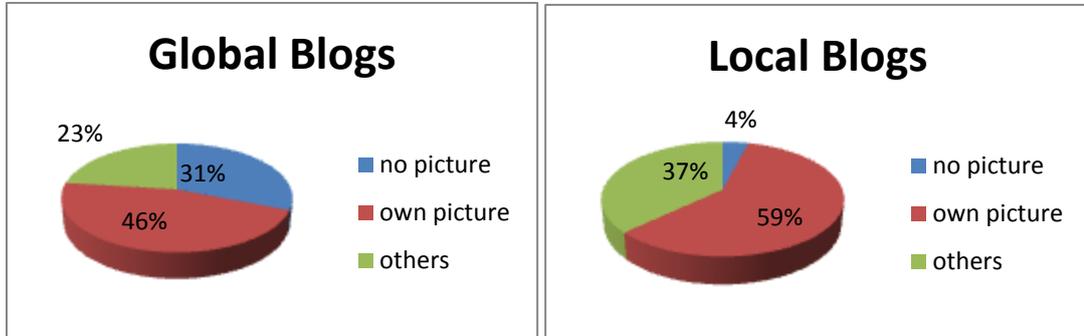


Figure 5. 1: Personal picture displayed in Chinese blogs

59% of Chinese local bloggers display pictures of themselves in their personal information page compared to 46% of the Chinese global bloggers that do so. In fact, the Chinese local bloggers display a higher percentage of pictures of others compared to the Chinese global bloggers with 37% of local bloggers doing so compared to only 23% of global bloggers taking the same action. On the other hand, the Chinese global bloggers show a distinctively higher percentage of not displaying any form of image to describe themselves as authors compared to the Chinese local bloggers. 31% of Chinese global bloggers do not have any image displayed on their personal information compared to only 4% of Chinese local bloggers doing the same. Similarly, there are marginal differences in term of name disclosure by both the Chinese global and local bloggers as shown in Figure 5.2.

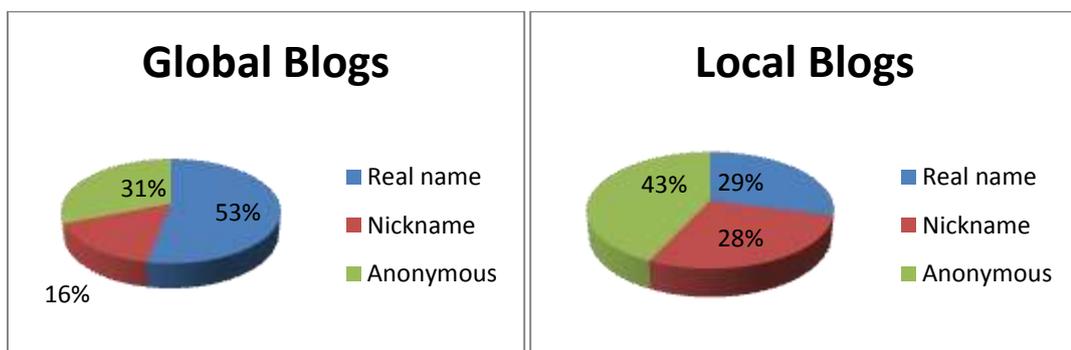


Figure 5. 2: Name disclosures of Chinese bloggers

The Chinese global bloggers display a significantly higher percentage in the disclosure of their full name with 53% compared to only 29% of the Chinese local

bloggers' disclosure of their full name. The Chinese local bloggers however, preferred to use a nickname in disclosing themselves with 28% disclosing only a nickname compared to only 16% of the Chinese global bloggers using nicknames. In term of using anonymous as their identity, the Chinese local bloggers seem to have a higher proportion with 43% preferring to remain anonymous in their identity compared to only 31% of the Chinese global bloggers doing so. In disclosing their age, however, both the Chinese global and local bloggers leave their age information blank. As shown in Figure 5.3, both the global and local bloggers display a proportionately low percentage in age disclosure.

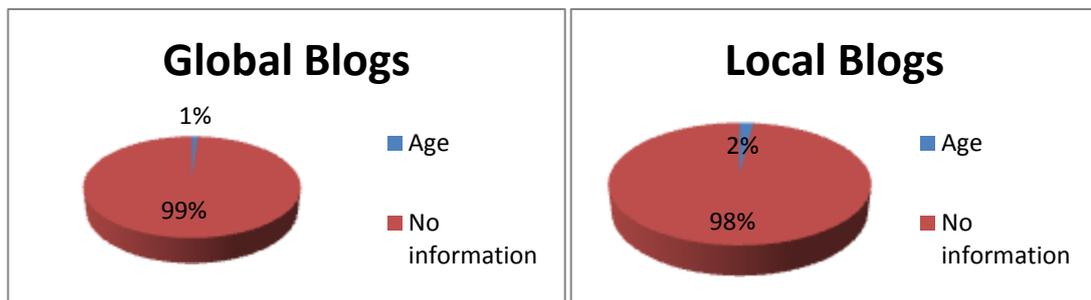


Figure 5. 3: Age information of Chinese bloggers

Figure 5.3 shows there is a relatively similar proportion of the number of Chinese bloggers that disclosing information about their age from both global and local blogs users. 1% of the Chinese global bloggers disclose their age on the author's profile section of the blog pages with Chinese local bloggers displaying a similar proportion at only 2%. Based on the gender information disclosure however, the disparity shown by both the Chinese global and local bloggers is significantly larger as depicted in Figure 5.4.

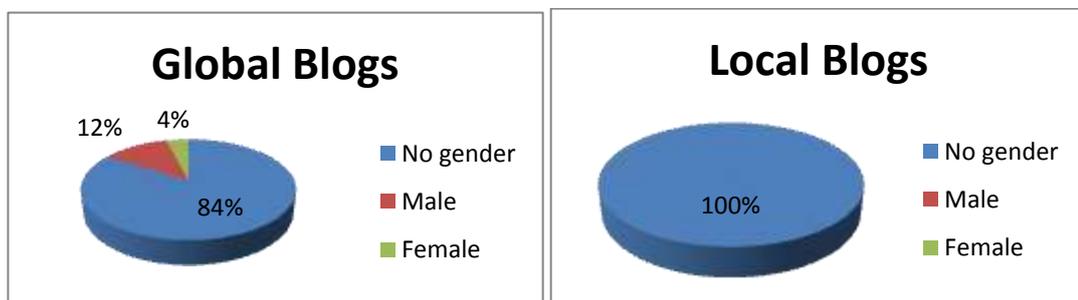


Figure 5. 4: Information on gender by Chinese bloggers

The gender information disclosed by both the Chinese global and local bloggers shows a disparity, with 16% of the Chinese global bloggers preferring to disclose their sexual category. The balance, 84% of the Chinese global bloggers however,

prefers not to disclose their gender type. The trend of non-disclosure of sexual category was followed by the Chinese local bloggers where no bloggers disclose the information on type of gender. In fact, the proportion of bloggers not disclosing their sexual category is 100%.

Except for the disclosure of personal pictures in the author’s profile section, the Chinese local bloggers on the whole prefer to disclose as little as possible about themselves with 29% displaying their full name, only 2% disclosing their age and 0% giving information on gender. Comparatively, the Chinese global bloggers disclose relatively more information about themselves with 53% mentioning their full name, 6% displaying their age and 41% giving information about their sexual category.

5.5.1.2 Image

The next indicator is image, referring to profiler illustrations that reflect people, places, monuments or events that are posted in the content section of the blog pages. It included pictures of the blog author him/herself, of other people be it friends or families or acquaintances, of icons or figures of authorities and reflections of landscapes and natural views. Furthermore, the findings also took into account the number of times images or pictures were posted on the blog pages to show the frequent repeat of the use of images to relay information. Based on this indicator, the differences between both the Chinese global and local blogs in terms of the images posted on blogs walls are illustrated in Table 5.5.

Table 5. 5: Image information on Chinese blogs

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
Image	No image	12	33
	Personal	74	47
	People or landscape	14	20
	Tradition or group	0	0
	Leader	0	0
	No image	12	33
	1 – 3 images	23	20
	4 – 6 images	25	25
	7 – 10 images	20	10
	> 10 images	20	12

The type of image that the Chinese global bloggers use involves a substantially higher percentage of personal images compared to the Chinese local bloggers. 74% of the Chinese global bloggers use personal images on their pages compared to only 47% of the Chinese local bloggers that posting similar images. The Chinese local bloggers however, also prefer to use no image at all on their blogs postings with 33% compared to only 12% of the Chinese global bloggers that preferring to do so. Both types of bloggers, on the other hand post zero images related to tradition or group or any images that depicting leaders or figures of authorities. The comparative illustration is shown in Figure 5.5

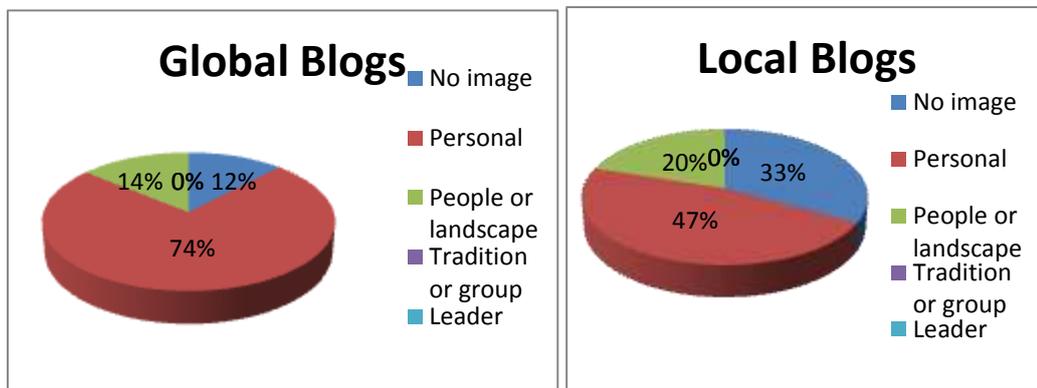


Figure 5. 5: The type of image posted on China blogs

The numbers of images posted on both the Chinese blogs, however, vary marginally. 25% of both the Chinese global and local blogs have 4 – 6 images posted on their blogs. In addition, 23% of the Chinese global bloggers and 20% of the Chinese local bloggers have 1 – 3 numbers of images on their blogs. They do differ, however, in terms of their preferences of posting larger numbers of images on their blogs. 20% of the Chinese global bloggers and 10% of the Chinese local bloggers 7 – 10 images postings, while those with images postings of more than 10 accounted for 20% of the Chinese global bloggers and 12% of the Chinese local bloggers. These differences in preferences are shown in Figure 5.6 below.

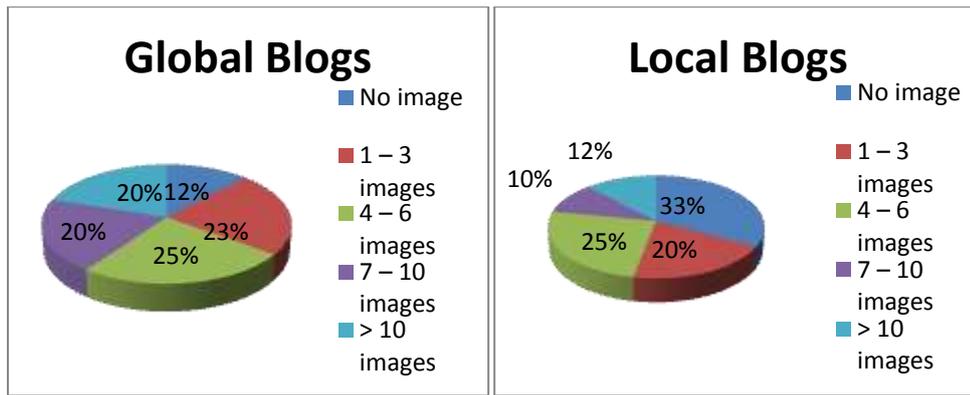


Figure 5. 6: Number of images postings on Chinese blogs

Comparatively, the Chinese global and local bloggers preferences in term of images vary significantly on the type of images that are posted on blogs wall. A higher proportion of the Chinese global bloggers preferring pictures of people and landscapes, while a higher proportion of Chinese local bloggers preferring postings of personal pictures. Neither type of bloggers however, has a huge disparity in their preferences in the number of images posted on blog pages.

5.5.1.3 Layout

Layout refers to the outline of how the information on blog pages is structured and presented. This indicator shows how content of the blogs is arranged in simple, one or two columns layout or complex three or four columns layout. The preferences in the structure of layout by the Chinese bloggers are shown in Table 5.6.

Table 5. 6: The layout structure preferences of Chinese bloggers

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
Layout	Simple	82	92
	Complex	18	8

The type of structure preferred by the majority of both the Chinese global and local bloggers is simple layout (one or two columns) with the proportion of 82% and 92% respectively. Only a small proportion of the sample bloggers preferred a layout that is complex. This is illustrated by 18% of the Chinese global bloggers and 8% of the Chinese local bloggers that chose three or four columns structures to present information on blogs as shown in Figure 5.7.

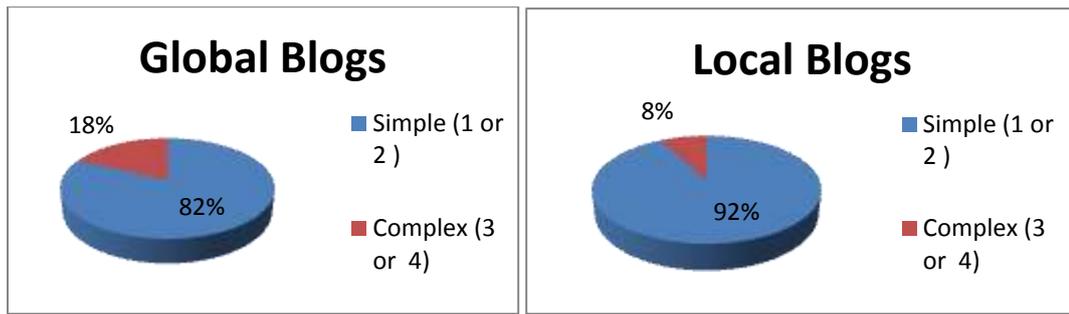


Figure 5. 7: Layout structure preferred by Chinese bloggers

5.5.1.4 Award

Award refers to the posting of rewards that the bloggers receive as recognition to the blogging activities either from the blog provider or any other bloggers group. The recognition usually comes in the form of a seal or visual design that contains a statement of the bloggers' achievements. The award is usually posted on the blog pages by the blog authors. Both the Chinese global and local bloggers however showed similar preferences in terms of award posting on their blog pages as shown in Table 5.7.

Table 5. 7: Award posting on Chinese blogs

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
Award	Yes	0	0
	No	100	100

Observation on China blog pages showed that both the Chinese global and local bloggers do not have any award posted on their wall. All sample bloggers or 100% of them do not show any award or recognition that are related to their blogging activities either by the Chinese global bloggers or the Chinese local bloggers as illustrated in Figure 5.8.

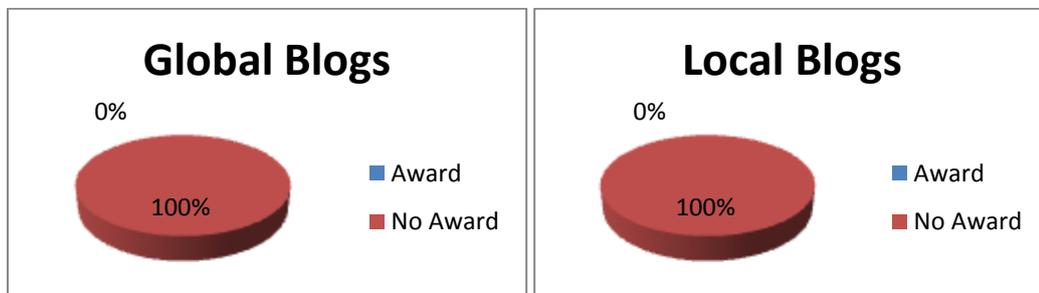


Figure 5. 8: Award posting by Chinese global and local bloggers

5.5.1.5 Disclaimer

Similarly, disclaimer refers to the statement of liability or copyright that carried legal implication on readers that sought to infringe or took any part of the content of the blog for their own use. The Chinese bloggers' preferences for this type of content can be shown in Table 5.8.

Table 5. 8: Preferences for disclaimer by Chinese bloggers

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
Disclaimer	Yes	4	0
	No	96	100

The Chinese local bloggers showed no inclination of preferring to post a disclaimer or copyright statement on their blog pages. That inclination is depicted by 100% of the bloggers having no statement of disclaimer on their wall as shown in Figure 5.9. 4% of the global bloggers however have disclaimer statement on their blogs pages.

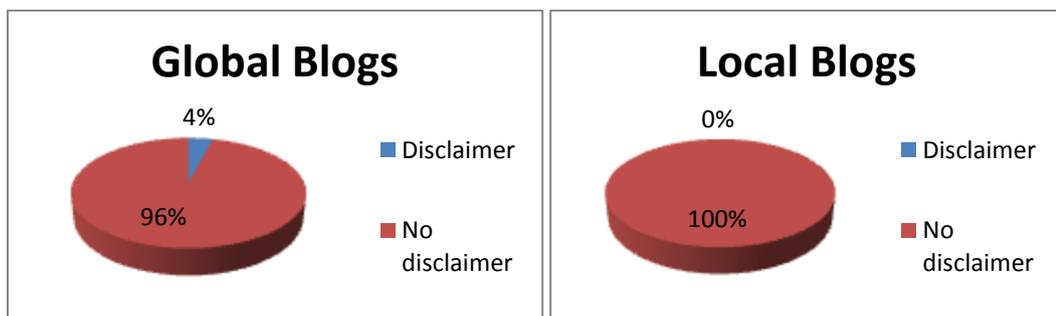


Figure 5. 9: Statement of disclaimer by Chinese bloggers

5.5.1.6 Multimedia

The last indicator is multimedia which contained aspects of audio or visual forms of technology that are used to relay information. The multimedia presentations on blogs are represented by two variables; the type of multimedia used and the number associated to the multimedia presentation. The Chinese bloggers preferences on the use of multimedia on blog pages can be shown in Table 5.9.

Table 5. 9: Multimedia preferences by Chinese bloggers

Indicator	Variables	China Global Blogs (%)	China Local Blogs (%)
	No multimedia	76	49
	Video	24	8
	Audio	0	33
	Both	0	10

Multimedia	No multimedia	76	49
	1 – 3	14	27
	4 – 6	7	20
	7 – 10	3	2
	> 10	0	2

The Chinese global bloggers preferred to use no multimedia to relay information compared to the Chinese local bloggers. 76% of the Chinese global bloggers have no multimedia presentation compared to 49% of the Chinese local bloggers that do not prefer multimedia as part of their blog content. However, the Chinese global bloggers that preferred the use of multimedia to present information applied the video aspect of technology rather than the use of audio or both. 24% of the Chinese global bloggers preferred the use of video presentation compared to 0% use of audio and 0% use of both aspects of technology together. Comparatively, the Chinese local bloggers who used multimedia presentation on their blogs preferred higher usage of audio technology relatively to visual. 33% of the Chinese local bloggers preferred the application of audio compared to only 8% of the Chinese local bloggers use video and only 10% of them preferred the combination of both aspects of technology on their blogs. The disparity is shown in Figure 5.10.

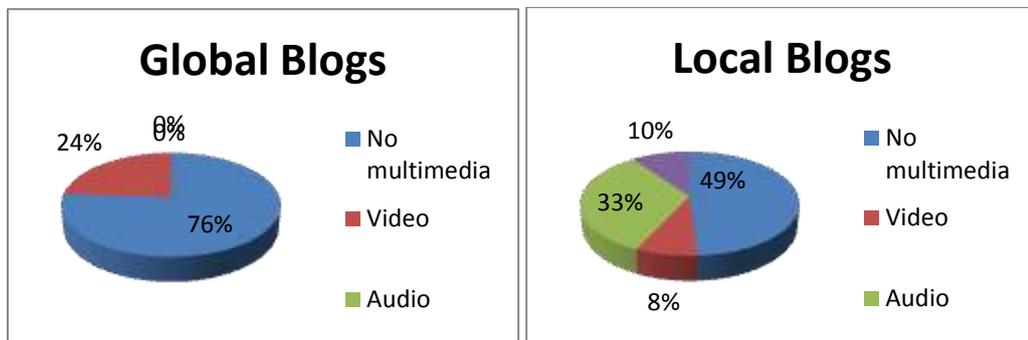


Figure 5. 10: The type of multimedia preferences by Chinese bloggers

In term of the number of multimedia usage, relatively the Chinese local bloggers applied a higher percentage of multimedia presentations on their blog pages. The Chinese global bloggers recorded 14% in the range of multimedia usage between 1 to 3, 7% in the use of multimedia of about 4 to 6 and only 3% in the range of 7 – 10 usage of multimedia. On the other hand, the Chinese local bloggers showed 27% in the range of 1 – 3 multimedia use, 20% in 4 – 6 numbers of multimedia usage, 2% in the range of 7 – 10 and 2% in the multimedia usage of more than 10 number of

multimedia use. The preferences in the number of multimedia use are depicted in Figure 5.11.

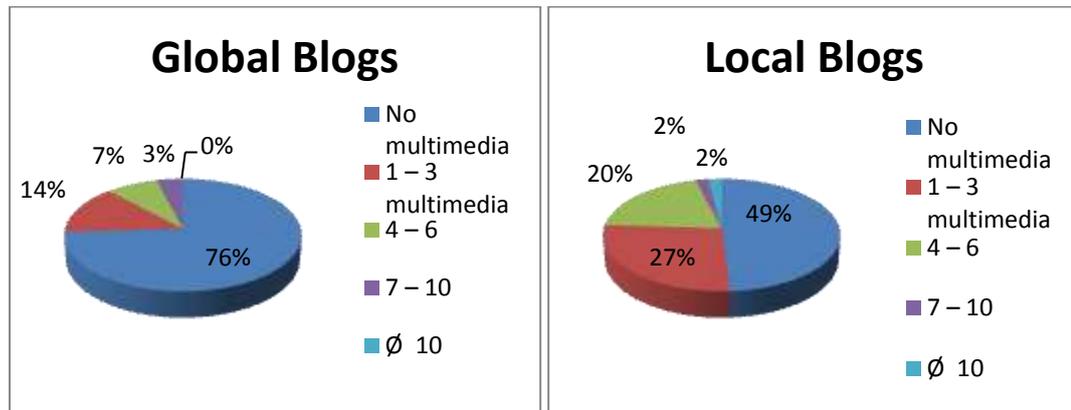


Figure 5. 11: The number of multimedia use by Chinese bloggers

Relatively, the Chinese local bloggers preferred to use a variety of multimedia presentations on their blog pages compared to the Chinese global bloggers. In addition, the Chinese local bloggers also recorded a higher proportion in term of the number of multimedia use compared to the Chinese global bloggers.

5.5.2 South Korea

The South Korean global and local bloggers design preferences show disparities in terms of the choice of design elements that are posted on blog pages. These disparities are shown in personal information disclosure, award display, images and multimedia choices. The preferences in terms of colour, layout and disclaimer, however, are similar among both South Korean global and local bloggers.

5.5.2.1 Personal Information

The types and level of personal information disclosure between the South Korean global and local bloggers vary significantly as shown in Table 5.10. The differences are shown in the types of disclosure that bloggers chose to disclose about themselves such as picture, name and gender. The information on age, however, tends to be the least particular detail that both the South Korean global and local bloggers prefer to reveal. Relatively, the South Korean global bloggers prefer to disclose more about themselves compared to the South Korean local bloggers. 35% of the South Korean global bloggers post their own picture, 45% reveal their full name and 67% disclose their sexual category. The South Korean local bloggers on the other hand, show a

proportion of 25% display their own picture; only 2% of them disclose their full name and none of the bloggers reveal their gender. The details on each type of personal information preferred by both the South Korean global and local bloggers are explained below.

Table 5. 10: Personal information disclosure of South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
Personal Information	No picture	13	4
	Own picture	37	25
	Others	50	71
	Real name	32	2
	Nickname	53	98
	Anonymous	15	0
	Age	1	0
	No gender	65	100
	Male	20	0
	Female	15	0

The South Korean global and local bloggers preferences in displaying a pictorial description of themselves are shown in Figure 5.12. Both types of bloggers have the choice of displaying their own pictures or pictures of others or forgo displaying any pictures at all. The differences in the choice of picture representation of the blog author vary substantially among the South Korean global and local bloggers. 13% of the South Korean global bloggers prefer to display no pictorial representation of themselves as authors on the personal information section, while, proportionately, 37% of the bloggers post their own picture, the balance, 50%, opting for the pictures of others to depict them personally. Comparatively, the South Korean local bloggers preferences show that 4% display no picture at all, 25% of the local bloggers show their own picture while the biggest proportion of the local bloggers, i.e., 71% posted the pictures of others in the authors' section of the blog pages.

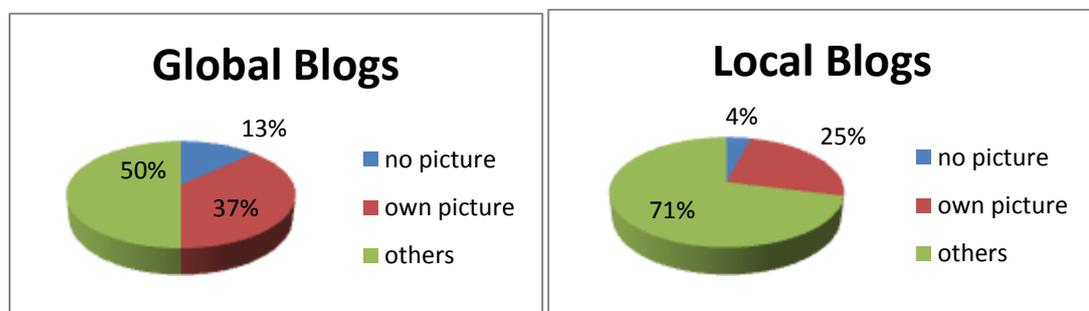


Figure 5. 12: Picture disclosures of authors by South Korean bloggers

Similarly, the level of authors' name disclosure by the South Korean global and local bloggers varies substantially with the South Korean global bloggers reveal a bigger proportion of name disclosure compared to the South Korean local bloggers. 32% of the South Korean global bloggers reveal their real name to introduce themselves, 53% use nickname while 15% remain anonymous to readers. Figuratively, only 2% of the South Korean local bloggers use their real name, while the balance, 98% choose to use a nickname as part of their introduction as the authors of blogs. The disparities in terms of name disclosure are shown in Figure 5.13.

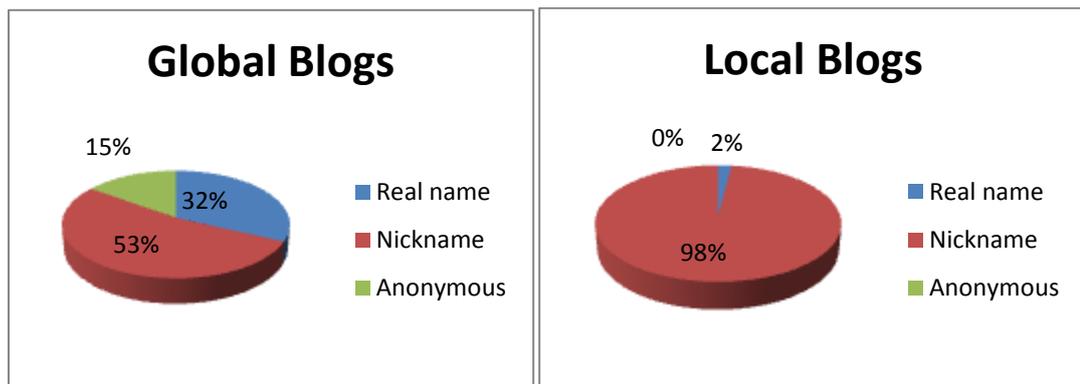


Figure 5. 13: Level of name disclosure by South Korean bloggers

The disclosure of age however, shows virtually no differences. Both the South Korean global and local bloggers prefer to give no information on age or birth relevant information. Figure 5.14 depicts that only 1% of the South Korean global bloggers disclosed their age while 0% of the South Korean local bloggers reveal information on age related significance.

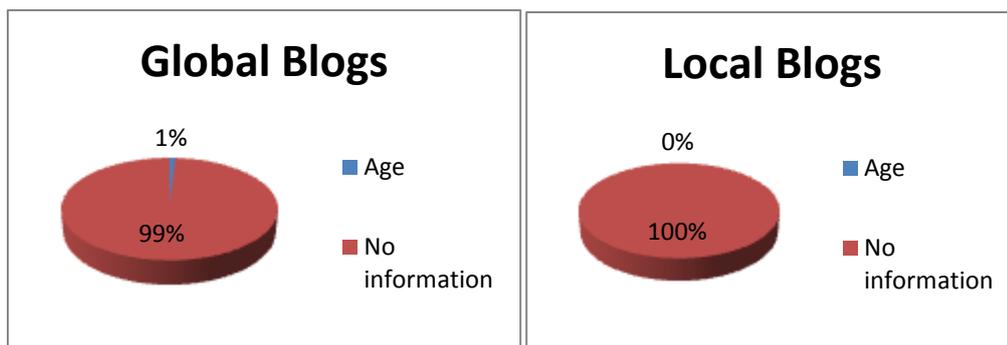


Figure 5. 14: Age disclosure information by South Korean bloggers

The sexual category exposure by the South Korean bloggers subsequently also indicates significant disparities dividing the preferences of both South Korean global and local bloggers. As shown in Figure 5.15, the South Korean global bloggers

prefer to reveal more information on their gender compared to the South Korean local bloggers. 20% of the global bloggers indicate that they are male bloggers while 15% of them indicate they are female in their sexual category preferences. The balance of 65% indicate neither a male nor female in their sexual category. On the other hand, 18% of the South Korean bloggers in the sample indicate their sexual category to be female as their gender in the authors' personal section on the blogs pages. The balance, 82%, however give no information on their sexual category.

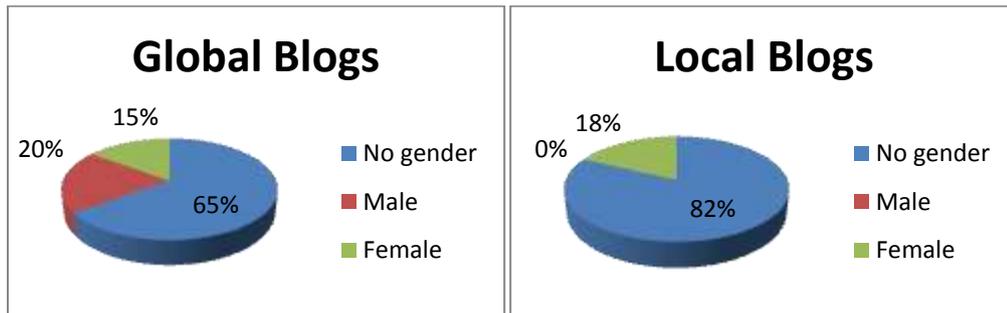


Figure 5. 15: Information on sexual category by South Korean bloggers

5.5.2.2 Image

The types and number of images preferred by both the South Korean global and local bloggers in the sample are depicted in Table 5.11. The figures show that there are proportionate differences in the choice of images preferred by both categories of South Korean bloggers. However, both the South Korean global and local bloggers prefer to post personal images on their blogs with a significant proportion of 70% and 98% respectively. In addition, a considerable proportion of the South Korean global and local bloggers also prefer to communicate information through pictorial messages. 40% of the global bloggers have more than 10 images on a single blog page while 76% of the local bloggers prefer to post more than 10 images at any one time. Further description of the types and number of images preferences by the South Korean global and local bloggers are shown in Figure 5.16.

Table 5. 11: Images preferences by South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
	No image	14	2
	Personal	70	98
	People or landscape	16	0
	Tradition or group	0	0
	Leader	0	0

Image	No image	14	2
	1 – 3 images	12	10
	4 – 6 images	20	6
	7 – 10 images	14	6
	> 10 images	40	76

The South Korean global bloggers preferences on the types of images posted on their blog pages consists of both personal and scenic view pictures. 70% of the South Korean global bloggers prefer to use personal photos of themselves in the content section of their blog pages while 16% choose to use personal or landscape pictures to communicate information to readers. For the South Korean local bloggers, on the other hand, the majority use personal photos to interact with their readers with 98% of the bloggers choosing to do so. Relatively, 14% of the South Korean global bloggers prefer to have no images in their blogs postings compared to only 2% of the South Korean local bloggers who prefer no images at all. Both the South Korean global and local bloggers simultaneously prefer to have zero images representing leaders, traditions or groups on their blog pages. These differences are depicted in Figure 5.16.

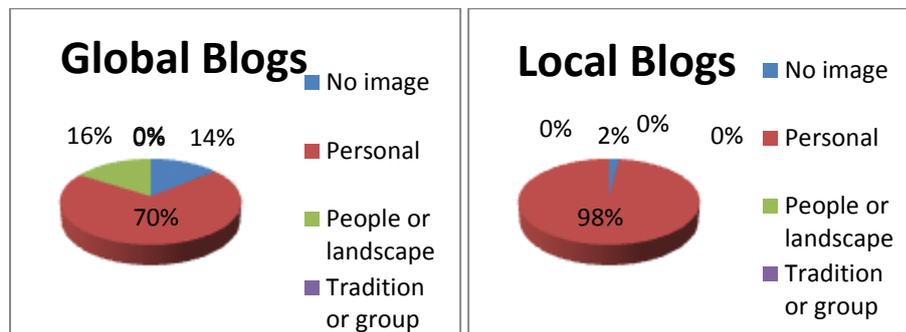


Figure 5. 16: Information on the types of images by South Korean bloggers

The number of images preferred by the South Korean bloggers varies significantly as shown in Figure 5.17. The South Korean global bloggers preferences on the number of images postings on blogs are evenly distributed in approximate proportion across the board. 12% of the South Korean global bloggers choose to use 1 – 3 images, 20% of them prefer to post 4 – 6 images on blogs, 14% of the bloggers opt for 7 – 10 images and the majority, 40%, prefer to put more than 10 images on their blogs postings. Comparatively, 10% of the South Korean local bloggers prefer to use 1 – 2 images on blogs, 6% choose to post 4 – 6 images and another 6% use 7 – 10 images in the content section of their blogs. The majority of the South Korean local

bloggers, which constitute 76% of the sample, prefer to communicate information using more than 10 images on their blog postings.

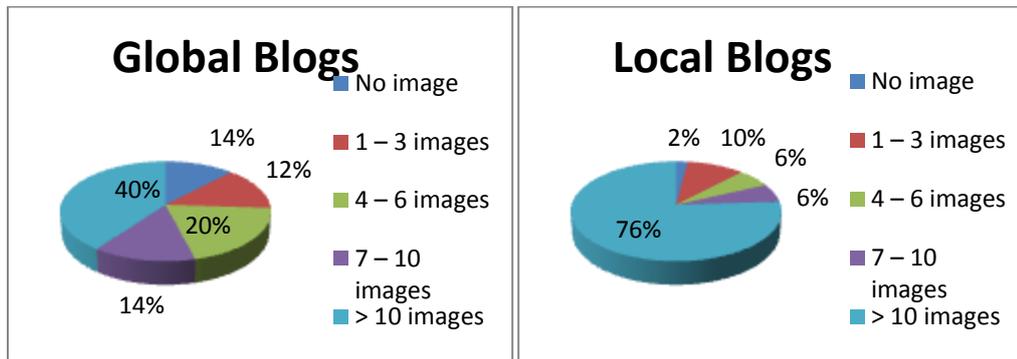


Figure 5. 17: Number of images preferred by South Korean bloggers

5.5.2.3 Layout

The majority of both South Korean global and local bloggers prefer to use simple layout to structure the way their information is relayed on blogs. The choice of layout structure is shown in Table 5.12 and further descriptions on the layout structure preferences are explained in Figure 5.20.

Table 5. 12: Layout structure preferences by South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
Layout	Simple	94	80
	Complex	6	20

94% of the South Korean global bloggers prefer to use simple layout structure to arrange information and messages in blogs postings. The use of simple layout which consists of one or two horizontal frames is also preferred by the South Korean local bloggers, with 80% using similar layout structure. The balance, which constitutes 6% of the South Korean global bloggers and 20% of the South Korean local bloggers, however, choose to use the complex layout structure of three to four columns frame to arrange information on their blogs. The differences are shown in Figure 5.18.

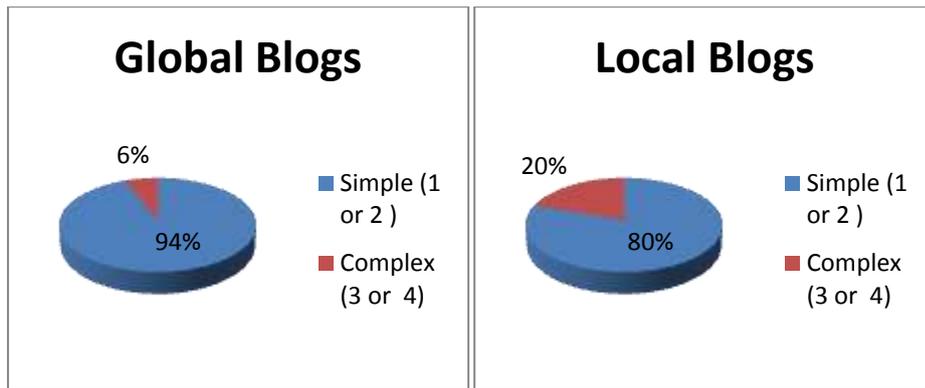


Figure 5. 18: Structure of layout preferred by South Korean bloggers

5.5.2.4 Award

In terms of award statements posted on blog pages by South Korean bloggers, the design feature is more favourable by the South Korean local bloggers. 97% of the South Korean local bloggers prefer to post awards or achievements statements on the wall of their blog pages as shown in Table 5.13.

Table 5. 13: Award statements by South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
Award	Yes	0	97
	No	100	3

The South Korean global bloggers, on the other hand, have no award statements posted on their blogs with the proportion of 100% of the sample preferring not to. The differences can be seen in Figure 5.19.

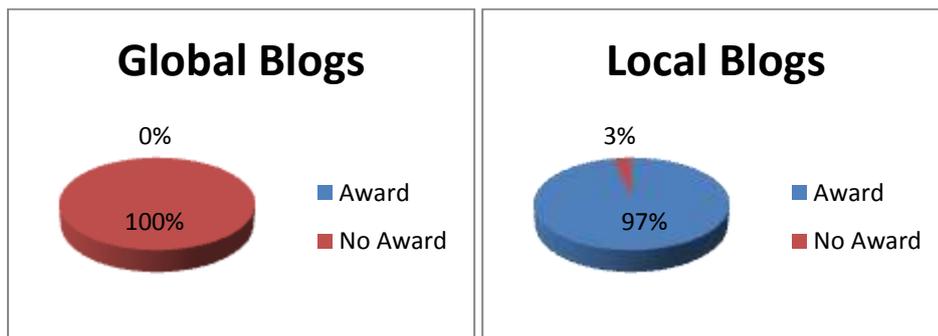


Figure 5. 19: Statement of award preferences by South Korean bloggers

5.5.2.5 Disclaimer

The preferences on disclaimer or copyright statements by the South Korean bloggers show that there seems to be a slight difference between both the global and local bloggers on this particular design feature. 2% of the South Korean local bloggers

prefer to have a statement of disclaimer or copyright posted on the wall of their blog pages as shown in Table 5.14 and Figure 5. 20.

Table 5. 14: Statement of disclaimer by South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
Disclaimer	Yes	0	2
	No	100	98

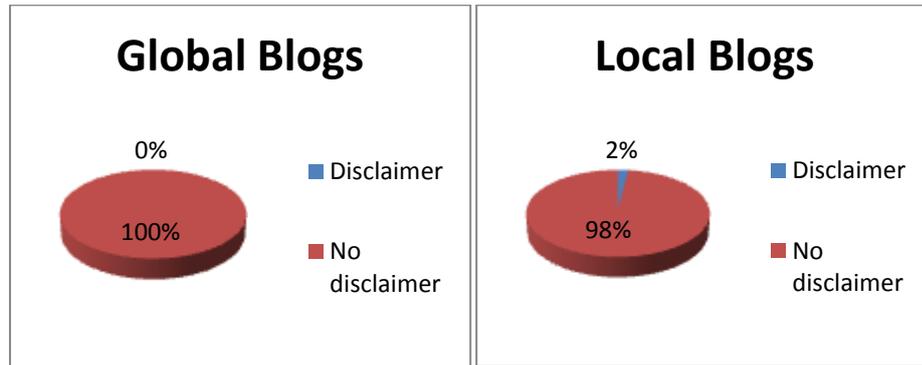


Figure 5. 20: Disclaimer statement preferences by South Korean bloggers

5.5.2.6 Multimedia

The South Korean global and local bloggers prefer less multimedia features on their blogs postings as a method to relay information. As shown in Table 5.15, the type and number of multimedia preferred by the South Korean bloggers indicates that 63% of the South Korean global bloggers choose to use no multimedia on their blogs while 82% of the South Korean local bloggers opt not to use any multimedia applications. The details on the type and number of multimedia preferred by the South Korean bloggers are explained by Figure 5.23 and Figure 5.24.

Table 5. 15: Number and types of multimedia by South Korean bloggers

Indicator	Variables	SKorea Global Blogs (%)	SKorea Local Blogs (%)
Multimedia	No multimedia	63	82
	Video	33	12
	Audio	0	6
	Both	4	0
	No multimedia	63	82
	1 – 3	25	14
	4 – 6	10	4
	7 – 10	2	0
	> 10	0	0

The types of multimedia preferred by both the South Korean global and local bloggers vary significantly between these two categories of bloggers as shown in Figure 5.21. The South Korean global bloggers prefer to use video and a

combination of both video and audio as the multimedia applications on their blogs. 33% of the South Korean global bloggers prefer to use video applications while 4% choose to use the multimedia application that is a combination of both video and audio. The South Korean local bloggers, on the other hand, prefer to use video and audio applications on their blogs to convey information. This is shown by 6% of the South Korean local bloggers preferring to use audio applications while 12% prefer to use video application.

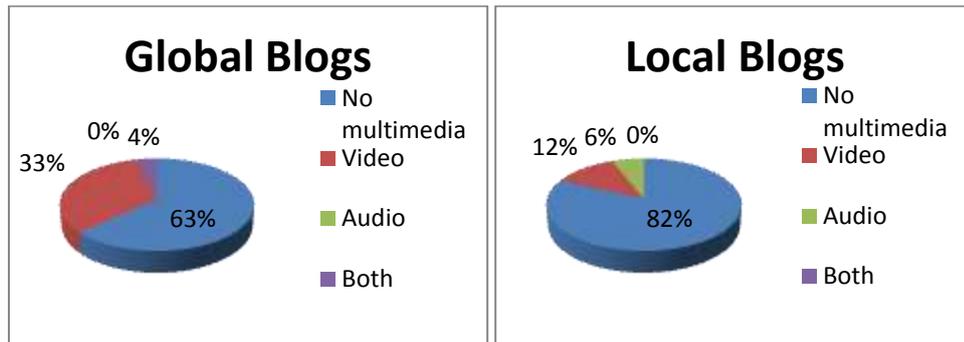


Figure 5.21: Types of multimedia applications preferred by South Korean bloggers

With regard to the number of multimedia applications preferred by the South Korean bloggers, the figures show that the South Korean global bloggers prefer to use a higher number of multimedia applications on their blogs compared to the South Korean local bloggers. 25% of the South Korean global bloggers prefer to use 1 – 3 multimedia applications on blogs, 10% prefer to apply multimedia functions in the range of 4 – 6 applications and 2% use 7 – 10 multimedia applications on blogs postings. Relatively, 14% of the South Korean local bloggers prefer to use 1 – 3 multimedia applications and 4% choose to use 4 – 6 applications on their blogs. No bloggers in the South Korean local sample apply multimedia functions in the range of 7 – 10 applications. Similarly, no bloggers in either the South Korean global or local sample prefer to use more than 10 multimedia applications on their blogs postings. The variations in the number of multimedia applications preferences are shown in Figure 5.22.

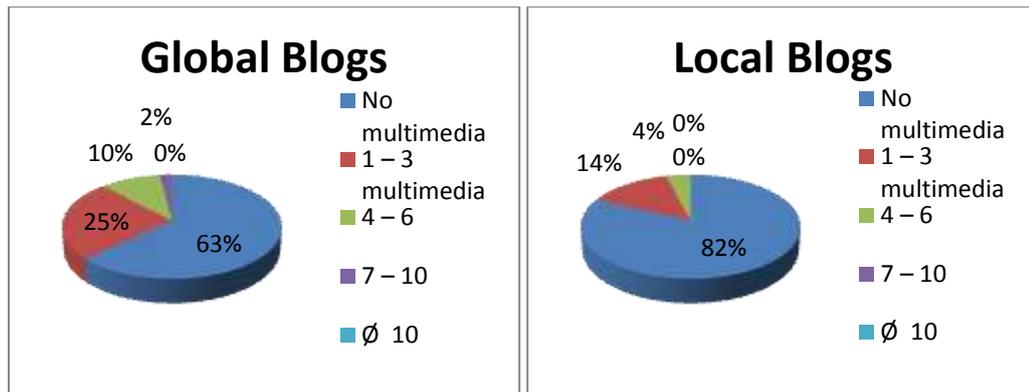


Figure 5. 22: Number of multimedia applications by South Korean bloggers

5.5.3 Japan

Japanese global and local bloggers also displayed discrepancies in their preferences on design features appearing on blogs postings. Except for award and disclaimer design features, both the Japanese global and local bloggers show differences in the preferred types and number of design elements on blogs walls.

5.5.3.1 Personal Information

In terms of personal information, Japanese local bloggers appear to be more open about themselves compared to the Japanese global bloggers as shown in Table 5.16. The Japanese local bloggers show higher proportions in disclosing personal information using pictures to describe themselves as authors, revealing names with which they are associated, disclosing their ages and mentioning their sexual categories. Comparatively, the Japanese global bloggers prefer to disclose less about their personal self with lower proportions compared to the local bloggers in posting their pictures, disclosing their names and ages as well as mentioning their gender.

Table 5. 16: Personal information disclosure by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Personal Information	No picture	15	0
	Own picture	39	51
	Others	46	49
	Real name	37	4
	Nickname	57	96
	Anonymous	6	0
	Age	19	37
	No gender	34	31
	Male	17	6
	Female	49	63

Individual items in the personal information section of blogs of the Japanese global and local bloggers which consists of picture of the author, name, age and gender are analysed and discussed as below. As depicted in Figure 5.23, the Japanese local bloggers preferred to disclose more about themselves compared to the Japanese global bloggers. 51% of the Japanese local bloggers posted their own pictures while 49% opted to show pictures of others to describe their personal self. Meanwhile, the Japanese global bloggers preferred to disclose themselves less in pictures with 39% chose to put their own pictures, 46% preferred to post pictures of other while 15% opted to post no pictures at all. The differences are shown in Figure 5.23.

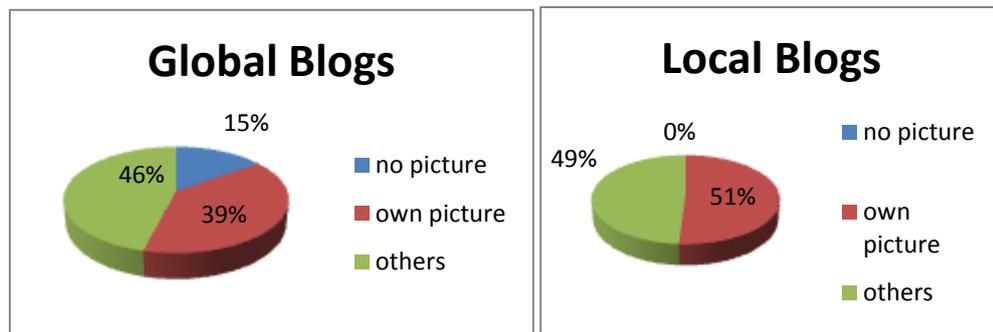


Figure 5. 23: Author personal pictures disclosed by Japanese bloggers

Both the Japanese global and local bloggers prefer to use a nickname to describe themselves with 57% of the global bloggers and 96% of the local bloggers opting to do so. Real name disclosure, however, indicates that 37% of the Japanese global bloggers prefer to use their real name while only 4% of the Japanese local bloggers choose to reveal their real name. The Japanese global bloggers, on the other hand, also prefer to remain anonymous with 6% revealing neither their full name nor gave any nickname associated with themselves. The preferences in terms of name disclosure are shown in Figure 5.24.

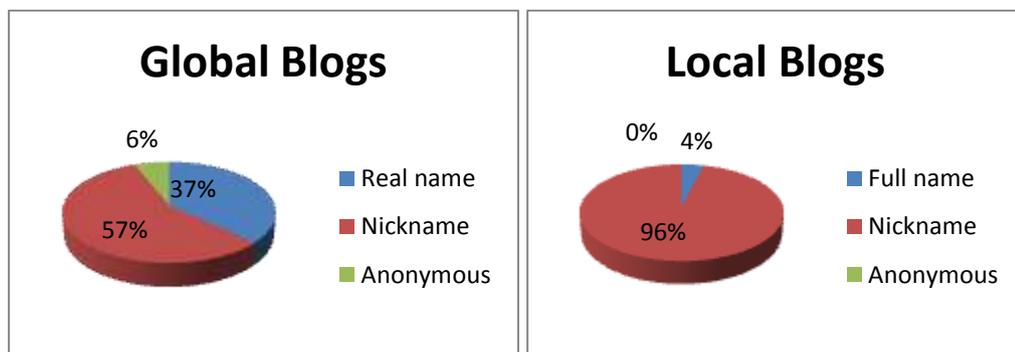


Figure 5. 24: Name disclosure by Japanese bloggers

Age disclosure by the Japanese bloggers show that the local bloggers prefer to reveal their age compared the global bloggers as shown in Figure 5.25. 98% of the Japanese local bloggers opt to mention their age relatively to 19% of the Japanese global bloggers who prefer to reveal information on age.

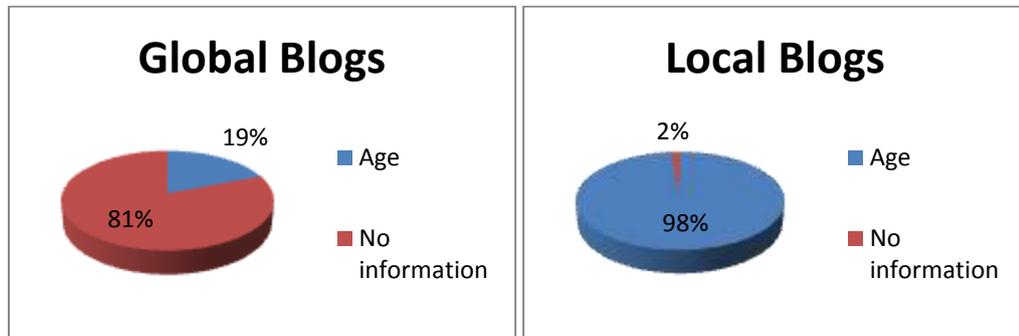


Figure 5. 25: Age disclosure by Japanese bloggers

Sexual category, which is the last item in the personal information section, shows that both the Japanese global and local bloggers have similar proportions in terms of revealing gender. 34% of the Japanese global bloggers forgo mentioning their sexual category while 66% mention their gender. Relatively, 31% of the Japanese local bloggers refuse to mention their sexual category while 69% prefer the reveal their gender, as shown in Figure 5.26.

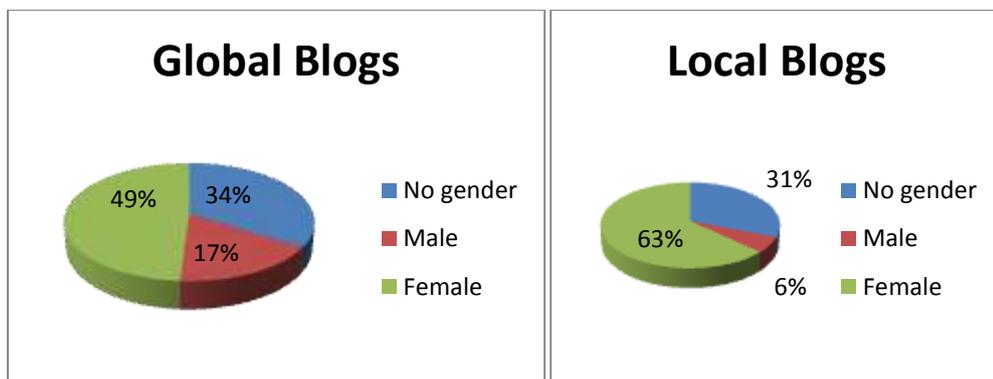


Figure 5. 26: Sexual category preferences by Japanese bloggers

5.5.3.2 Image

The preferences on the types and numbers of images posted on blogs vary among the Japanese global and local bloggers as shown in Table 5.17. The Japanese global bloggers prefer to use personal images, people and scenic views as well as pictures that represented tradition or group to relay information to readers. The Japanese local bloggers, however, choose to post personal, people and landscape images on blogs.

In terms of the number of images posted, the Japanese global bloggers prefer to have a bigger number of images posted on blogs compared to the Japanese local bloggers. Both types and number of images prefer by the Japanese bloggers are explained in Figure 5.27 and Figure 5.28.

Table 5. 17: Types and number of images by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Image	No image	8	14
	Personal	53	78
	People or landscape	23	8
	Tradition or group	16	0
	Leader	0	0
	No image	8	14
	1 – 3 images	10	39
	4 – 6 images	19	12
	7 – 10 images	4	12
	> 10 images	59	23

The Japanese global bloggers prefer to have a variety of images posted on their blogs compared to the Japanese local bloggers as depicted in Figure 5.27. 53% of the Japanese global bloggers prefer to use personal images, 23% choosing to post images of people and landscape while 16% opt to use images that represent tradition or group. Comparatively, 78% of the Japanese local bloggers prefer personal images and 8% choose to use images of people and landscape. On the other hand, 8% of the global bloggers prefer no images in blogs postings while 14% of the local bloggers choose to use no images to relay information.

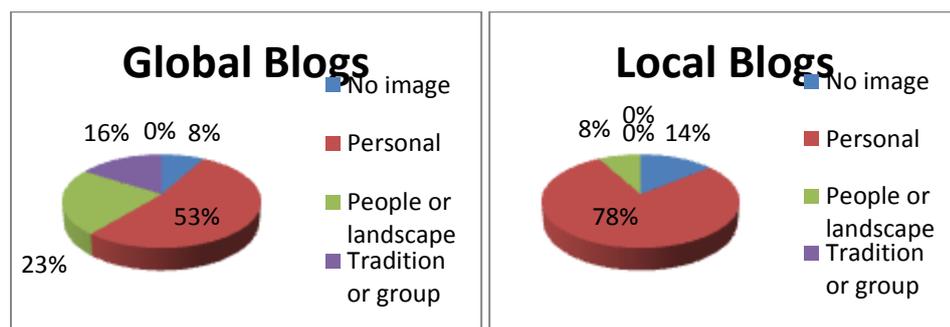


Figure 5. 27: Types of images preferred by Japanese bloggers

In addition, the number of images preferred by the Japanese bloggers show that the Japanese global bloggers prefer the use of more images on blogs posting compared to the Japanese local bloggers. 59% of the Japanese global bloggers prefer to have more than 10 images at one time on blogs while only 23% of the Japanese local bloggers opt for more than 10 images. The Japanese local bloggers in the sample

prefer to have less images posted on blogs compared to the Japanese global bloggers with 39% and 10% respectively. For number of images between 4 – 6 and 7 – 10, the disparities between both the Japanese global and local bloggers vary marginally as shown in Figure 5.28. 19% of the Japanese global bloggers prefer to 4 – 6 images on blogs relatively to 12% of the Japanese local bloggers opt to do so. It is also observed that only 4% of the Japanese global bloggers choose to use 7 – 10 images compared to 12% of the Japanese local bloggers preferring 7 – 10 images on blogs.

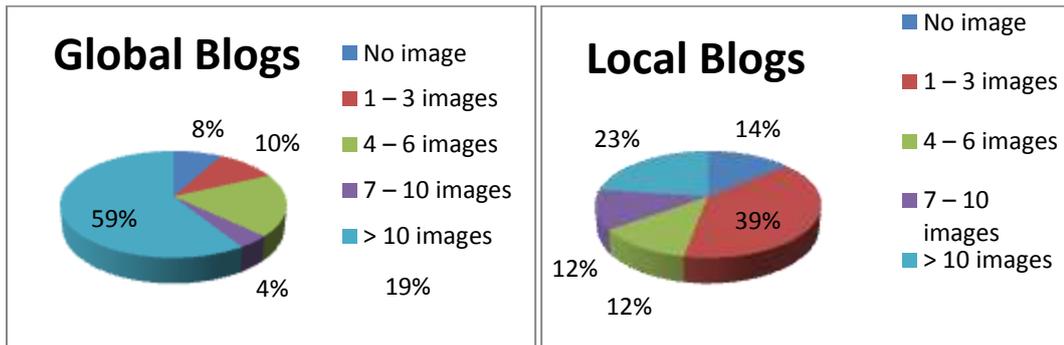


Figure 5. 28: Number of images preferred by Japanese bloggers

5.5.3.3 Layout

The observation on the choice of layout preferred by the Japanese bloggers shows that the majority of the Japanese global and local bloggers opted for simple 1 or 2 columns layout. The Japanese local bloggers, however, have a bigger proportion in preferring to use complex layout compared to the Japanese global bloggers as shown in Table 5.18.

Table 5. 18: Layout preferences by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Layout	Simple	94	74
	Complex	6	26

94% of the Japanese global bloggers prefer simple layout while only 6% choose to use complex layout to structure information on blogs. For the Japanese local bloggers, however, 74% chose to structure information in simple 1 or 2 columns layout while 26% prefer to use complex 3 or 4 columns structures of layout as shown in Figure 5.29.

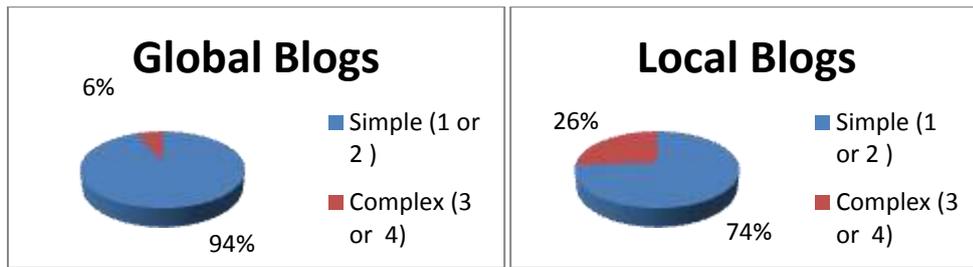


Figure 5. 29: Structure of layout preferred by Japanese bloggers

5.5.3.4 Award

The preferences on award postings by the Japanese bloggers show that there are no variations between both the Japanese global and local bloggers as shown in Table 5.19 and Figure 5.30. None of the Japanese global and local bloggers in the sample post any form of award or achievement statement on the walls of their blogs.

Table 5. 19: Award statement by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Award	Yes	0	0
	No	100	100

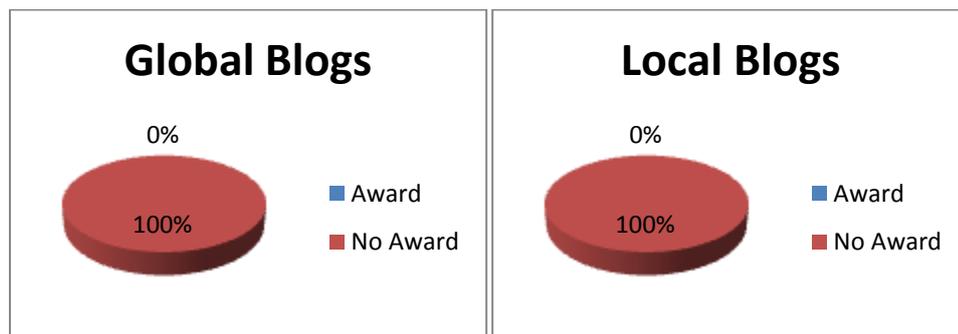


Figure 5. 30: Statement of award by Japanese bloggers

5.5.3.5 Disclaimer

Similar preferences are shown regarding the statement of disclaimer or copyright posted by the Japanese bloggers. 0% of both the Japanese global and local bloggers prefer to include disclaimer statements or any statement pertaining to copyright as shown by Table 5.20 and in Figure 5.31.

Table 5. 20: Disclaimer statement by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Disclaimer	Yes	0	0
	No	100	100

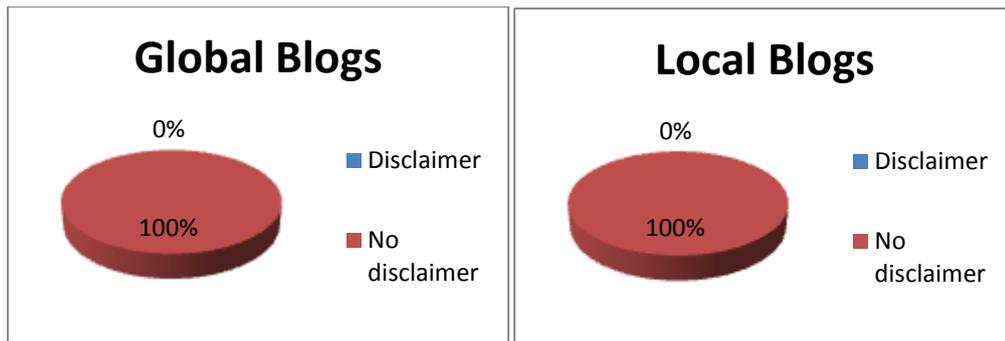


Figure 5. 31: Statement of disclaimer by Japanese bloggers

5.5.3.6 Multimedia

The majority of both the Japanese global and local bloggers prefer to use no multimedia on their blogs to disseminate information. 72% of the Japanese global bloggers and 84% of the Japanese local bloggers choose to use no multimedia in blogs postings as shown in Table 5.21. The types and numbers of multimedia preferred by the Japanese bloggers are shown in Figure 5.32 and Figure 5.33.

Table 5. 21: Types and number of multimedia by Japanese bloggers

Indicator	Variables	Japan Global Blogs (%)	Japan Local Blogs (%)
Multimedia	No multimedia	72	84
	Video	26	12
	Audio	2	4
	Both	0	0
	No multimedia	72	84
	1 – 3	12	12
	4 – 6	16	4
	7 – 10	0	0
	> 10	0	0

The types of multimedia preferred by the Japanese bloggers vary marginally between the global and local bloggers. Both the Japanese global and local bloggers prefer video applications as the medium preferred with 26% of Japanese global bloggers and 12% of the Japanese local bloggers showing this preference. Only 2% of the Japanese global and 4% of the Japanese local bloggers choose to use audio applications as a medium. Neither the Japanese global nor local bloggers use a combination of both video and audio applications. The preferences are shown in Figure 5.32.

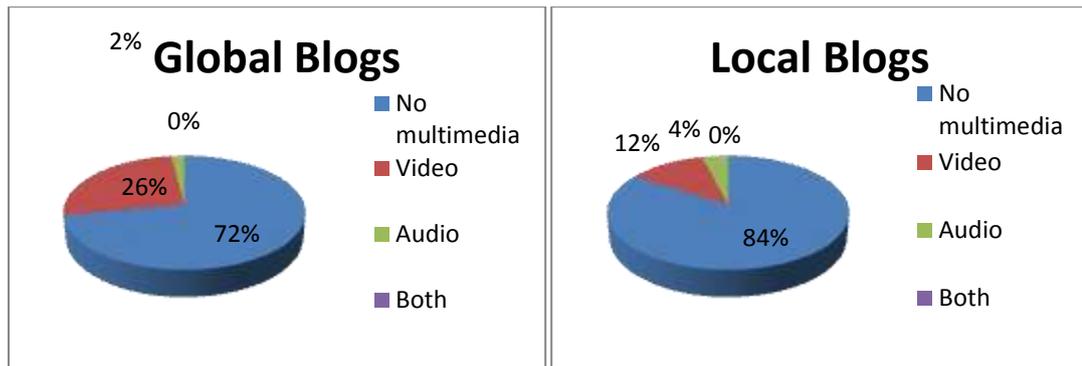


Figure 5. 32: Types of multimedia preferred by Japanese bloggers

Observation on the number of multimedia preferred by both the Japanese global and local bloggers shows that the choice is between the range of 1 – 3 and 4 – 6 numbers of multimedia applications. 12% of the Japanese global bloggers prefer to use 1 -3 multimedia applications while 16% prefer to apply 4 – 6 multimedia applications on blogs. Similarly, 12% of the Japanese local bloggers choose to use 1 – 3 multimedia applications while 4% prefer to use 4 – 6 applications. There are no multimedia applications preferred by either the Japanese global or local bloggers for the range 7 – 10 or more than 10 numbers of applications. The choices are shown in Figure 5.33.

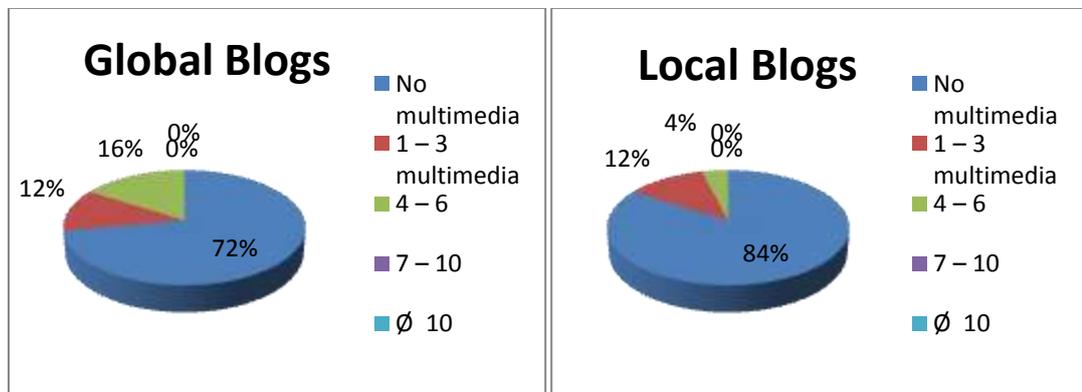


Figure 5. 33: Number of multimedia preferred by Japanese bloggers

5.5.4 Germany

The design features preferences of both the German global and local bloggers vary significantly among indicators chosen as design elements. Both categories of bloggers preferences differ in the types and number of design elements that consist of personal information, images, colour, layout structure, statements of award and disclaimer as well as multimedia. The significant variations are explained below according to each individual design features.

5.3.4.1 Personal Information

In terms of personal information that are disclosed by both the German global and local bloggers, the global bloggers prefer to reveal a lot more information about themselves compared to the local bloggers. Apart from age, the German global bloggers disclose more personal information by posting their own picture, revealing full name and mentioning their sexual category in higher proportion relatively to the German local bloggers as shown in Table 5.22. Detailed preferences on each item under personal information are given in the paragraphs below.

Table 5. 22: Types of personal information preferred by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Personal Information	No picture	1	0
	Own picture	65	49
	Others	34	51
	Real name	58	35
	Nickname	18	18
	Anonymous	24	47
	Age	50	100
	No gender	61	100
	Male	0	0
	Female	39	0

The type of picture disclosure in the personal information section of both the German global and local bloggers shows that the German global bloggers prefer to reveal their identities by posting their own pictures to describe themselves. 65% of the German global bloggers prefer to put their own picture as authors of blogs compared to 49% of the German local bloggers opting to do so. The differences are depicted in Figure 5.34.

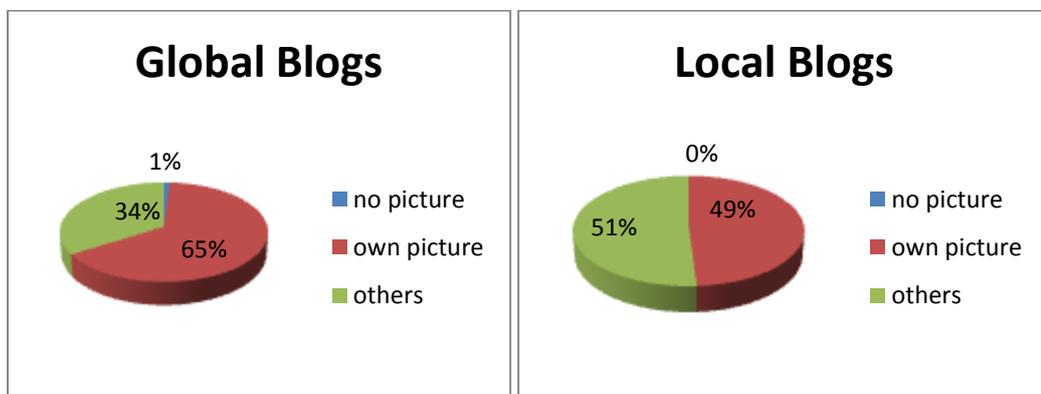


Figure 5. 34: Picture disclosures of authors by German bloggers

The level of name revelation by the German bloggers shows that the German global bloggers prefer to use their own name to identify themselves. 58% of the German global bloggers prefer to disclose their real name for authors' identification compared to only 35% of the German local bloggers choosing to reveal their real name. Furthermore, a higher proportion of the German local bloggers prefer to remain anonymous compared to the German global bloggers. 47% of the German local bloggers choose to give no information about their name relatively to only 24% of the German global bloggers preferring to remain anonymous. The choice of using a nickname, however, saw that both the German global and local bloggers prefer the use of a nickname in similar proportion; that is, 18%. Figure 5.35 shows the variations in name disclosure by both categories of German bloggers.

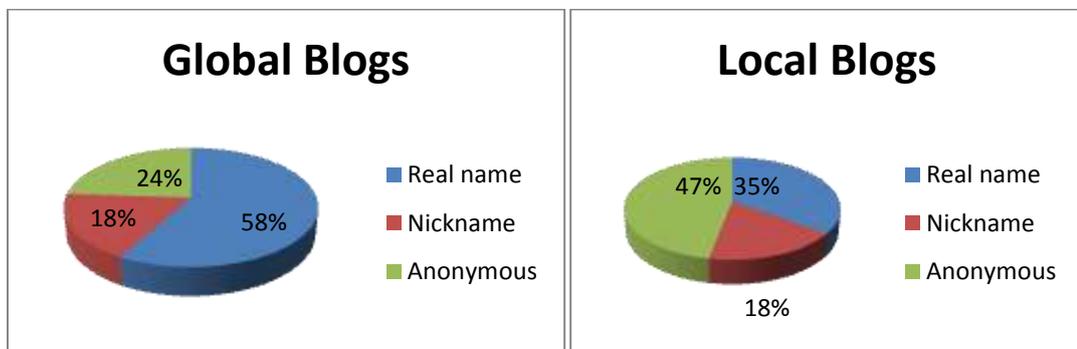


Figure 5. 35: Name disclosure by German bloggers

Conversely, German global bloggers prefer not to reveal any information regarding their age. 50% of the German global bloggers in the sample prefer to give information on age disclosure compared to all the German local bloggers, or 100%, choosing to reveal information on their age. The disparities are shown in Figure 5.36.

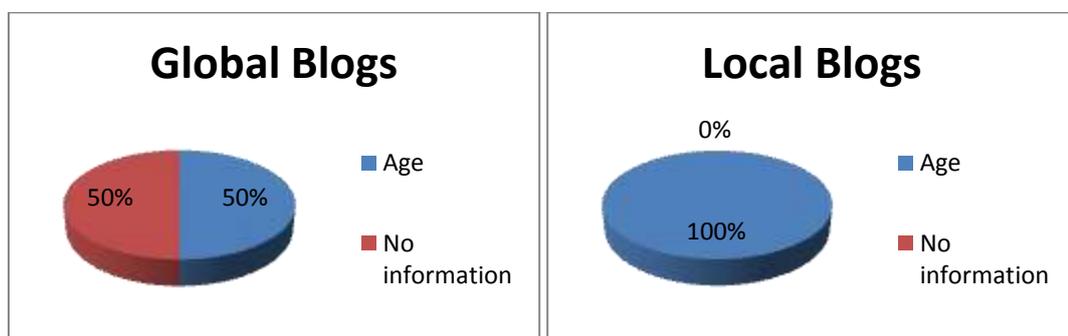


Figure 5. 36: Age disclosure by German bloggers

The German global bloggers choose to mention and disclose information with regard to their sexual category compared to the German local bloggers. Only 22% of the

German global bloggers refuse to disclose their gender while 78% prefer to say that they are female bloggers. 100% of the German local bloggers in the sample, on the other hand, choose to give no information on their sexual category as shown in Figure 5.37.

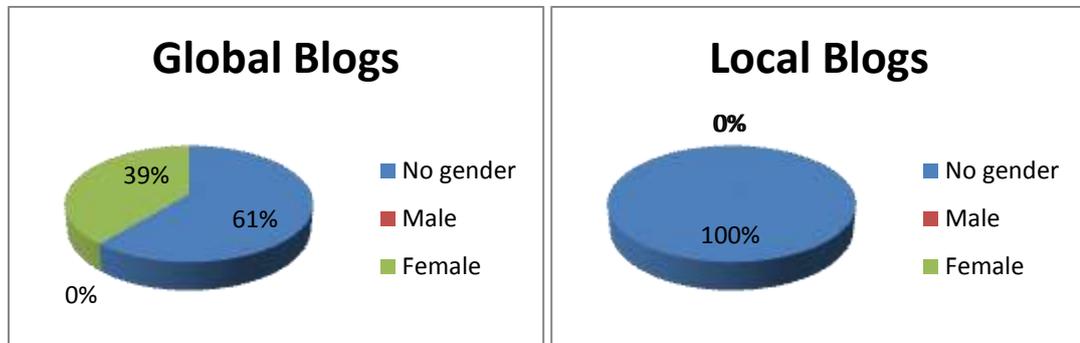


Figure 5. 37: Information on sexual category by German bloggers

5.5.4.2 Image

The German bloggers preferences in the types and number of image posting on their blogs differ substantially between global and local bloggers. The German global bloggers prefer personal image postings on their blogs and they also prefer to have a bigger number of image postings compared to the German local bloggers. The variations in preferences are shown in Table 5.23.

Table 5. 23: Types and number of image postings preferred by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Image	No image	0	18
	Personal	100	72
	People or landscape	0	10
	Tradition or group	0	0
	Leader	0	0
	No image	0	18
	1 – 3 images	0	43
	4 – 6 images	2	12
	7 – 10 images	0	10
	> 10 images	98	17

Figure 5.38 shows the preferences in the types of image postings by both the German global and local bloggers. The variations can be shown by the differences in the proportion preferred by each category of bloggers. 100% of the German global bloggers in the sample prefer to use personal images as postings on their wall while 72% of the German local bloggers prefer to use personal images on wall postings. A proportion of 10% of the German local bloggers prefer to post images of people and

scenic landscape view on blogs walls. The balance 18% of the German local bloggers choose to use no image on their blogs.

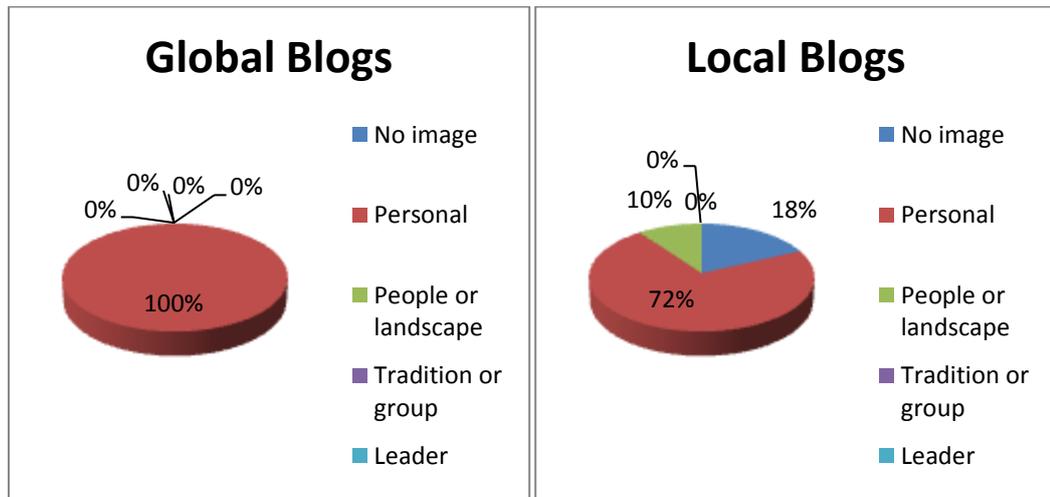


Figure 5. 38: Types of image postings by German bloggers

In addition, the number of images postings on blogs by the German bloggers shows very significant variations by both categories of bloggers. 98% of the German global bloggers prefer to post more than 10 images at one time on their blogs walls while 2% choose to use 4 – 6 images on blogs. The German local bloggers however, prefer to have a variety of number of images at any one time on their blogs postings. 43% of the German local bloggers prefer to use 1 – 3 images on blogs, 12% choose to post 4 – 6 images, and 10% opt to post 7 – 10 images as postings, whereas 17% prefer to use more than 10 images on blogs walls postings. The preferences by both the German global and local bloggers are shown in Figure 5.39.

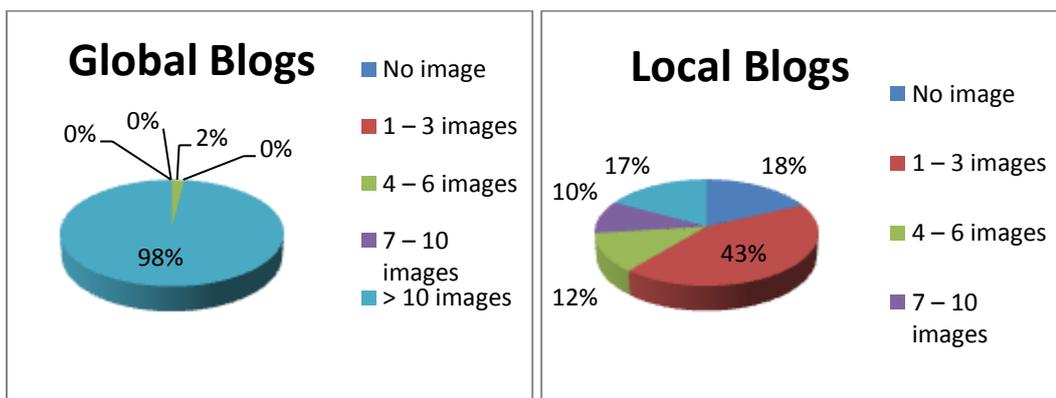


Figure 5. 39: The number of image postings preferred by German bloggers

5.5.4.3 Layout

Table 5.24 shows the layout preferences by the German bloggers. The variations show that the majority of the German global bloggers prefer simple layout structure while the majority of the German local bloggers prefer layout structure that is complex.

Table 5. 24: Layout preferences by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Layout	Simple	69	33
	Complex	31	67

69% of the German global bloggers in the sample prefer to use simple 1 – 2 columns layout while the balance, 31%, choose to arrange information in complex 3 – 4 columns structure. The German local bloggers however, prefer to use the complex layout structure with 67% of local bloggers in the sample choosing to put information on blogs using 3 – 4 columns structure. 33% of the German local bloggers, furthermore, choose to use simple 1 – 2 columns layout to arrange information. The preferences are shown in Figure 5.40.

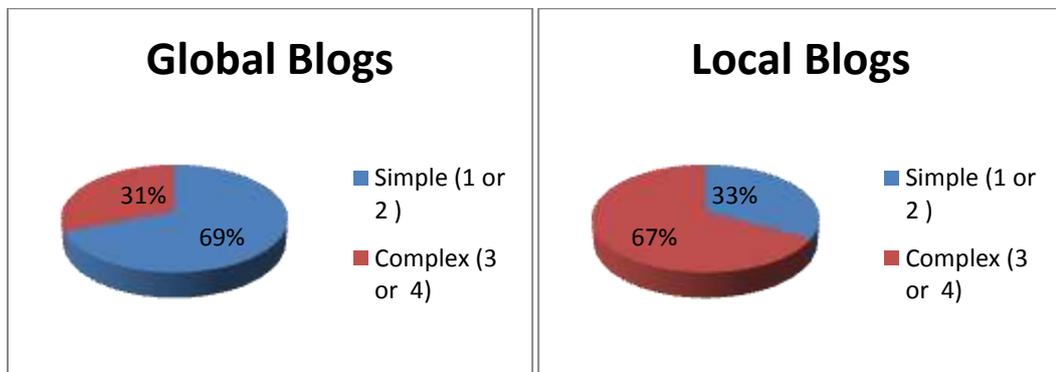


Figure 5. 40: Structure of layout preferences by German bloggers

5.5.4.4 Award

The statements of award postings vary marginally between the German global and local bloggers. the majority of the German global bloggers and German local bloggers prefer to post no award or achievement statement on their blogs walls as shown in Table 5.25.

Table 5. 25: Award statement postings by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Award	Yes	28	0
	No	72	100

72% of the German global bloggers prefer no award statement postings on blogs walls while 100% of the German local bloggers opt for no posting of award statement. A proportion of 28% of the German global bloggers prefer to put award or achievement statement on their walls as shown in Figure 5.41.

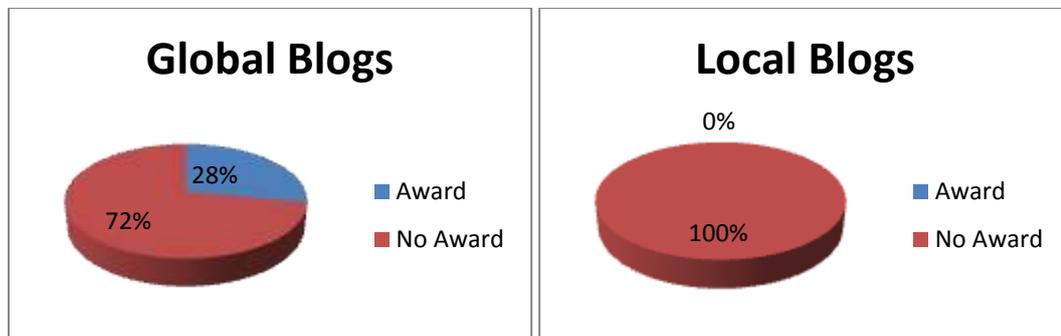


Figure 5. 41: Statement of award preferences by German bloggers

5.5.4.5 Disclaimer

The disclaimer statement preferences by the German global and local bloggers varies significantly as seen in Table 5.26.

Table 5. 26: Disclaimer statement preferences by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Disclaimer	Yes	73	0
	No	27	100

73% of the German global bloggers prefer to post statements of disclaimer and copyright compared to 0% of the German local bloggers choosing to do so. In addition, only 27% of the German global bloggers choose to post no statement of disclaimer and copyright as shown in Figure 5.42.

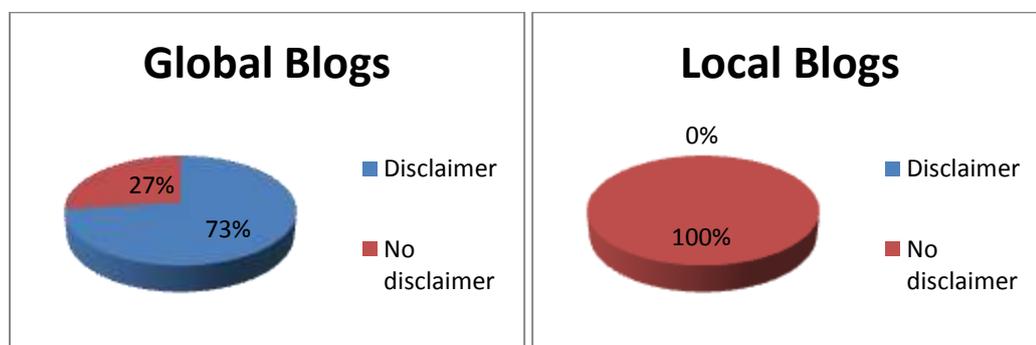


Figure 5. 42: Statement of disclaimer and copyright postings by German bloggers

5.5.4.6 Multimedia

As seen in Table 5.27, the types of multimedia applications preferred by the German bloggers do not differ between both the German global and local bloggers. The number of multimedia applications on blogs preferred by both categories of bloggers, however, vary marginally especially in the range of lower number of multimedia applications by German bloggers.

Table 5. 27: Types and number of multimedia preferences by German bloggers

Indicator	Variables	Germany Global Blogs (%)	Germany Local Blogs (%)
Multimedia	No multimedia	43	39
	Video	57	61
	Audio	0	0
	Both	0	0
	No multimedia	43	39
	1 – 3	57	41
	4 – 6	0	12
	7 – 10	0	4
> 10	0	4	

The majority of both the German global and local bloggers prefer to use video application as the medium to relay information on their blogs. 57% of the German global bloggers prefer to apply video application on their blogs while 61% of the German local bloggers choose to use video application as the preferred medium on blogs. 43% of the German global bloggers and 39% of the German local bloggers prefer to use no multimedia applications on their blogs as shown in Figure 5.43.

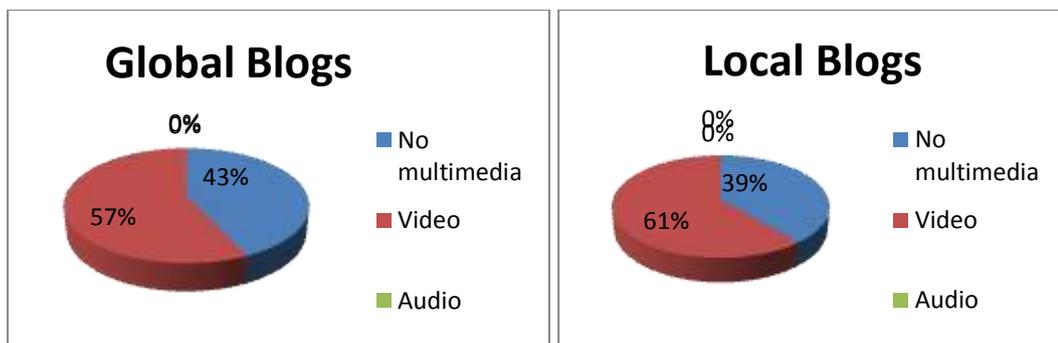


Figure 5. 43: Types of multimedia preferences by German bloggers

With regard to the number of multimedia applications on blogs postings, the German global bloggers prefer a smaller number of applications as seen in Figure 5.48. 57% of the German global bloggers prefer to use 1 – 3 multimedia applications on their blogs while 43% chose to use no multimedia applications at all. The German local bloggers, on the other hand, prefer a variety of multimedia applications in the range of 1 -3 to more than 10 applications at any one time. 41% of the German local

bloggers in the sample prefer multimedia applications in the range of 1 – 3, 12% choose to apply 4 – 6 multimedia applications on blogs, 4% opt for 7 – 10 multimedia applications and another 4% prefer to use more than 10 multimedia applications on blogs. The preferences are shown in Figure 5.44.

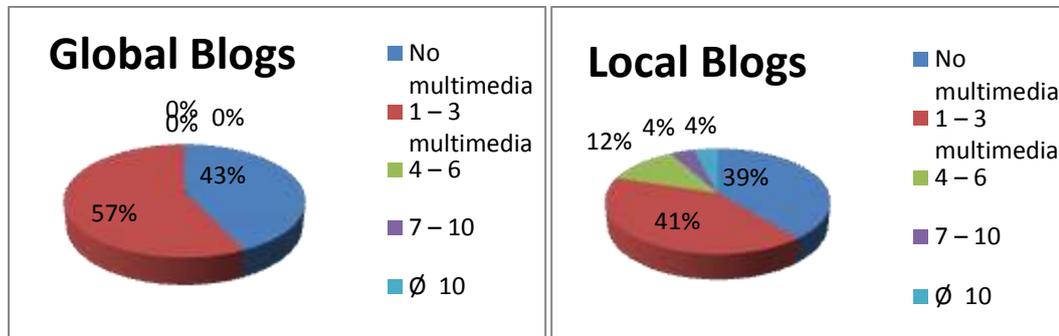


Figure 5. 44: Number of multimedia preferences by German bloggers

5.5.5 France

The French bloggers preferences in blogs design features also shows significant differences between French global and local bloggers. The significant variations can be seen in the choice of personal information disclosure, types and number of images that are posted on blogs walls, the colour and layout options, award and disclaimer statements displayed as well as the multimedia applications that are chosen to disseminate information on blogs pages.

5.5.5.1 Personal Information

The French bloggers have different preferences in choosing the level of personal information disclosure with regard to the author’s revelation on blogs. The French local bloggers prefer to disclose more about themselves compared to the French global bloggers by revealing their picture, full name, age and gender in higher proportion than their global counterparts. The preferences are shown in Table 5.28.

Table 5. 28: Personal information disclosure by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Personal Information	No picture	32	22
	Own picture	28	37
	Others	40	41
	Real name	62	47
	Nickname	20	25
	Anonymous	18	28
	Age	42	84

	No gender	17	16
	Male	37	35
	Female	46	49

In the author’s picture disclosure, 37% of the French local bloggers prefer to use their own picture relatively, whereas only 28% of the French global bloggers opt to do so. The majority of the French global bloggers, however, choose to use pictures of others in describing themselves compared to the French local bloggers with 40% and 41% respectively. The proportion in using no picture at all to represent themselves is marginally varied with 32% of the French global bloggers using no picture while 22% of the French local bloggers choose to do likewise. The choice in the author’s picture disclosure is depicted in Figure 5.45.

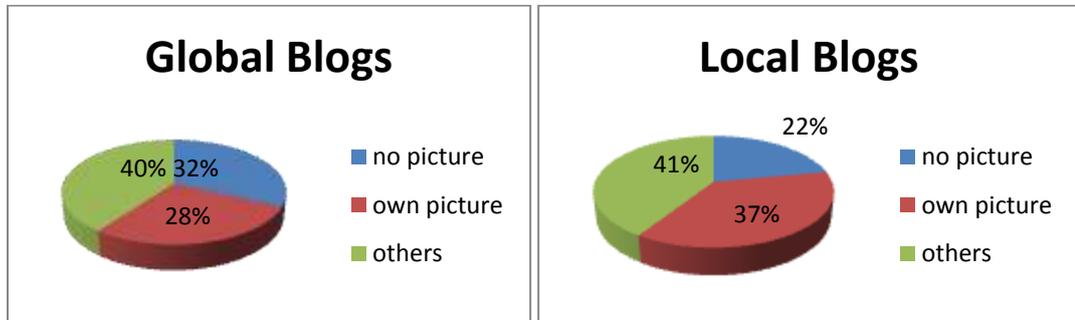


Figure 5. 45: Author’s picture revelation by French bloggers

Author’s name disclosure by the French bloggers however, varies marginally with the majority of both the French global and local bloggers preferring to reveal their full name. Figure 5.46 showed that 62% of the French global bloggers opt to reveal their real name while 47% of the French local bloggers choose to disclose their real name. Furthermore, the balance of the French bloggers in the sample prefers to reveal their identities using either nicknames or choose to remain anonymous. Comparatively, 20% of the French global bloggers prefer to use a nickname to identify themselves while 25% of the French local bloggers use a nickname as identification. Likewise, 18% of the French global bloggers prefer to remain anonymous and 28% of the French local bloggers remain anonymous without revealing their names.

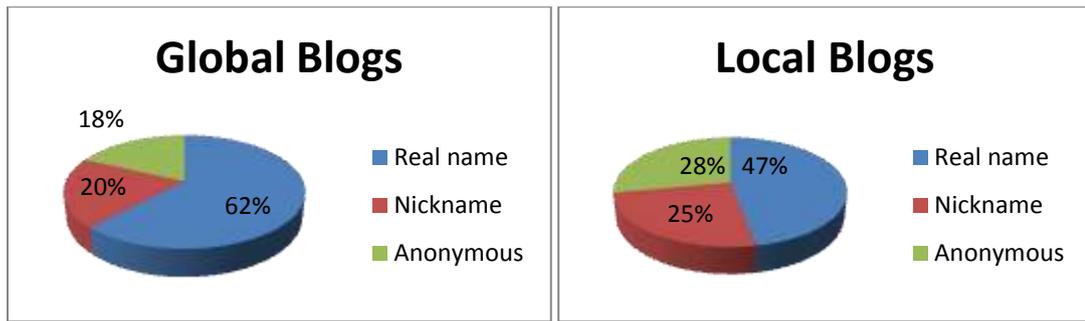


Figure 5. 46: Name disclosures by French bloggers

All the French global bloggers in the sample prefer not to disclose information with regard to age or date of birth as seen in Figure 5.47. 58% of them opt to remain silent on their age compared to only 16% of the French local bloggers that choose not to disclose their age information. Subsequently, only 42% of the French global bloggers prefer to reveal information on their age compared to 84% of the French local bloggers that prefer to do so.

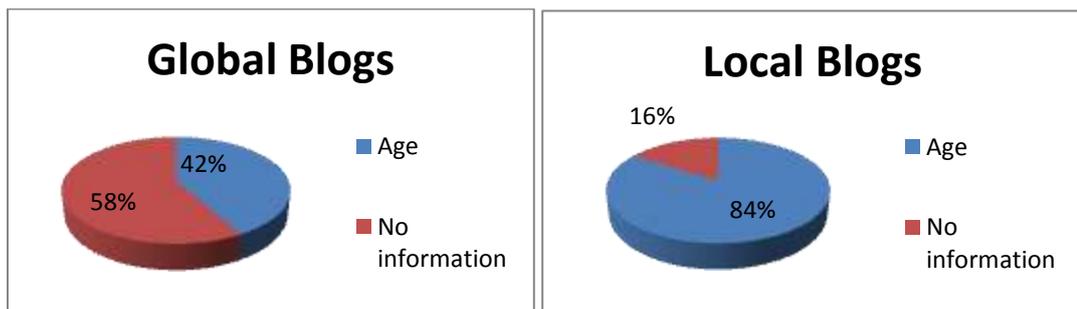


Figure 5. 47: Age revelation by French bloggers

Observations on the disclosure of sexual category by the French bloggers show that information on gender is an item that is readily disclosed by the majority of the bloggers. 73% of the French global bloggers disclose their sexual category while 84% of the French local bloggers choose to mention their gender. Relatively, 27% of the French global bloggers prefer to stay silent on their sexual category information while 16% of the French local bloggers prefer not to mention their gender. The preferences are shown in Figure 5.48.

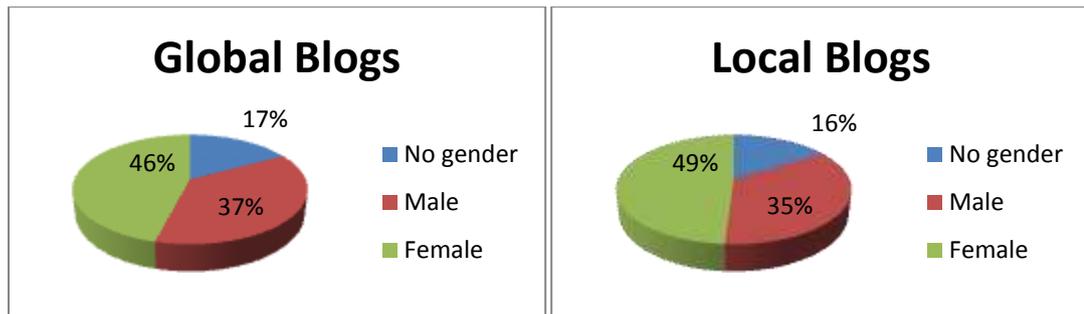


Figure 5. 48: Information on sexual category by French bloggers

5.5.5.2 Image

The choice in the types and numbers of image preferred by the French bloggers in the sample indicates that the majority use personal pictures to relay information on blogs. The French global bloggers, in addition, prefer to use more images on their blogs compared to the French local bloggers as seen in Table 5.29.

Table 5. 29: Types and number of image preferred by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Image	No image	2	41
	Personal	98	51
	People or landscape	0	8
	Tradition or group	0	0
	Leader	0	0
	No image	2	41
	1 – 3 images	0	12
	4 – 6 images	14	21
	7 – 10 images	17	8
	> 10 images	67	18

98% of the French global bloggers prefer to use personal pictures to impart information on blogs while the balance, 2%, choose not to use any image at all on their blogs. Comparatively, 51% of the French local bloggers prefer to use personal images on blogs and 8% choose to post images of people and landscape on blogs. Subsequently, 41% opt to use no picture in the information section of their blogs. The choices in the image and picture postings are shown in Figure 5.49.

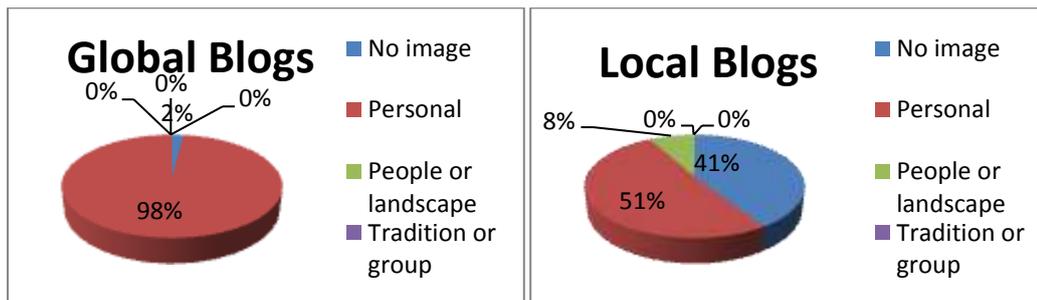


Figure 5. 49: Types of image preferences by French bloggers

The French global bloggers however, prefer a higher number of images postings on blogs compared to the French local bloggers. 67% of the French global bloggers prefer to have more than 10 images postings on their blogs, 17% have images postings in the range of 7 -10 and 14% choose to post 4 – 6 images. Surprisingly, only 2% prefer to have no images on their blogs while 0% of the French global bloggers have 1 – 3 images as blogs postings. Comparatively, 18% of the French local bloggers have more than 10 images on their blogs, 8% have images in the range of 7 – 10, 21% have 4 – 6 images on blogs, 12% of them have 1 – 3 images while the majority of 41% choose to have no image posting on their blogs walls. The preferences in terms of the number of images by the French bloggers are shown in Figure 5.50.

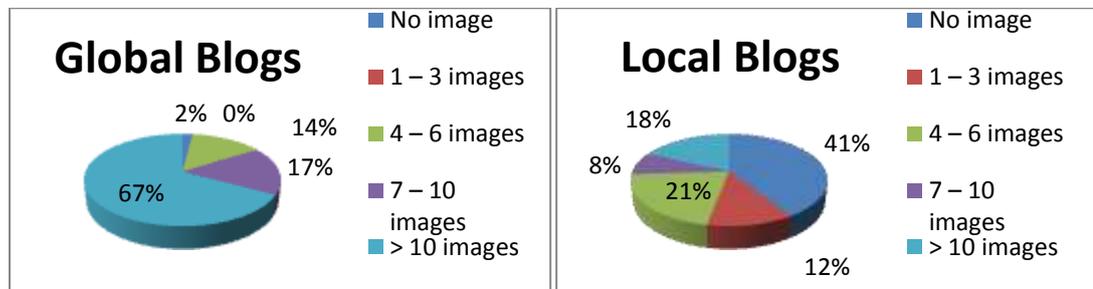


Figure 5. 50: Number of images preferred by French bloggers

5.5.5.3 Layout

The French global bloggers preferred simple layout compared to the French local bloggers compared to the French local bloggers that are approximately even in their preferences between simple and complex layout as shown in Table 5.30.

Table 5. 30: Layout preferences by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Layout	Simple	100	53
	Complex	0	47

All 100% of the French global bloggers in the sample prefer to structure their information on blogs using simple 1 or 2 columns layout. The French local bloggers' preferences on the other hand, are distributed quite evenly between the choice of simple and complex layout as depicted in Figure 5.51. 53% of the French local bloggers choose to use simple layout while 47% preferred the complex layout as the structure to arrange information on their blogs.

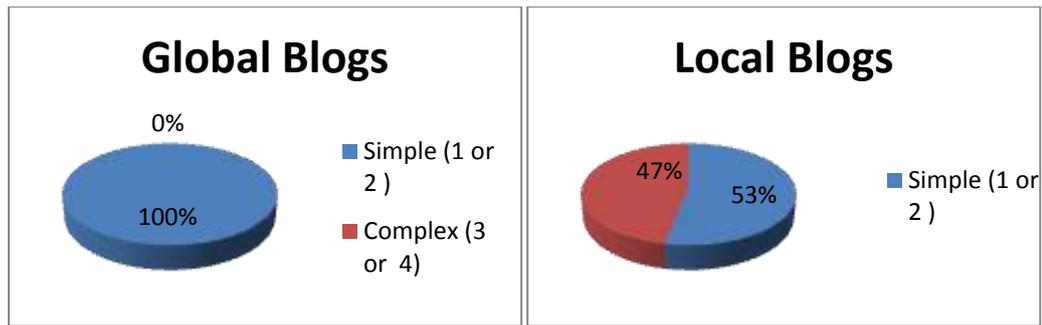


Figure 5. 51: Preferences on layout structure by French bloggers

5.5.5.4 Award

The preferences in displaying the award or achievement statement on blogs by the French bloggers are shown in Table 5.31. Only a minority of the French global bloggers prefer to display award statements on blogs walls while all the French local bloggers in the sample choose not to display any award statement on blogs.

Table 5. 31: Award statement display by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Award	Yes	4	0
	No	96	100

Figure 5.52 shows the preferences in the display of disclaimer statements by the French bloggers; 96% of the French global bloggers preferring not to display statement of award or achievement while 100% of the French local bloggers choose to display no such statement on their blogs. Only 4% of the French global bloggers opt to post statements of their awards on blogs.

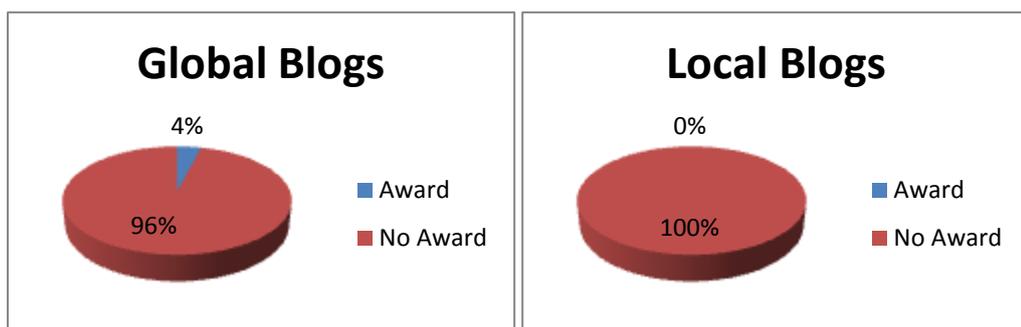


Figure 5. 52: Display of award statement by French bloggers

5.5.5.5 Disclaimer

The French global bloggers in the sample are distributed quite evenly in their preferences of displaying the statement of disclaimer or copyright on their blogs.

Their local counterpart, however, is observed to have a higher proportion in not displaying similar disclaimer statement as shown in Table 5.32.

Table 5. 32: Display of disclaimer statement by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Disclaimer	Yes	43	12
	No	57	88

43% of the French global bloggers prefer to post a statement of disclaimer and copyright on the walls of their blogs compared to 12% of the French local bloggers who opt to include such a statement. Alternatively, 57% of the French global bloggers choose to post statements of disclaimer relatively to 88% of the French local bloggers who prefer no such statement on their blogs. The preferences are shown in Figure 5.53.

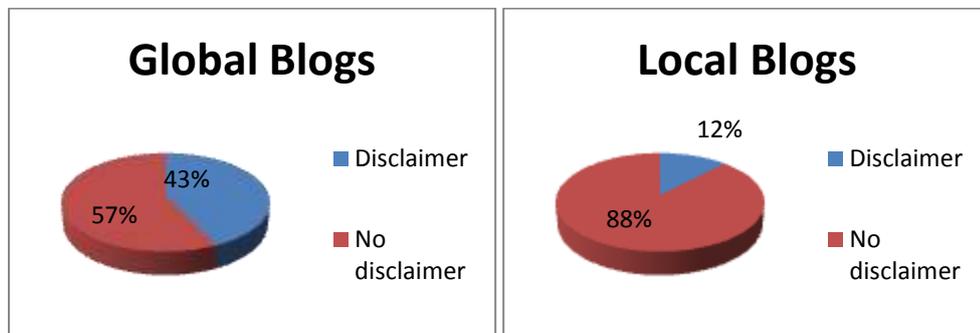


Figure 5. 53: Statement of disclaimer display by French bloggers

5.5.5.6 Multimedia

Observations on the French bloggers preferences show that both the French global and local bloggers have different tastes in the types and numbers of multimedia applications on blogs as seen in Table 5.33. The majority of the French bloggers prefer to use video application as the medium for multimedia usage on blogs while the majority of the French local bloggers prefer not to use any multimedia applications on blogs.

Table 5. 33: Types and number of multimedia preferred by French bloggers

Indicator	Variables	France Global Blogs (%)	France Local Blogs (%)
Multimedia	No multimedia	37	67
	Video	61	23
	Audio	0	2
	Both	2	8

	No multimedia	37	67
	1 – 3	43	17
	4 – 6	14	8
	7 – 10	6	2
	> 10	0	6

61% of the French global bloggers prefer to use video application on blogs, 0% chooses not to use audio and 2% opt for application that is a combination of both video and audio while 37% prefer to have no multimedia applications on blogs. Comparatively, 23% of the French local bloggers prefer to have video application as multimedia used, 2% choose to use audio, 8% choose to apply multimedia application combining both video and audio while 67% choose not to use any multimedia applications on blogs. The choices are depicted in Figure 5.54.

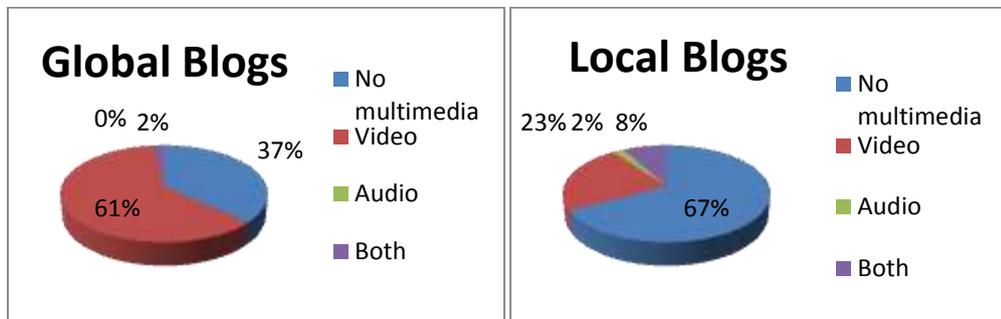


Figure 5. 54: Types of multimedia preferred by French bloggers

The choice in the number of multimedia preferred by the French bloggers is shown in Figure 5.55. 43% of the French global bloggers prefer a number of 1 – 3 multimedia applications, 14% choose to use 4 – 6 applications, 6% used 7 -10 multimedia applications and none put more than 10 multimedia applications on their blogs. Relatively, 17% of the French local bloggers choose to use 1 – 3 multimedia applications, 8% prefer to use 4 – 6 applications on blogs, 2% use 7 – 10 multimedia applications and 6% opt to use more than 10 multimedia applications on blogs.

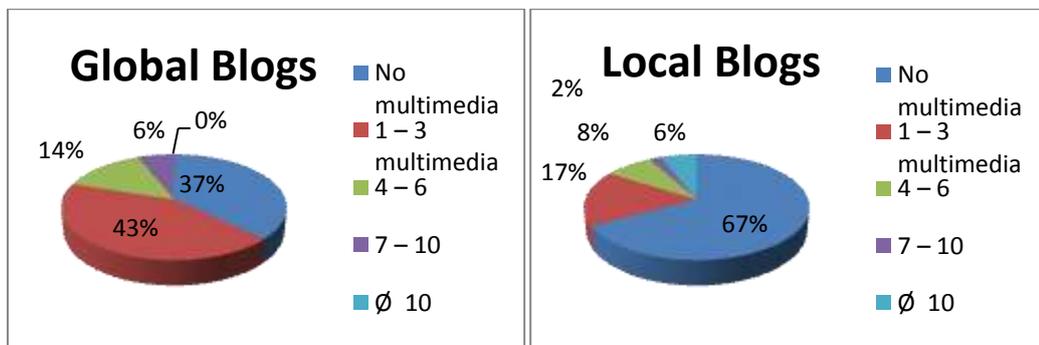


Figure 5. 55: Number of multimedia applications by French bloggers

5.5.6 Sweden

The Swedish bloggers show significant variations in the preferences of design features on their personal blogs pages. Observations on each indicator of design depict that both the Swedish global and local bloggers prefer different variety of design features in terms of personal information disclosure, preferences on image postings, colour, layout, award and disclaimer displays and the choice of multimedia applications that are used to depart information to users.

5.5.6.1 Personal Information

As seen in Table 5.34, the Swedish global bloggers disclose a lot more information on their personal self compared to the Swedish local bloggers. Majority of the Swedish global bloggers prefer to post their own picture, reveal their full name and mention their sexual category compared to the Swedish local bloggers. The Swedish local bloggers in the sample prefer to reveal as little information as possible regarding their personal self as seen in the table below.

Table 5. 34: Personal information disclosure by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Personal Information	No picture	33	37
	Own picture	59	49
	Others	8	14
	Real name	50	12
	Nickname	28	51
	Anonymous	22	37
	Age	3	6
	No gender	68	94
	Male	17	0
	Female	15	6

59% of the Swedish global bloggers use their own picture to reveal personal information compared to only 49% of the Swedish local bloggers choosing to do so. The local bloggers, however, have a higher proportion in not using any pictures at all to describe themselves, with 37% of them choosing to post no picture at all to introduce themselves as authors' of blogs. Relatively, 33% of the Swedish global bloggers prefer not to use any picture that represents them as authors. The proportion of using the picture of others to represent the bloggers as authors of blogs show that 8% of the Swedish global bloggers use any picture of others while 14% of the

Swedish local bloggers opt to include picture of others as introductions. The preferences are shown in Figure 5.56.

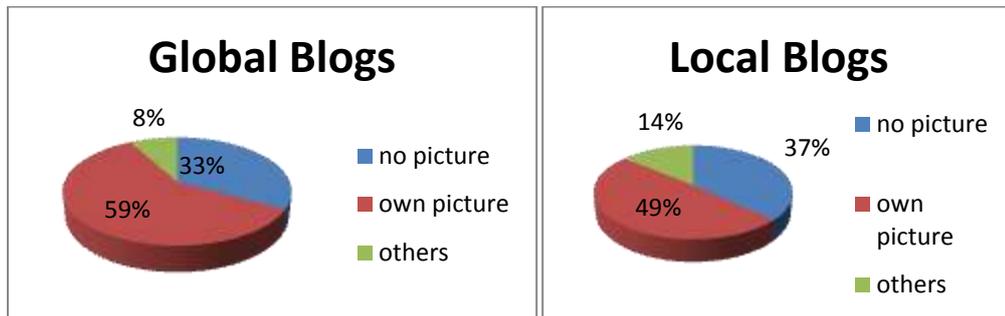


Figure 5. 56: Picture representation preferred by Swedish bloggers

The preferences with regard to name disclosure depict that the majority of the Swedish global bloggers prefer to use their real name compared to the Swedish local bloggers. Figure 5.57 shows that 50% of the Swedish global bloggers prefer their real name on display compared to only 12% of the Swedish local bloggers who opt to reveal their full name. The majority of the Swedish local bloggers, however, use their nickname to identify themselves with 51% choosing the use of a nickname relatively to only 28% of the Swedish global bloggers that use nickname identification. The balance saw the use of anonymity in authors' identification with 22% of the Swedish global bloggers and 37% of the Swedish local bloggers remaining anonymous.

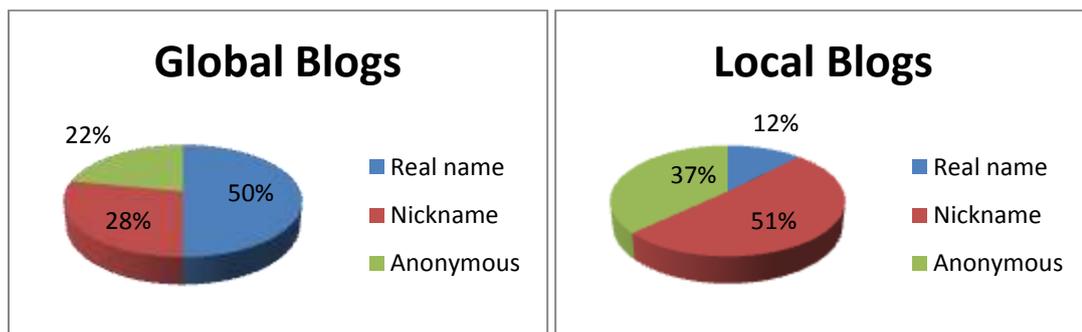


Figure 5. 57: Name disclosure by Swedish bloggers

The majority of both the Swedish global and local bloggers prefer to remain silent on age information. 97% of the global bloggers choose not to mention their age while 94% of the local bloggers prefer no mention of any information regarding age as seen in Figure 5.58.

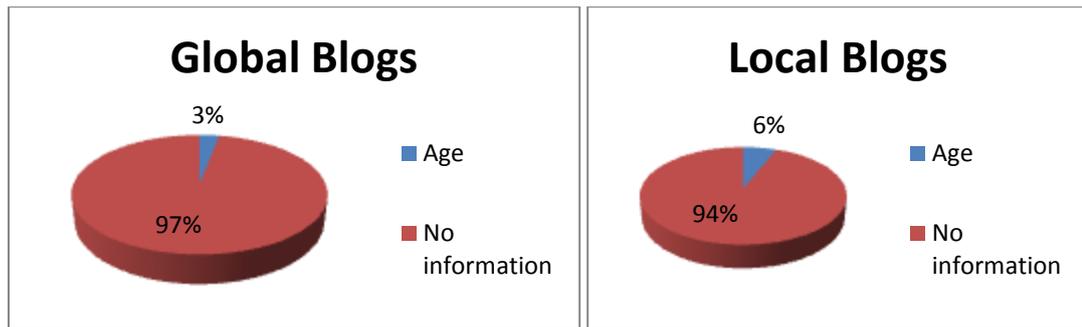


Figure 5. 58: Disclosure of age by Swedish bloggers

Figure 5.59 shows that 32% of the Swedish global bloggers reveal their sexual category while 68% of the local bloggers include no information with regard to their gender. The Swedish local bloggers, on the other hand, depict that 94% prefer not to disclose their sexual category and only 6% choose to declare that they are female bloggers.

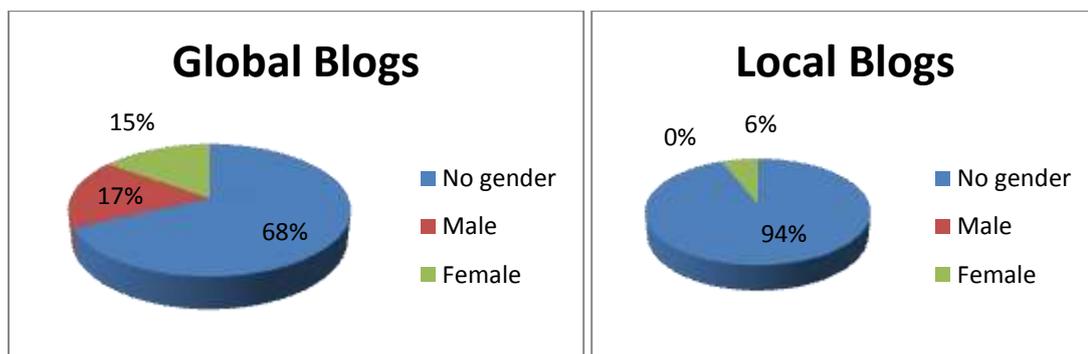


Figure 5. 59: Sexual category preferences by Swedish bloggers

5.5.6.2 Image

The preferences on images by the Swedish global and local bloggers show differences in the types and number of images that are posted on blogs walls as shown in Table 5.35. Although the majority of the Swedish bloggers prefer to use personal images on blogs, they differ in bigger proportions in their preferences of having no image and postings of images of people or landscape. Furthermore, both bloggers differ in their preferences in using the number of images on blogs.

Table 5. 35: Images preferred by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Image	No image	33	12
	Personal	51	88
	People or landscape	16	0
	Tradition or group	0	0
	Leader	0	0

No image	33	12
1 – 3 images	27	6
4 – 6 images	22	4
7 – 10 images	6	8
> 10 images	12	70

The Swedish global bloggers prefer using personal images and images of people or landscapes on the walls of their blogs with 51% and 16% respectively. The Swedish local bloggers however, prefer personal images on blogs with 88% choosing images that are personal in nature. In addition, 33% of the Swedish global bloggers prefer to use no image on blogs while 12% of the Swedish local bloggers prefer no image at all. These preferences are shown in Figure 5.60.

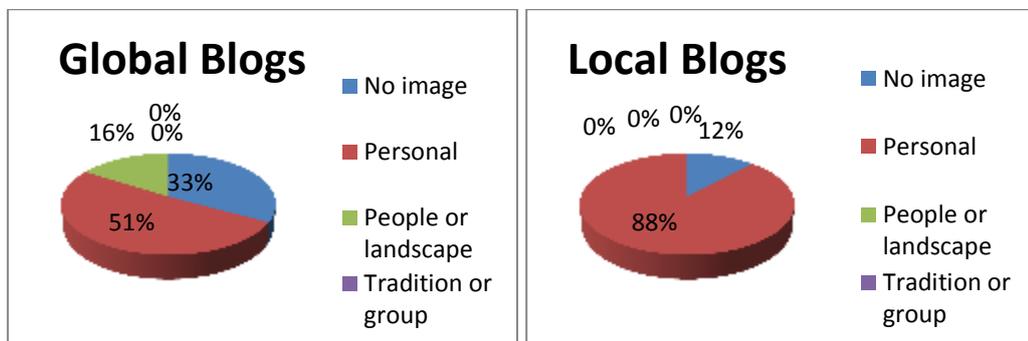


Figure 5. 60: Types of images preferred by Swedish bloggers

Figure 5.61 shows the number of images preferred by both the Swedish global and local bloggers. 70% of the Swedish local bloggers prefer to use more than 10 images on blogs, 8% choose to use 7 – 10 number of images at any one time, 4% opt for 4 – 6 images and 8% prefer to use 1 – 3 images postings. The Swedish global bloggers on the other hand, form a different picture of preferences. 12% prefer more than 10 images postings, 6% chose to use 7 – 10 images, 22% opt for 4 – 6 number of images and 27% prefer 1 – 3 images on blogs.

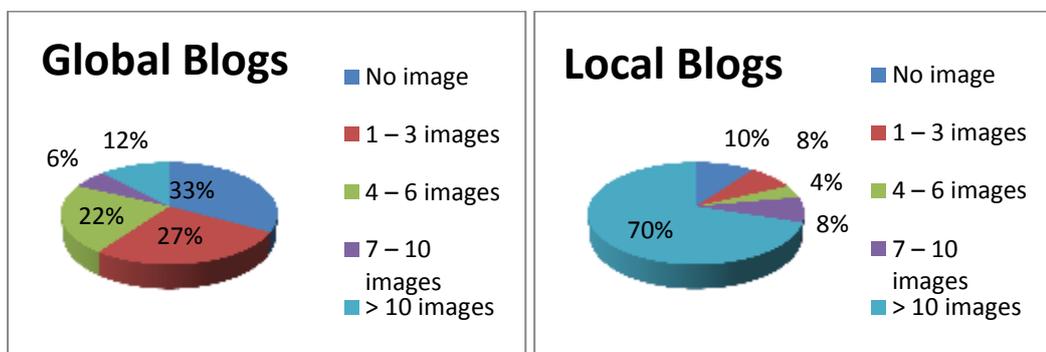


Figure 5. 61: Number of images preferred by Swedish bloggers

5.5.6.3 Layout

The majority of the Swedish global and local bloggers prefer to use simple layout to structure information on their blogs. Only a minority of the Swedish global bloggers choose to use complex layout while none of the Swedish local bloggers prefer to use the complex layout structure as shown in Table 5.36.

Table 5. 36: Layout preferences by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Layout	Simple	94	100
	Complex	6	0

94% of the Swedish global bloggers and 100% of the Swedish local bloggers prefer the simple structure layout to arrange information on their blogs as seen in Figure 5.62. Only 6% of the Swedish global bloggers prefer the complex layout structure as information arrangement.

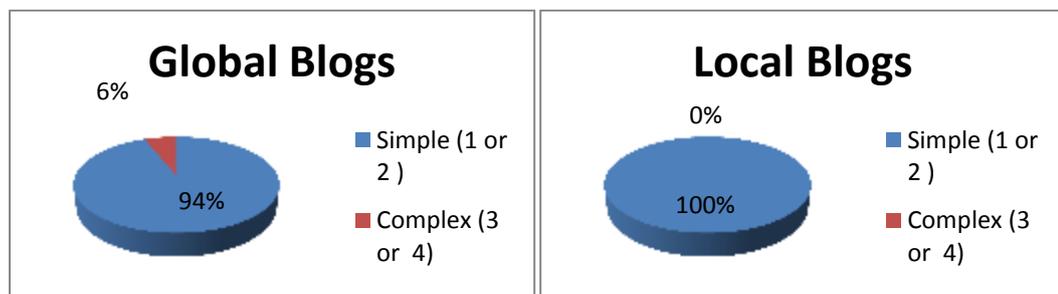


Figure 5. 62: Preferences on layout structure by Swedish bloggers

5.5.6.4 Award

Both the Swedish global and local bloggers prefer not to display award statements on their blogs. Only a minority of the Swedish global bloggers are observed to display such statement on blogs walls as shown in Table 5.37.

Table 5. 37: Award display by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Award	Yes	2	0
	No	98	100

2% of the Swedish global bloggers prefer to put statements of award and achievement on their blogs while 98% of them choose not to display any statement with regard to their achievement or to award that they have received. 100% of the Swedish local bloggers, on the other hand, prefer no statement of award or achievement on their blogs wall as shown in Figure 5.63.

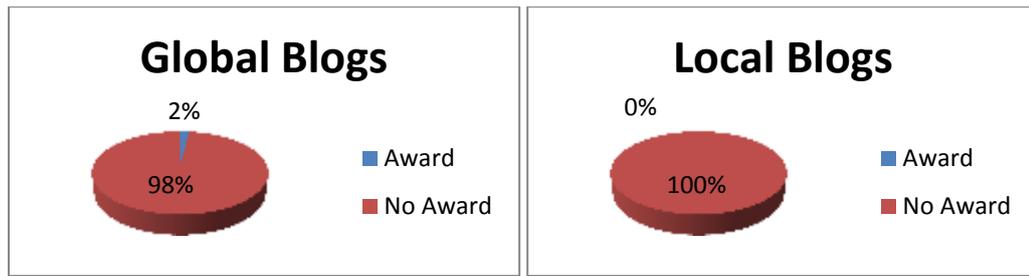


Figure 5. 63: Preferences on award display by Swedish bloggers

5.5.6.5 Disclaimer

Both the Swedish global and local bloggers unanimously prefer not to display statements of disclaimer and copyright on blogs. Only a minority of them display the legal notice in the same proportion for both the global and local bloggers as shown in Table 5.38.

Table 5. 38: Disclaimer statement by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Disclaimer	Yes	2	2
	No	98	98

98% of both the Swedish global and local bloggers prefer not to display statements of disclaimer and copyright on their blogs walls while 2% of both categories of bloggers prefer to display the legal-bearing statement to caution readers. This is shown in Figure 5.64.

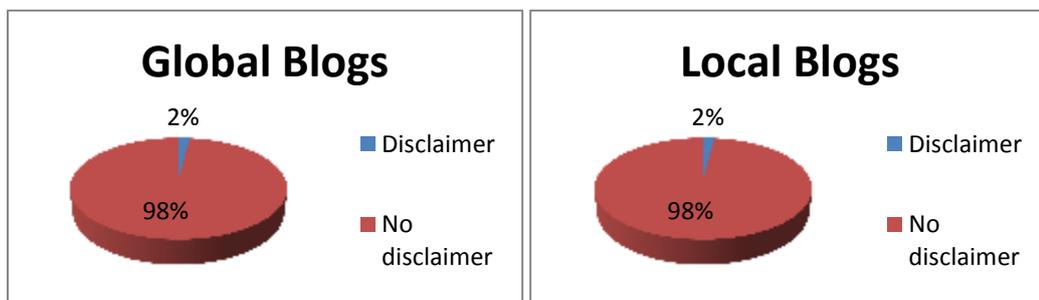


Figure 5. 64: Preferences on disclaimer statement by Swedish bloggers

5.5.6.6 Multimedia

The preferences on the types and number of multimedia applications by both the Swedish global and local bloggers are observed to differ marginally. Majority of both the Swedish global and local bloggers preferred to use no multimedia applications on their blogs and majority of those who preferred multimedia in both categories of bloggers preferred less number of multimedia applications on blogs.

Table 5.39 showed the types and number of multimedia applications that are preferred by the Swedish bloggers.

Table 5. 39: Types and number of multimedia applications by Swedish bloggers

Indicator	Variables	Sweden Global Blogs (%)	Sweden Local Blogs (%)
Multimedia	No multimedia	53	71
	Video	45	25
	Audio	0	2
	Both	2	2
	No multimedia	53	71
	1 – 3	39	21
	4 – 6	4	8
	7 – 10	4	0
	> 10	0	0

53% of the Swedish global bloggers and 71% of the Swedish local bloggers prefer no multimedia applications on their blogs. Of those who prefer the use of multimedia on blogs, 45% of the Swedish global bloggers prefer the use of video application and 2% chose to apply a medium that has a combination of both audio and video, 25% of the Swedish local bloggers use video application, 2% of them prefer audio while another 2% choose a medium that is a combination of both video and audio. The preferences on the types of multimedia applications by both categories of Swedish bloggers are shown in Figure 5.65.

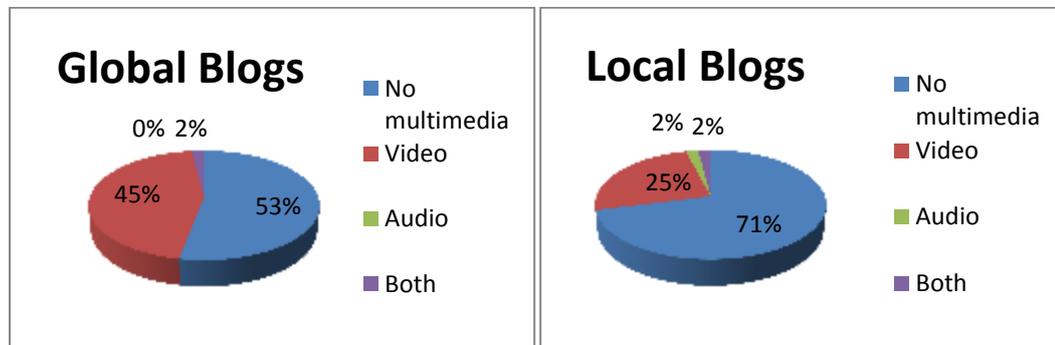


Figure 5. 65: Types of multimedia applications by Swedish bloggers

The number of multimedia preferred by both categories of Swedish bloggers indicates the majority of them prefer a lower number of multimedia applications on blogs. 39% of the Swedish global bloggers prefer to use 1 – 3 multimedia applications, 4% choose to apply multimedia in the range of 4 - 6 and another 4% opt for 7 -10 multimedia applications. 21% of the Swedish local bloggers, on the other hand, prefer to use 1 – 3 multimedia applications and 8% opt for 4 – 6 applications on blogs. Figure 5.66 depicts the differences in the number of multimedia preferred by the Swedish bloggers.

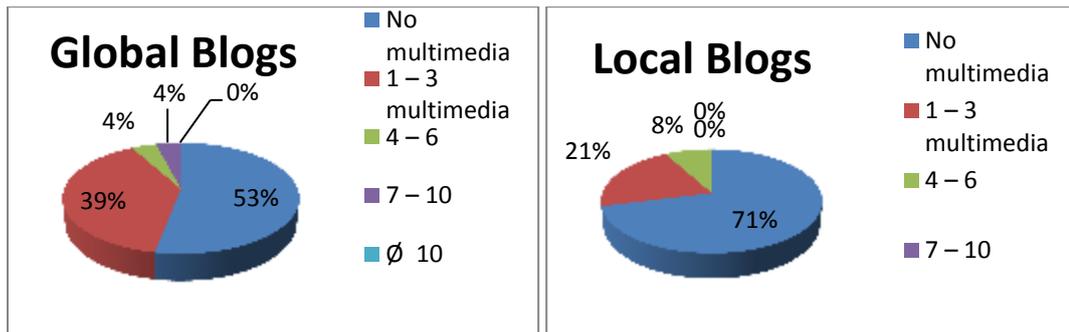


Figure 5.66: Number of multimedia applications preferred by Swedish bloggers

5.5.7 Conclusion of the Country Analysis

The country analysis is conducted to compare and contrast the similarities and the differences in the preferences of blogs design features in a particular country. The comparison analysis purpose is to show that should national culture be the dominant factor that influences the design choice on blogs, both categories of blogs, that is, the global and the local blog,s would have a majority of the design features closely similar to one another in terms of preferences. The results, however, reveal preferences that are diverse and dispersed between the two categories of blogs in a same country. The results are summarised in Table 5.40.

Table 5.40: Summary of the country analysis between the global and local blogs

Items	China	SKorea	Japan	Germany	France	Sweden
Personal Information	Differ in all items	Differ in other items but similar in picture	Differ in other items but similar in picture	Differ in all items	Similar in all items but differ in age	Differ in other items but similar in age
Image Type	Differ	Differ	Differ	Differ	Differ	Differ
Image Number	Differ	Differ	Differ	Differ	Differ	Differ
Colour	Similar	Similar	Differ	Differ	Differ	Differ
Layout	Similar	Differ	Differ	Differ	Differ	Similar
Award	Differ	Differ	Similar	Differ	Differ	Similar
Disclaimer	Similar	Similar	Similar	Differ	Differ	Similar
Multimedia Type	Differ	Differ	Similar	Similar	Differ	Differ
Multimedia Number	Differ	Similar	Similar	Differ	Differ	Differ

In addition to the country analysis where global and local blogs of each country are compared and analysed, two other analyses were conducted and considered. They are the cultural analysis and the statistical analysis.

5.6 Cultural Analysis

The analysis was conducted by analysing the cultural markers on blog pages to the cultural indicators that have been selected for this research. The cultural indicators are shown in Table 5.41 are the benchmarks used to assess blogs design features according to each national culture elements as proposed by Hofstede (2000) and Hall (2000).

Table 5. 41: Selected national culture indicators

Hofstede's Cultural Dimension	Level	
Individualism versus Collectivism	Individualism	Collectivism
	Personal award Disclosure of personal information	Traditional or group image Restricted personal information
Uncertainty Avoidance	High	Low
	Simple layout Disclaimer or copyright statement	Complex layout
Hall's Cultural Dimension	Level	
High Context versus Low Context	High Context	Low Context
	Extensive use of image and multimedia (Implicit communication)	Less use of image and multimedia (Explicit communication)

Cultural assessment on blog pages based on design features were then mapped according to each country's observations to ascertain whether design features contain cultural markers that are in accordance to national culture. The results are shown in Table 5.42. The mapping of cultural indicators on blog design features was done according to Hofstede's two cultural dimensions: individualism versus collectivism, and uncertainty avoidance as well as Hall's High Context versus Low Context culture. Each cultural dimension mapping is explained in detail in the paragraphs below.

5.6.1 Individualism versus Collectivism

5.6.1.1 Individualism

Countries that are individualistic in nature like Germany, France and Sweden are expected to have web pages that display personal award and achievement. The authors of the blogs are more willing to provide personal information in order to distinguish themselves as individuals who are different from the group. Figure 5.75

Table 5. 41: Mapping of national cultural markers on blogs design features

Hofstede's Cultural Dimension	China		South Korea		Japan		Germany		France		Sweden	
Individualism versus Collectivism	Collectivism		Collectivism		Moderate		Individualism		Individualism		Individualism	
Collectivism	G	L	G	L	G	L	G	L	G	L	G	L
Group Image	0%	0%	0%	0%	16%	0%						
Restricted personal information												
No picture / Others	54%	41%	63%	75%	64%	49%						
Nickname / Anonymous	47%	71%	68%	98%	63%	96%						
No mentioning of age	99%	98%	99%	100%	81%	63%						
No mentioning of gender	84%	100%	65%	100%	34%	31%						
Individualism	G	L	G	L	G	L	G	L	G	L	G	L
Personal Award							28%	0%	4%	0%	2%	0%
Disclosure of personal information												
Own picture							65%	49%	28%	37%	59%	49%
Real name							58%	35%	62%	47%	50%	12%
Age							50%	100%	42%	84%	3%	6%
Gender information							39%	0%	83%	84%	32%	6%
Uncertainty Avoidance	Low		High		High		High		High		Low	
High Uncertainty Avoidance	G	L	G	L	G	L	G	L	G	L	G	L
Simple layout			94%	80%	94%	74%	69%	33%	100%	53%		
Statement of disclaimer or copyright			0%	2%	0%	0%	73%	0%	43%	12%		
Low Uncertainty Avoidance	G	L	G	L	G	L	G	L	G	L	G	L
Complex layout	18%	8%									6%	0%
Hall's Cultural Dimension	China		South Korea		Japan		Germany		France		Sweden	
High Context versus Low Context	High		High		High		Low		Low		Low	
High Context	G	L	G	L	G	L	G	L	G	L	G	L
Multimedia usage (> 5 in number)	24%	51%	37%	18%	28%	16%						
Image usage (> 5 in number)	88%	67%	86%	98%	92%	86%						
Low Context	G	L	G	L	G	L	G	L	G	L	G	L
Multimedia usage (1 -3 in number)							43%	39%	37%	67%	53%	71%
Image usage (1 - 3 in number)							0%	18%	2%	41%	33%	12%

shows the preferences of displaying personal award on blogs in individualistic countries. Blogs in Germany, France and Sweden show that bloggers in those countries prefer not to display personal awards on blogs walls. Only 28% of the German global bloggers, 4% of the French global bloggers and 2% of the Swedish global bloggers prefer to post statements of award and achievement on their blogs. None of the local bloggers in Germany, France and Sweden choose to display any statement of award or achievement on the walls of their blogs as shown in Figure 5.67.

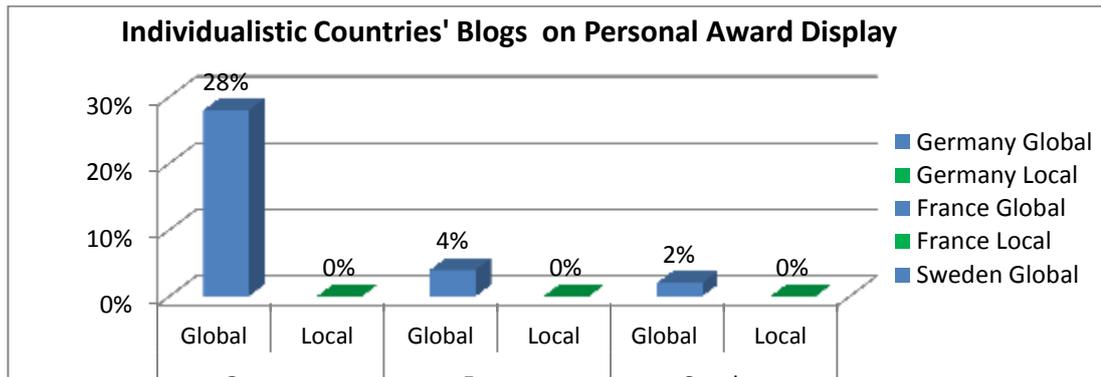


Figure 5. 67: personal award displays in individualistic countries' blogs

This also means that for the German bloggers, 72% of the global and 100% of the local blogs users have no personal award displays on blogs pages. Similarly, 96% of the France global bloggers and 98% of the Swedish global bloggers have no display of personal award on their walls. In addition, 100% of the local bloggers from France and Sweden prefer to display no personal award on their blogs pages. This phenomenon contradicts national cultural traits of individualism characteristics. The next indicator of the individualistic culture on the web is the willingness to disclose personal information by the authors of blogs. Figure 5.68 depicts the percentage of bloggers that disclose their personal information in selected individualistic countries.

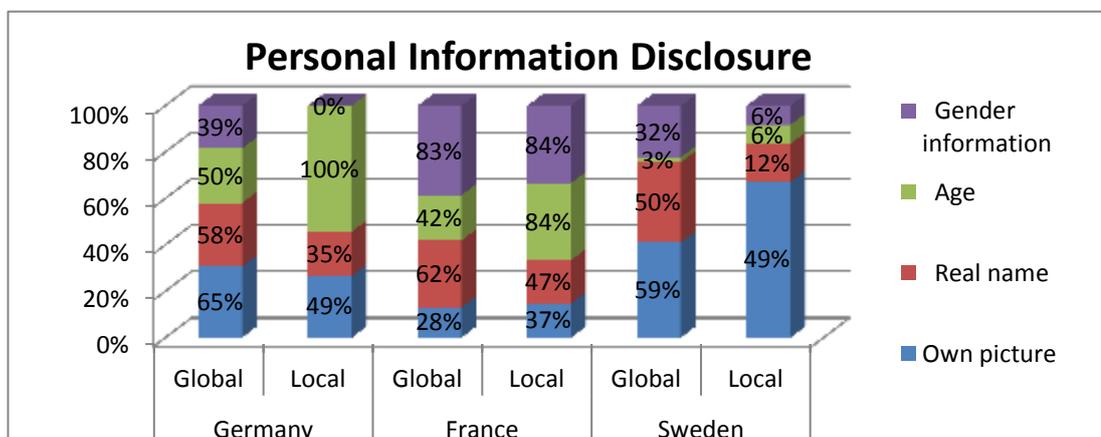


Figure 5. 68: Personal information disclosures in individualistic countries' blogs

The readiness to disclose personal information by the authors of blogs shows that the German and the Swedish global bloggers have similar preferences in disclosing about themselves compared to the French global bloggers. The German and Swedish bloggers, however, differ in term of preferences for age revelation. The German global bloggers, for example, have a 65% preference for displaying their own picture, 58% in providing their real name and 39% preferences in revealing their gender. Similarly, the Swedish global bloggers have 59% preferences in displaying their own picture, 50% of them prefer to provide their own name and 32% preferences in revealing their gender. Conversely, the German bloggers have higher preferences in revealing their age compared to the Swedish bloggers. 50% of the German global bloggers and 100% of the local bloggers prefer to reveal their age information. In comparison, the Swedish bloggers preference to reveal their age is only 3% by the global bloggers and 6% by the local bloggers. Comparatively, both the French global and local bloggers have relatively similar preferences in disclosing their personal information. The French global and local bloggers show 28% and 37% respectively in displaying their own picture; 62% and 47% preferences respectively in revealing their real name; and 83% and 84% preferences in providing information on gender. Among the local bloggers, however, France records the highest preferences in disclosing information on their personal self compared to Germany and Sweden; both the German and Swedish local bloggers preferring to disclose less information about themselves on blogs. The proportion in revealing own picture to identify themselves as authors of blogs show similar preferences of 49% for both the German and Swedish local bloggers. In terms of disclosing real name, the Swedish local bloggers have the lowest preferences compared to the German local bloggers with 12% willing to reveal real name and the German local bloggers showing 35% preference in revealing real name. The Swedish local bloggers, on the other hand, have slightly higher preferences in disclosing their gender with 6% preferences compared to 0% of the German local bloggers who prefer to do so. In terms of age, the French bloggers have less preferences than the German bloggers but higher than the Swedish bloggers in revealing their age information. 42% of the French global bloggers and 84% of the French local bloggers prefer to reveal information with regard to their age.

On the whole, there are mixed preferences in terms of the items of personal information that bloggers in Germany, France and Sweden are willing to disclose. Both the global and local bloggers in Germany and Sweden prefer to reveal more about themselves in pictorial information than the bloggers in France. The global bloggers in Germany and Sweden have relatively similar preferences in disclosing their real name with the French global bloggers. Both the global and local bloggers in France have the same preferences in disclosing their sexual category compared to Germany and Sweden. The German and Sweden local bloggers have the least preferences in revealing their gender. Preferences indicate that there are considerations apart from cultural traits that influence personal information disclosure looking at the low proportion of preferences in items like real name and gender.

5.6.1.2 Collectivism

Countries that have a collective culture such as China, South Korea and Japan, on the other hand, are expected to have web pages that portray images of groups, society and pictures that represent things that are traditional in such cultures. Figure 5.69 shows the preferences in displaying image that represent group and tradition in countries that have a collective society such as China, South Korea and Japan.

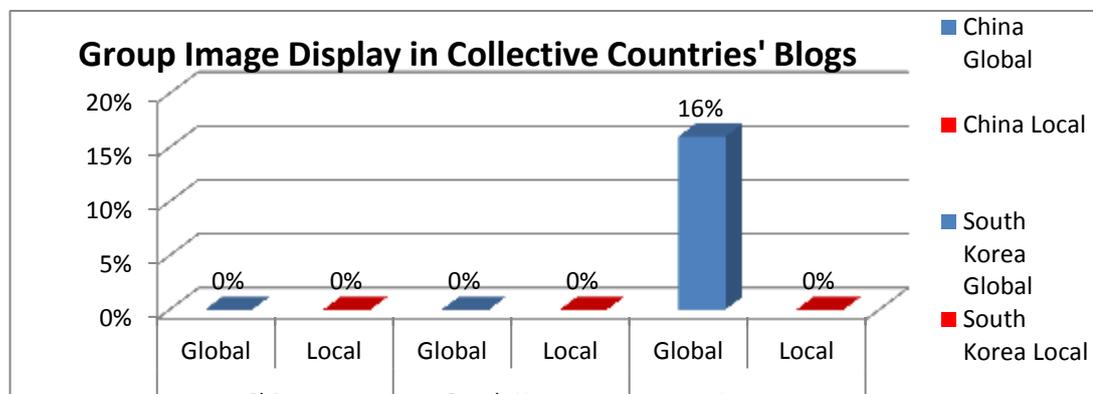


Figure 5. 69: Preferences in displaying group image in collective countries' blogs

The preferences in displaying images of groups or traditional image on personal blogs do not coincide with the collective culture of countries such as China, South Korea and Japan. Both the global and local bloggers in China prefer not to display any image that represents groups or traditions with 0% of both categories of bloggers choosing to post no image of groups or traditions. Similarly, both the global and local bloggers in South Korea prefer the same choice with 0% preferences in non-displaying of any image regarding group or tradition by both the global and local bloggers. Japan, however, has

only 16% of the global bloggers displaying group or traditional images while 0% of the local bloggers opt for non-displaying of group image. Displaying images that represent group or tradition are not the preferences for image displaying in these collective cultures.

In addition, the web pages in the collective culture are also expected to display lower levels of disclosure of the authors' personal information on the web compared to web pages in individualistic cultures. This is to indicate the unwillingness to disclose information about personal self. Figure 5.70 shows the preferences in the level of personal information disclosure by bloggers in collective societies such as China, South Korea and Japan. The preferences vary between the global and local bloggers as well as between collective country to the other.

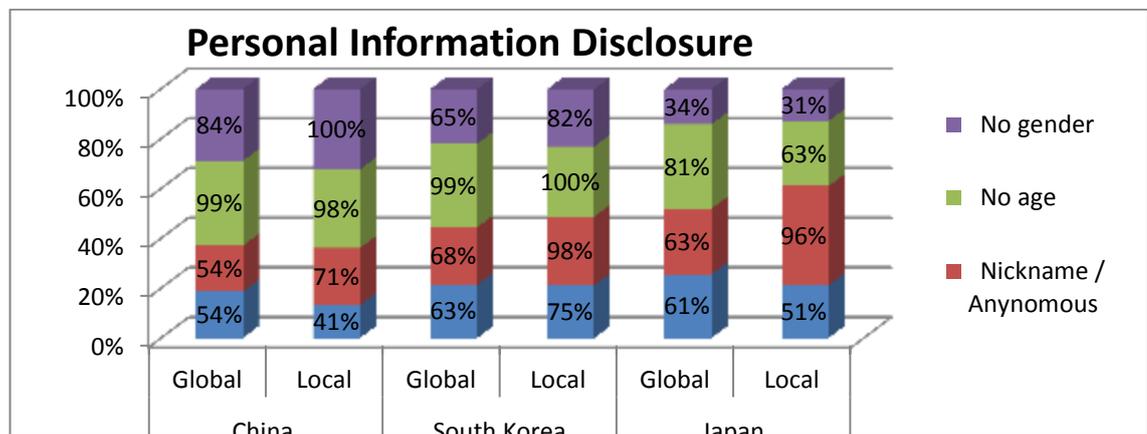


Figure 5. 70: Personal information disclosures in collective countries' blogs

Observations on blogs from China, South Korea and Japan with regard to the profile section show higher percentages of bloggers prefer to keep a low profile on themselves especially the local bloggers. The item most preferred to be hidden is the information on age. Being anonymous is a commonality across blogs from these three countries especially the local bloggers with 71% of the Chinese local bloggers preferring the use of a nickname and anonymity, 98% and 96% of the local bloggers from South Korea and Japan also prefer to use a nickname and other anonymous identification to describe themselves. As shown in Figure 5.78, the global bloggers in China, South Korea and Japan are more open about their personal self compared to the local bloggers in the same countries by revealing personal information at a higher level of disclosure than their local counterparts. 46% of the Chinese global bloggers post their own pictures as identification, 53% of them prefer to use their full name, and 16% reveal their sexual

category. The South Korean global bloggers' preferences disclose that 37% prefer their own pictures, 32% use their full name, and 35% mention their gender. Japan, furthermore, has 39% of the global bloggers posting their own pictures as identification, 37% use their full name, and 65% mention their sexual category. Comparatively, the local bloggers in these countries are more restrictive in providing their personal information. Only 4% of the Chinese local bloggers reveal their own pictures, 29% use their real name for identification, while 2% opt to mention their sexual category. Similarly, 4% of the South Korean local bloggers put their own pictures in authors' identification category, 2% prefer to use their real name and 0% reveal information regarding gender. Japan local bloggers however, prefer to disclose more information about themselves compared to the local bloggers in China and South Korea. 51% of the local bloggers in Japan use their own picture, and 69% choose to mention their gender. The Japanese local bloggers prefer not to use their real name for authors' identification with 96% choosing to put their nickname on their blogs. Age seems to be the most sensitive information to be revealed, especially in China and South Korea. 99% of the Chinese global bloggers and 98% of the Chinese local bloggers prefer not to reveal information on age. In addition, 99% of the South Korean global bloggers and 100% of the local bloggers remain silent on their age information. Comparatively, bloggers in Japan have slightly less of a preference in not revealing information on age by showing 81% preferences by the global bloggers and 63% preferences by the local bloggers.

However, looking at the profile observation from Germany, France and Sweden it shows that the local bloggers from these countries have high percentages of using nicknames in addition to being anonymous. The observation shows that 65%, 53% and 88% of the local bloggers from Germany, France and Sweden respectively prefer to be anonymous in revealing their own real name on blogs. Apart from Germany, French and Sweden global bloggers have significant percentages in bloggers anonymity preferences with 47% and 37% respectively. Even countries that are collective in nature do not show cultural markers that clearly represent the respective culture as indicated by Hofstede on personal blogs located in the countries mentioned earlier. Similarly, cultural markers on blogs design in individualistic countries do not appear to indicate and represent the culture that has been earmarked as dominant of particular countries in the sample.

5.6.2 Uncertainty Avoidance

5.6.2.1 High Uncertainty Avoidance

Countries that are high in uncertainty avoidance are expected to have web pages that have simple layout and contain a statement of disclaimer or copyright clearly indicating the legal implication of any misconduct behaviour by readers. Figure 5.71 shows the preferences in using simple layout structure by bloggers in countries that are high in uncertainty avoidance like South Korea, Japan, Germany and France. Except for the German local bloggers, bloggers in the countries mentioned earlier prefer to use simple layout as the structure for information presentation on their blogs. 94% of the global bloggers and 80% of the local bloggers in South Korea, along with 94% of the global bloggers and 74% of the local bloggers in Japan, together with 69% of the German global bloggers and subsequently 100% of the French global bloggers and 53% of the French local bloggers prefer the simple structure layout to arrange information on their blogs. The German local bloggers, however, have the lowest proportion in their preferences of the simple layout with only 33% choosing to use simple layout as the structure for information presentation. Surprisingly, both local bloggers from France and Germany record observations showing that 47% and 67% respectively choose to use complex layout as the structure to display information on blogs. The German global bloggers, furthermore, record 31% of preferences on the use of complex layout structure. This preference of blogs design feature does not coincide with the culture of high uncertainty avoidance that ensures things are completed in a simple manner to avoid risk and complication.

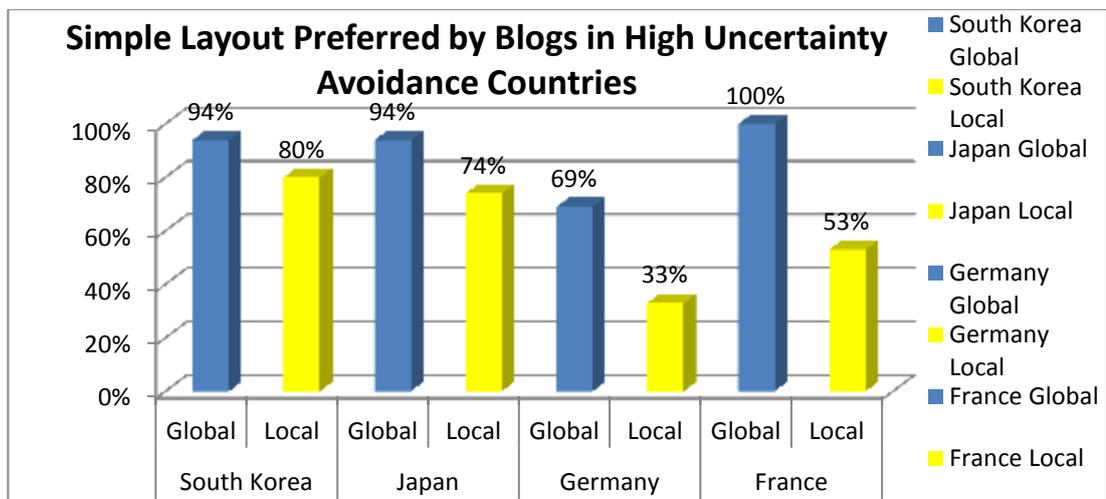


Figure 5. 71: Simple layout preferences by bloggers in high uncertainty countries

Another cultural marker for high uncertainty avoidance indicator is the display of the statement of disclaimer or copyright that carries legal implications for any wrong doing by readers. Figure 5.72 highlights the preferences by bloggers in South Korea, Japan, Germany and France that post such statements on the walls of their blogs. The German global bloggers, the French global and local bloggers depict the highest percentages in showing preferences for displaying statements of disclaimers and copyright. As seen in Figure 5.72, 73% of the German global bloggers, 43% of the French global bloggers and 12% of the French local bloggers choose to display the statement that contains a disclaimer or that carries copyright implications. The German local bloggers and both categories of bloggers in Japan and South Korea prefer not to display such statements on their blogs. The observations mean that 100% of both categories of bloggers from South Korea and Japan did not display any form of disclaimer or copyright statement on their blogs as well as 100% of the German local bloggers that preferred to do so. The France global bloggers have 57% preferences in not displaying such statements on their blogs while 88% of the French local bloggers prefer not to display any statement of copyright or disclaimer. The German global bloggers is the only group that showed strong preferences for statements of disclaimer and copyright.

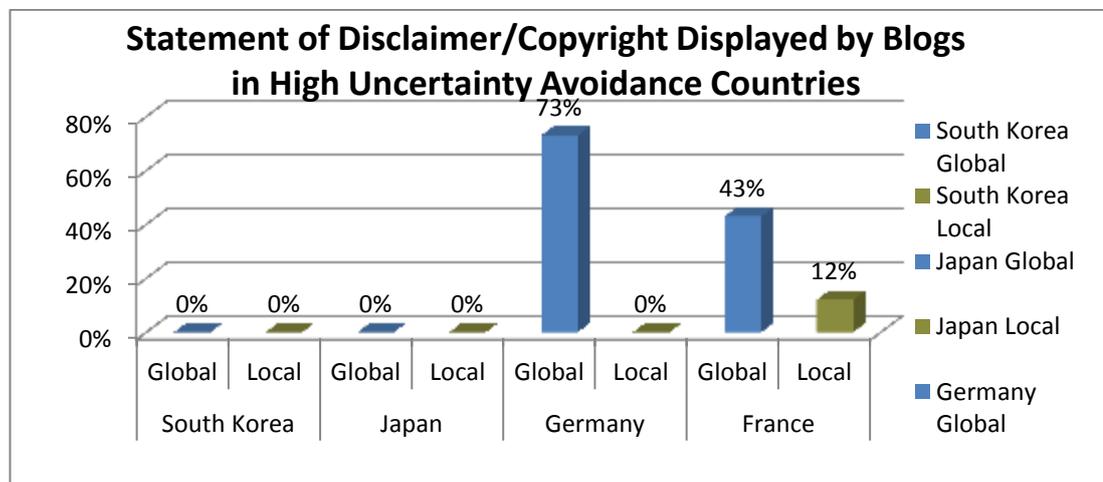


Figure 5. 72: Statement of disclaimer by bloggers in high uncertainty countries

5.6.2.2 Low Uncertainty Avoidance

An indicator of web cultural marker for low uncertainty avoidance countries is the use of complex layout as the structure for information on web pages. Figure 5.83 shows the preferences by bloggers in low uncertainty avoidance countries with regard to the use of complex layout as information structure on blogs. Countries such as China and Sweden as highlighted in Figure 5.73, however, have low percentages in preferring to use

complex layouts on blogs. 18% of the global bloggers and 8% of the local bloggers in China prefer to use complex layout to structure information on their personal blogs. Similarly, only 6% of the global bloggers in Sweden choose to use complex layout structure while none of the Swedish local bloggers opt for the layout that is complex. This means that 82% of the Chinese global bloggers and 92% of the Chinese local bloggers prefer simple layout rather than the complex layout as indicated by the cultural indicator. Similarly, 94% of the Swedish global bloggers and 100% of the Swedish local bloggers opt for simple layout structure which contradicts the cultural indicator in design feature for low uncertainty avoidance culture.

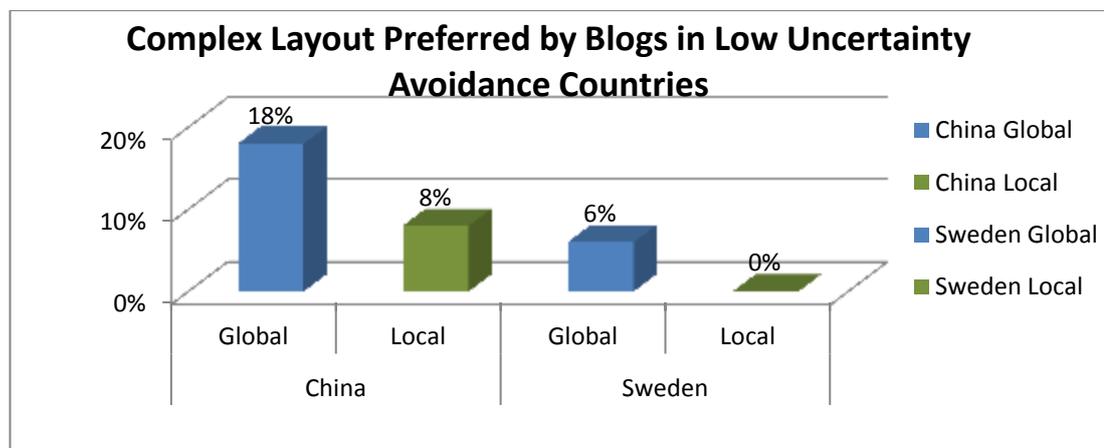


Figure 5. 73: Complex layout preferences in low uncertainty avoidance countries

Observations on design behaviour from the national culture perspective for uncertainty avoidance dimension shows that blogs design features preferences do not coincide strictly with the national cultural traits. Bloggers in uncertainty avoidance countries are observed to have preferences in web design that do not reflect cultural markers. Although there are bloggers who show preferences that are aligned to national culture traits, the preferences are not displayed similarly across the board in both layout choices and copyright / disclaimer statement.

5.6.3 High Context versus Low Context Culture

5.6.3.1 High Context Culture

The indicators used to represent the high context versus low context culture on web interface are the use of multimedia and image on web pages and information. Users of blogs in the high context culture are expected to display a higher level of multimedia use and extensive show of images to spread information. The low context culture users, on the other hand, are expected to display less or no usage of multimedia and images

and show more text-based information on blogs walls. Figure 5.74 shows the preferences in the percentage of multimedia usage by high context culture countries like Japan, China and South Korea. The multimedia usage in high context culture does not show a significant high proportion looking at the percentages of preferences in use. The highest preference is from the Chinese local bloggers with 51% of them preferring to use a high amount of multimedia on their blogs. However, the Chinese, the South Korean and the Japanese global bloggers are observed to record preferences of using extensive usage of multimedia that are higher than the South Korean and the Japanese local bloggers. The global bloggers from China, South Korea and Japan show 24%, 37% and 28% respectively on preferences to use a high number of multimedia in their blogs compared to 18% of the South Korean local bloggers and 16% of the Japanese local bloggers that prefer to do so. In other words, more than 50% of the Chinese, South Korean and Japanese global bloggers prefer to use less multimedia on their blogs as well as more than 80% of the South Korean and the Japanese local bloggers opting for less use of multimedia on their blogs.

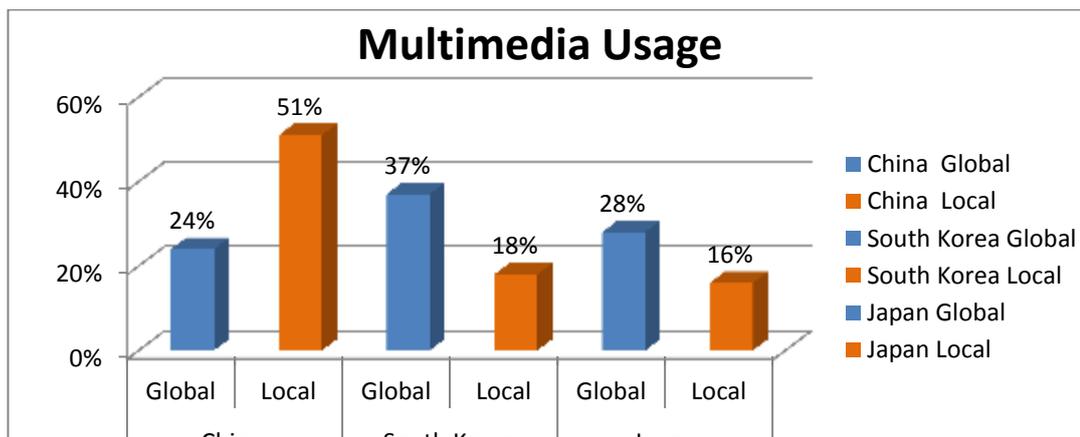


Figure 5. 74: Multimedia usages in high context culture countries' blogs

The use of image, however, illustrates an entirely different scenario from multimedia. The preferences to the extensive use of image are observed to show an overwhelming correspondence. The countries under observation which are China, South Korea and Japan highlight more than 60% preferences in the extensive use of images on blogs in both categories of blogs. The global bloggers' preferences in the extensive use of images are observed to be 88% in China, 86% in South Korea and 92% in Japan. Comparatively, the local bloggers' preferences in the use of images on blogs show proportions of 67% in China, 98% in South Korea and 86% in Japan. The preferences in the use of images by bloggers in China, South Korea and Japan are indicated in Figure

5.75. Such high proportions in the number of images by these high context culture countries coincides with the cultural traits of these countries under study.

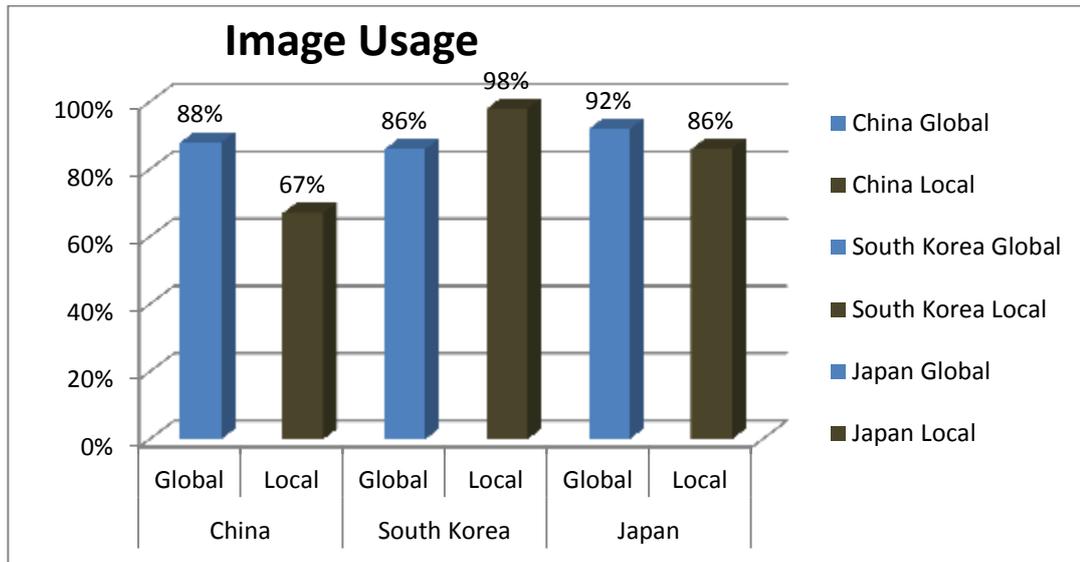


Figure 5. 75: Proportions of image usage preferences in high context culture

5.6.3.2 Low Context Culture

Low context culture countries are expected to use text-based information on their web pages and apply less or no use of multimedia or images to communicate on the web. Figure 5.76 highlights the preferences in multimedia usage in low context culture countries of Germany, France and Sweden.

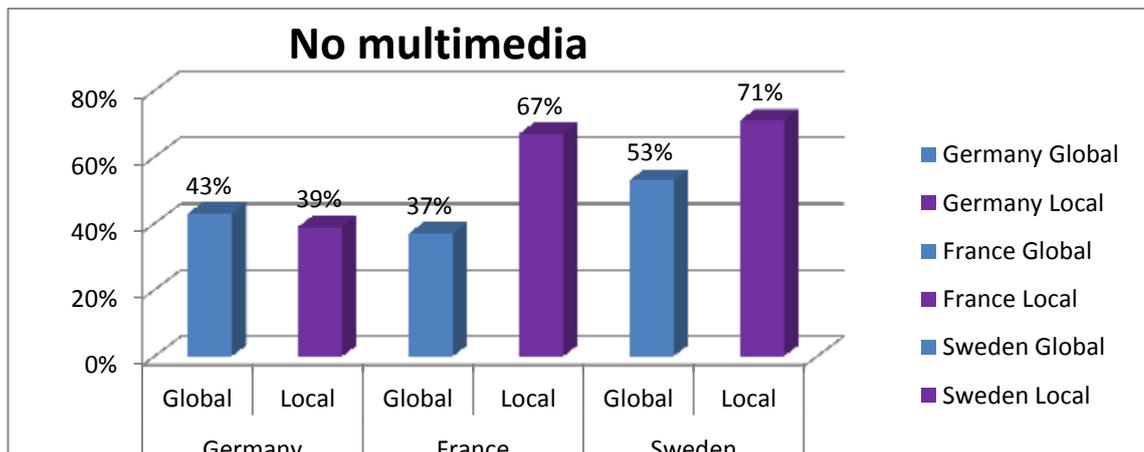


Figure 5. 76: Preferences in multimedia usage in low context culture

The local bloggers in France and Sweden are observed to prefer less or no use of multimedia on their blogs with 67% and 71% respectively. The local bloggers in Germany, however, are observed among the low preferences in not using multimedia on blogs with 39% of them preferring to use little or no multimedia on their blogs. The

global bloggers in Sweden are the highest in this category of bloggers that opt for no use of multimedia on blogs with an observation of 53% preferences. The global bloggers in Germany and France record 43% and 37% respectively in the preferences of no multimedia usage on blogs. The figures, however, indicate that German and French global bloggers, relatively, have higher proportions of multimedia usage compared to Swedish global bloggers. 57% of the German global bloggers and 63% of the French global bloggers prefer to use multimedia applications on their blogs compared to only 47% of the Swedish global bloggers choosing to apply multimedia applications on blogs. The German local bloggers, however, have a higher proportion in multimedia usage preferences with 61% choosing to use multimedia applications compared to 43% of the French local bloggers and 21% of the Swedish local bloggers opting for multimedia applications.

5.7 Statistical Analysis

The last stage of analysis is the statistical analysis. To answer the research question and to validate research findings in country and cultural analysis above, a statistical analysis has been conducted to ascertain that findings are validated internally and to ensure that hypotheses are statistically significance. The purpose of statistical analysis is to provide statistical evidence that can be compared to other researches since it focused on explanation, prediction and proof. Statistical analysis formed part of the empirical validity, which refers to the degree to which available evidence and established theory support various stages of a research process (Krippendorf, 2004). Validity concerned with truths and validity tests set claims or results from a research effort against evidence obtained independent of that research effort. The independent evidence can be in the form of additional data, findings of other research efforts, evidence found in this research's research question domain and criticism based on observations, experiments or measurements as opposed to logic and process. Since data are categorical variables, Cross-Tabulation Analysis is used to test for a significant association between two categorical variables across six countries and is used to evaluate the significance of the first hypothesis.

H1: There is no association between bloggers' design preferences and national culture.

5.7.1 Cross-Tabulation Analysis

Design preferences between the global and local blogs across six countries would be tested using the Cross-Tabulation Analysis on each indicator of culture. The results are shown in Table 5.42.

Table 5. 42: Cross-Tabulation analysis across six countries

Country Indicator	China	South Korea	Japan	Germany	France	Sweden
Picture	$\rho = 0.000$					
Name	$\rho = 0.000$					
Age	$\rho = 0.000$					
Gender	$\rho = 0.000$					
Image type	$\rho = 0.000$					
Image number	$\rho = 0.000$					
Multimedia type	$\rho = 0.000$					
Multimedia number	$\rho = 0.007$					
Layout	$\rho = 0.000$					
Disclaimer	$\rho = 0.000$					
Awards	$\rho = 0.006$					

Picture: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the display of author's picture between local and global blogs across six countries.

Name: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the revelation of author's name between local and global blogs across six countries.

Age: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the mention of author's age between local and global blogs across six countries.

Gender: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the author's gender disclosure between local and global blogs across six countries.

Image type: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the type of image preferred between local and global blogs across six countries.

Image number: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the number of image preferred between local and global blogs across six countries.

Multimedia type: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the type of multimedia preferred between local and global blogs across six countries.

Multimedia number: $\rho = 0.007 < \rho 0.05$

Lamba = 0.009; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the number of multimedia preferred between local and global blogs across six countries.

Layout: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the type of layout preferred between local and global blogs across six countries.

Disclaimer: $\rho = 0.000 < \rho 0.05$

Lamba = 0.000; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the display of the disclaimer statement between local and global blogs across six countries.

Awards: $\rho = 0.006 > \rho 0.05$

Lamba = 0.002; Phi = 0.000; Cramer's V = 0.000

There is a significant difference on the display of award between local and global blogs across six countries.

Decision: Accept the null hypothesis - There is no association between design preferences in linked networks of blogs and national cultural traits. The result of the test static indicates there are significant differences in each indicator of design features in across six countries with $\rho < 0.05$. It is concluded that the statistical significance in the differences in design preferences between the global and local blogs in across six countries reflect that there is no association between bloggers' design preferences in networks of blogs and national culture.

5.7.2 Cluster analysis and multivariate test

A cluster analysis was conducted to examine whether blogs in linked networks are groups with similar characteristics. The analysis follows the steps as explained in paragraph 4.4.5 of Chapter Four. The dendogram depicts characteristics of blogs that form the related clusters and each dendogram of the network of blogs is shown in Appendix 1 to Appendix 12. To verify the cluster analysis and to test for the significance of hypotheses 2 and 3, multivariate tests were conducted to determine the association and differences between clusters of blogs.

H2: There is no significant difference in bloggers' design preferences within each network of blogs.

Tables 5.43 and 5.44 below highlight the multivariate test conducted to find the similarities within each network of blogs in the six countries. The test is to show that within each group of blogs, there are design similarities that group each of the bloggers in the same network as a cluster. The ρ values show that design preferences of bloggers in linked networks of global blogs are not independent of each other, prompting to reject the null hypothesis.

Table 5. 43: Multivariate tests for blogs from China, South Korea and Japan

Multivariate Test	China		South Korea		Japan	
	Global	Local	Global	Local	Global	Local
Items	ρ	ρ	ρ	ρ	P	P
ZPicture	0.311	0.242	0.172	0.954	0.695	0.054
ZName	0.503	0.796	0.034	0.847	0.318	0.885
ZAge	0.632	0.859	0.340	0.655	0.493	0.462
ZGender	0.171	0.436	0.614	0.343	0.217	0.637
ZImage Type	0.442	0.410	0.374	0.768	0.320	0.347
ZImage Number	0.655	0.650	0.852	0.359	0.205	0.534
ZMultimedia Number	0.185	0.398	0.269	0.307	0.805	0.952
ZLayout	0.542	0.425	0.190	0.977	0.218	0.295
ZDisclaimer	0.930	0.477	0.599	0.174	0.248	0.977
ZAward	0.210	0.770	0.446	0.403	0.761	0.303

Table 5. 44: Multivariate tests for blogs from Germany, France and Sweden

Multivariate Test	Germany		France		Sweden	
	Global	Local	Global	Local	Global	Local
Items	ρ	ρ	ρ	ρ	P	P
ZPicture	0.332	0.271	0.423	0.413	0.408	0.432
ZName	0.829	0.377	0.718	0.089	0.095	0.195
ZAge	0.330	0.892	0.750	0.201	0.178	0.229
ZGender	0.591	0.152	0.008	0.874	0.465	0.536
ZImage Type	0.780	0.139	0.036	0.932	0.078	0.798
ZImage Number	0.191	0.962	0.148	0.608	0.047	0.775
ZMultimedia Number	0.101	0.801	0.017	0.330	0.654	0.321
ZLayout	0.307	0.148	0.200	0.431	0.641	0.307
ZDisclaimer	0.581	0.247	0.450	0.803	0.406	0.673
ZAward	0.299	0.926	0.677	0.992	0.687	0.374

Decision: Reject the null hypothesis - There is no significant difference in bloggers' design preferences within each network of blogs in the six countries. The result indicates that group influence exists within each network of blogs. **Conclusion:** Group influence on design preferences of bloggers is reflected in design similarities.

In addition, a control group that consists of blogs chosen at random and not in a linked network was conducted. A similar statistical analysis was completed on blogs in the control group and the results are shown in Table 5.45.

Table 5. 45: Multivariate test for blogs in control group

Multivariate Test	Control Group
Items	ρ
Zpicture	0.000
Zname	0.353
Zage	0.000
ZGender	0.030
ZImage Type	0.000
ZImage Number	0.041

ZMultimedia Number	0.008
ZLayout	0.219
ZDisclaimer	0.033
Zaward	0.022

The test indicates that blogs that are not in linked networks and chosen at random have eight design features that are independent from each other, indicating there are no cluster or group characteristics between them. Two design features are similar between blogs in the control group. Name and layout are common features that are shared among bloggers in the control group. The majority of differences imply that blogs in non-linked networks do not belong to a cluster and these blogs, that are not linked, do not share similar design features in most items in the design characteristics.

H3: There is a significant design difference in bloggers' design preferences between networks of blogs.

Table 5.46 highlights the results of the multivariate test conducted on the networks of blogs to test for the similarities and differences between each network. The ρ values are less than 0.05 indicating acceptance of the null hypothesis. Each linked network of blogs is independent of design characteristics from each other.

Table 5. 46: Multivariate test between networks of blogs

Multivariate Test	Between Clusters
Items	ρ
Zpicture	0.000
Zname	0.000
Zage	0.000
ZGender	0.000
ZImage Type	0.000
ZImage Number	0.042
ZMultimedia Number	0.009
ZLayout	0.000
ZDisclaimer	0.000
Zaward	0.034

Decision: Accept the null hypothesis - There is a significant difference in bloggers' design preferences between networks of blogs. **Conclusion:** Design differences between networks exist in networks of blogs.

5.7.3 Summary to the Statistical Analysis

The statistical analysis can be summarised as in Table 5.47 to highlight the significance of the variety of hypotheses that have been analysed earlier.

Table 5. 47: Summary of the statistical analysis

Items	Hypotheses	Results
H1	There is no association between bloggers' design preferences and national culture.	Supported
H2	There is no significant difference in bloggers' design preferences within networks of blogs.	Supported
H3	There is a significant design difference in bloggers' design preferences between networks of blogs.	Supported

5.8 Conclusion

The statistical analysis verifies the two earlier analyses and proves the nature of cultural influence on blogs design features. The earlier two analyses mixed results show that there are design features preferences that are similar in one culture in one country and there are design features preferences that are different although they belong to one culture and one nation. Furthermore, there are design preferences that coincide with the cultural traits of a certain country and there are design preferences that contradict the cultural markers designated for a certain culture that belong to a particular nation. The last stage of the analyses validates the earlier findings using statistics that there are design features preferences that prove to be similar in blogs from the same cultural values as well as blogs in different cultural backgrounds. The mixed results from the three stages of analysis have confirmed and provided answer to the research question that **there is no association between national culture and bloggers' design preferences**. Results from the country, the cultural and the statistical analyses confirm that the preferences in blogs design features are as follows:

- (i) There are similarities and differences in the preferences of blogs design features between the global and local blogs in each country under observation. In one country with similar cultural values, local blogs and global blogs design preferences are found to be similar or different from one another.
- (ii) Those similarities and differences are proved through the mapping of cultural markers on design features based on selected indicators that confirm there are elements of design that do not coincide with the stipulated cultural traits that are have been recognised as particular cultural values and designated to certain

nations. Local and global blogs design preferences are found to follow or contradict the national culture of a particular nation.

- (iii) The statistical findings also validate that the design preferences in linked networks of blogs are similar within each network. In addition, each linked network of blogs is different from each other in terms of design preferences and characteristics.

In conclusion, results from the three types of analyses confirm and validate that there are other factors influencing the design preferences of blog users in different countries. As such, national culture has been weakened as the factor that influenced the preferences of design features in blogs. The following chapter involves the discussions on the findings that have been presented in the present chapter. The discussions will touch on the possibility of the influence of other factors on the design preferences of blog users taking into consideration the nature and characteristics of blogs as a medium of social interaction.

CHAPTER SIX: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The researcher has identified the gap in the literature in terms of the effect of group level culture on the design behaviour of blogs and showed the benefits such research has on the literatures of IS, to contradict an existing theory on the national culture influence of web design behaviour. To test and verify the gap in the literature a conceptual framework and a research model have been developed using two of Hofstede's cultural dimensions, individualism versus collectivism and uncertainty avoidance; in addition Hall's cultural dimension of high versus low context culture has been used. The context has been selected from a range of web providers operating in the six countries under observation to validate the theoretical assumption that motivates this research. In addition, the methodology that has been adopted is suited to the nature of the research and fulfils the research question and issues. The results and findings that have been sorted and analysed using SPSS from selected blogs have shown potential to the different types and levels of culture that have an influence on web design behaviour apart from national culture. To further enhance understanding and comprehension on the phenomenon, the researcher intends to streamline findings and argumentations from the previous chapter with discussion and justification in order to link these reviews with the aim and objectives of the research. The chapter also extends the arena of this research by taking into consideration the implications of the research findings, its contributions, limitations and recommendations as well as proposing future further research.

6.2 Overview of the study

This study examined blogs' design preferences from the point view of culture. It also identified different levels of influence on design preferences in linked networks of blogs. The importance of exploring the types and levels of influence on design preferences is due to the different nature and context within which blogs exist and operate compared to the static websites of the early web innovation. The substantive use of Hofstede's cultural model on websites evaluation and assessment has been criticised as questionable and excessive. Remarks such as homogeneity of culture in any

particular country is questionable (Peppas, 2001); individual differences could also be the result of other different levels of culture (McSweeney, 2002); the sub-culture influences are often assumed non-existence in Hofstede's taxonomy (Straub et al., 2002) as well as the use of one organisation, (IBM) to represent nation states has been the focus of criticisms (McCoy, 2003) to the Hofstede dominant presence in websites evaluation literatures. As a consequence, there arise interests in to explore different levels of influences in IS departing from the usual national model to those of individual (Straub et al., 2002), professional and organisational (Wessinger and Trauth, 2003), professional, group and individual (Karahanna et al., 2005). However, limited empirical studies and research have been carried out to test the different levels of cultural influence in IS and most of the literatures have only explored the theoretical foundation of the concept (Karahanna et al., 2005) without providing concrete evidence and a theoretical framework on how different influence levels models could be used in IS research. Furthermore, no theoretical foundation or theoretical frameworks have been explored on design preferences on other forms of websites such as those on the social network landscape, apart from the static and organisational types of web pages.

To examine this research problem, a quantitative method approach using content analysis was adopted (Simon, 2001; Singh et al., 2003; Marcus, 2006). Content analysis is a systematic technique that has been widely adopted in researches that investigate cultural impact on web design. It is widely used in various applications as a reliable technique for compressing words into categories using a coding system (Krippendorff, 2004). The coding system in this research was built using the indicators of web assessment consisting of the Hofstede's two cultural dimensions of individualism versus collectivism (Marcus and Gould, 2000) and uncertainty avoidance (Singh et al., 2003) in addition to Hall's high versus low context (Wurtz, 2005). The coding system was tested on a pilot study on linked networks of Malaysian blogs to test for its relevance and accuracy. It was then applied on samples of linked networks of blogs from six countries that are culturally different.

To uphold the research reliability, two different types of test were conducted on the data collected from linked networks of blogs in six countries. Firstly, an independent second researcher was chosen to rate the blogs pages using a similar coding system. The two sets of data from the two independent researchers were then tested reliability for

categorical data, namely Cohen Kappa's Test. The results of the test showed coefficients between 0.7 and 0.9 indicating that the measurements used are reliable. The second type of test involved the use of native speakers for non-English blogs evaluation. This step was taken to avoid any error in Google translation that may jeopardise the quality and the integrity of the research. The findings of the research were then sorted and tabulated according to the required analyses as stated in the previous chapters.

The results of the study demonstrated strong support for design preferences in linked networks of blogs to be associated with group level influence. The country analysis showed disparities in design preferences between the global and local blogs in each country indicating that national culture may have been weakened. Large deviation in design preferences according to national culture indicators as shown in the cultural analysis also proved to indicate that national culture dominance in design preferences may have weakened in linked networks of blogs. The statistical analysis was the last stage of testing that showed linked networks of blogs act as clusters of groups that share similar design characteristics. The following sections evaluated the findings in networks of blogs' design preferences by summarising the supporting evidence for the hypotheses.

6.3 National culture and blogs design preferences

The first objective of the research was to investigate and evaluate design preferences on two categories of blogs, global and local, in countries selected for this research. The evaluation was first conducted on the global and local blogs in China followed by South Korea, Japan, Germany, France and Sweden in the order of sequence. The first findings in China revealed that there are acute similarities in the design preferences of bloggers from the two categories of blogs which may have confirmed the theory that web design behaviour in a country is influenced by the culture of that particular country. On the other hand, the findings also revealed that there are vast differences in the bloggers' design preferences from the two types of blogs indicating that in a country with the same culture, web design preferences showed signs that contradict the theory of national culture influence on web design behaviour. The mixed results from China served as the first platform to show that a diversity in the design preferences of bloggers in a same country exists, confirming an earlier assumption of disputing the claim of dominance at a national level aspect of cultural influence in web design. For further proof, evaluation

on both the global and local blogs in five other countries, namely South Korea, Japan, Germany, France and Sweden was conducted using similar measurement units. To fulfil the second objective of the research, a comparison analysis between countries was prompted to compare and analyse design preferences of bloggers. The results proved that design preferences of bloggers in different countries have similarities that could not be explained using cultural background. The comparison analysis, no doubt, is the map that connects all the dots, to converge them into a picture that shows design preferences of bloggers across the globe have similarities and differences that go well beyond the boundaries of nations.

The similarities and differences, however, do have connections with culture in a variety of degrees. To ensure the type of connections involved, the third objective of the research is to analyse cultural indicators on design preferences by mapping design elements on blogs from various countries with national cultural markers. The results from the second part of the analysis provided stronger evidence that design preferences in blogs are not influenced by national culture traits. Statistical evidence from the Cross-Tabulation Analysis indicates that there is no association between design preferences in blogs and national cultural traits. This indication is shown by the statistical significance difference in design preferences between local and global blogs across six countries.

Given the results, there is evidence of a mixture of different types of influence with a significant contribution to the preferences of design in blogs other than national culture. The last and final stage of analysis is the statistical analysis to confirm the relationships between each of the selected design elements in blogs with the cultural values. The results from this final stage of analysis strengthened the findings from the country and cultural analyses on the mixture of types of influences on design preferences of bloggers in and between countries shown by the similarities and differences in design preferences. Furthermore, the similarities and differences in the design preferences of bloggers are explained further, and provided justifications on the effect of other influences apart from national culture on web design preferences. The explanation centred on the role of blogs as a social medium covering the design preferences into the three components which comprise the author's profile, visual design and information design.

6.3.1 Author's profile: Self-disclosure and anonymity on blogs

Marc (1999) defines anonymity as a state where a person is not identifiable and the situation is a social element since it requires an audience of at least one person. Blog is one of the computer-mediated communication media and a social medium that has greatly facilitated anonymity by providing channels for communication between people separated in time and space. Blog providers offer users anonymity in terms of a number of options which are total anonymity, partial anonymity or identifiable. Users who set up a new blog can easily choose from a variety of personal profile information which are optional and the users themselves have the option to either share or withhold their profile information. The levels of self-disclosure on blogs are determined by the users' choice in the type of anonymity that they prefer. In the blog itself, the anonymity is typically visual where it refers to the physical aspect of a message source that cannot be detected or seen due to the lack of any visual representation of a person (Lea, Spears and de Groot, 2001). Although the author's profile and the blog entries might reveal something about the author of the blog to a certain degree, in an online environment people in blogs usually feel anonymous when their personal information is withheld (Qian and Scott, 2007).

Marcus and Gould (2001) claim people in the individualistic cultures are more willing to disclose their personal information to distinguish the individual from the group. In other words, it also means that people who come from the collective culture are less willing to disclose their personal information. However, the mixed results from the country and cultural analyses, supported by the statistical analysis in this research, show commonalities and differences exist in the sampled profile information across different cultures. There are similarities in the level of self-disclosure and the type of anonymity that bloggers from China, South Korea, Japan, Germany, France and Sweden share across the boundaries of nations. In comparison, there are similarities between countries concerning disclosure on pictorial, name, age and gender information. As opposed to my hypothesis, the global bloggers in these countries show a higher percentage than the local bloggers in revealing personal information. The percentages of global bloggers in China, Japan, South Korea, Germany, France and Sweden that reveal their real name are higher than that of local bloggers in the same countries. Apart from France and China, the global bloggers in South Korea, Japan, Germany and Sweden also disclose a higher percentage in revealing their own picture compared to their local counterparts.

Revealing the information on gender, however, the global bloggers in China, South Korea, Japan, Germany and Sweden disclose their sexual categories in a higher percentage than the local bloggers. Consistent with my hypothesis, the percentage of global and local bloggers in France that reveal their gender information shows similar proportions. Age information, however, remains the most favourite item not to be disclosed. Except for the local bloggers in Japan, Germany and France, the percentage of both the global and local bloggers that reveal their age are similar in China, South Korea and Sweden which is consistent with my hypothesis. The mixed results are supported by Park et al. (2006) who found that anonymity plays a significant role in blogs regardless of culture. In their study of sampled user profile across the US, China and South Korea, they found that the bloggers in the sampled countries share one commonality which is anonymity. The comparison analysis on the US, China and Korean bloggers show mixed results in terms of similarities and differences that the bloggers reveal on their personal information. They conclude that the mixed results indicate that there are various factors that could be attributed to the findings apart from cultural differences such as economic development, democratic institutions, educational level and post material values.

Researchers also found that bloggers have an inclination towards expressing their identity on their blogs. Cerulo (1997), Huffaker and Calvert (2005) and Van Doorn et al. (2007) argue that beyond personal information such as age and location, bloggers also express their identity through the use of emoticons and language styles as well as using domains that represent their identity. Therefore, it is clearly possible for bloggers to develop virtual self identities through blogs and the advancement in the communication technology have been observed to create online communities and the resulting virtual social identity. Bergami and Bagozzi (2000) and Dholakia et al. (2004) suggest that social identity can be developed in both the virtual and real world. Thus, consistent with the general rationale of the social identity theory, socialised bloggers will develop virtual social identities as a form of commitment to their blogs communities. Building on the virtual identities aspect, individuals possessing various role and group identities in their real life are likely to extend these identities into the online world as virtual self and social identities that are manifested through their blogs irrespective of their cultural background to form a virtual social network based on discussions of similar interests. In short, the identities that they portray on blogs using

different levels of anonymity are a form of expressing their social identities that they sometimes do not openly exhibit in their life (Huffaker and Calvert, 2005) that could be similar or different from their real world identities. One possible method is through anonymity.

Bloggers reveal themselves in different levels of degrees. Some bloggers share more personal details and thoughts about themselves than others. Qian and Scott (2007) argue that such differences can be explained by individual differences in personality or temperament. They also found that the target audience and the blogging group one belongs to determines the level of personal information a blogger would provide as well as how anonymous a blogger feels. They argue the group view and their attitude about identity protection and risk would influence the need for anonymity and self-disclosure. This may be because name and personal identification in a blog would be within reach in a search. With their picture and name posted, a blogger's name and image could be queried and cross-referenced online. That would be a cause of concern and may be perceived as a risk. By refraining to give identification information, bloggers tend to disclose and share sensitive information with others. On the other hand, bloggers in a group may be more interested in being identified so that others would know exactly who they are and they are credited for their ideas and issues. In turn, they are more willing to share personal information and thoughts.

These arguments suggest that the types (visual or non-visual), the levels of anonymity (full or partial) and self-disclosure on blogs are under the influence of various factors apart from cultural differences. They are not dichotomous but vary in degrees and on a continuum pendulum with various options.

6.3.2 Visual design: Images and self-presentation

A number of theoretical perspectives have suggested that the use of images and pictorial description such as icon and avatar, in communication are strongly influenced by a person's cultural background. Hall's (2000) paradigm of high-context and low-context communication culture suggests that in high-context societies, greater importance is placed on non-verbal aspects of communication like body language, tone and the use of silence, than communication in verbal aspects. This type of culture emphasises more on listening and interpreting messages using contextual cues such as images. On the other

hand, the low-context culture uses explicit communication style and places more emphasis on direct verbal cues for effective communication. The types of images used in technological devices could also be influenced by culture as suggested by Marcus and Gould (2001) based on the individualistic and collective cultures. They argue that people in individualistic culture would prefer to portray images that are self-portrait and personal while those in the collective culture prefer images that represent group, society, people and landscapes. The trend in the use of images and pictorial description in the research shows findings that contradict the cultural variations hypotheses.

The findings show that the majority of the preferences in the images used by bloggers in China, South Korea, Japan, Germany, France and Sweden are personal in the form of photos. This is not surprising since blogs under study are personal blogs and most of the blogs' content describes items that are personal and of the interest to the individual authors. For authors in the collective culture (China, South Korea and Japan), the second most preferred type of images displayed is people and landscapes while those in the individualistic culture (Germany, France and Sweden) prefer to display no images at all on their blogs depending only on the textual communication. A relatively low percentage of Japan global bloggers (16%) is the only category of bloggers in the collective culture that prefer to use tradition and group images on their blogs.

The trend in the number of images used shows similar preferences across nations. Extensive use of images (more than 5 in numbers) are preferred by the global bloggers in China, South Korea, Japan, Germany and France as well as local bloggers in South Korea and Sweden. The majority of the local bloggers in China and France, as well as the majority of global bloggers in Sweden, prefer to use no images on their blogs. The majority of the local bloggers in Japan and Germany prefer to use less than five images on their blogs. One interesting observation is that the type and number of images used on blogs has a link with the content and the type of friends with whom the authors associate as a group. It was observed that blogs associated with arts and handicrafts such as the global blogs in Germany and France, have photos that describe the arts and crafts that are mentioned on blogs and, thus, carry images in large numbers. Global blogs in China and South Korea function as personal journals that describe the authors of the blogs activities and interests.

The type of images that these blogs carry is the self-image; and the content of blogs reveals information on the authors. The Japanese global bloggers, on the other hand, are observed as a group of people who use blogs to promote Japan based on its people, society and natural heritage. Therefore, blogs in Japan carry photos that describe the Japanese people and landscapes. The Swedish global and local blogs focus on the economics and political issues in Sweden as well as the daily lives of the Swedish. The contents are more textual since the format of the content encourages debates and forums on current issues. Words and texts used provoke more discussion compared to the use of images. The local bloggers in China, South Korea, Japan, Germany, France and Sweden use blogs primarily to communicate to others about themselves, their activities and their daily lives. The images on blogs would be sorted according to the topic of interests of the authors.

The different focus in the content of the blogs prompted the types of images that the authors of blogs prefer to portray on their personal blogs. The blogging group which is the target audience, according to Qian and Scott (2007), influences the way posts are written and the type of information that is made available. Audiences, they claim, drive various dimensions of blogging behaviour. In addition, they also argue that the goal and purpose of the blog itself are important to understand the level of self-presentation on blogs. This is supported by Marcus et al. (2006) who argue that web site content acts as a link between authors' expression of personality and readers' impressions of the authors. Thus, content of a web page is actually a self-presentation of the author, in which it conveys the information given to the readers on how the author has to be regarded. Images on blogs, therefore, are part of this self-presentation of the authors of blogs. De Angeli (2009) argues that self-presentation is context dependent and the emphasis on self-presentation leads people to behave as unique individuals. The lack of social cues regulating online self-presentation has led to the perception that blog is a medium which has the power to liberate individuals from social boundaries and influences. Therefore, blogging reduces cultural and status differences by allowing a more equal sharing of information compared to face-to-face interactions. By doing so, personal blog emphasises the individual identity, stressing people's unique identity and, at the same time, reducing the importance of other social factors such as culture.

The implications of the research findings with regard to the use of images on blogs could be traced to the fact that social media act as a medium between the blog author and his/her readers. Images therefore, play a significant role in maintaining relationship between them since their way of communication is non face-to-face. The limitation on the way online members interact brings about the importance of visual communication as a way to attract friends. By portraying images on the web pages, blogs authors could easily describe features of him/herself that are difficult to explain in words. Furthermore, images can easily be uploaded and retrieved for future and present usage. By way of communicating through images, authors would be able to reach to a wide range of audience in fewer words than texts are able to. Therefore, images serve as an icon of communication rather than an object of culture in social media.

Images mark the foundations of spaces and history of mankind. They can be seen in forms of art, icons, symbols, graphics and writing. Combined with the power of text and visual, images are combined into new communications environments with digitised communications bringing image, text and sound together into the same transmission media. The social network sites with Web 2.0 technology is known as the participatory web as users participate through sharing and creating their own content using text, photos, images or videos (Burns and Friedman, 2012). The use of images, apart from text, increases the perceived social presence on social networking sites (Nov and Ye, 2010) and has an effect on social behaviour (Allport, 1968). One of the popular ways to draw attention to the images and photos that are posted online is through tagging.

The results from this research show that types and the number of images, photos as well as multimedia used on the global and local blogs in six countries are not significantly different between one country to the other. Personal image is the highest type of preferred photo used in both the global and local blogs in six countries as a form of communication and to relay messages. In addition, at least 50% of both the global and local bloggers in the six countries prefer to use personal images in the range of 4 to 10 images per web page. The use of multimedia, however, is not as popular as images and photos in blogs observed in this research. At least 40% of the global and local bloggers in each country prefer to have no multimedia on their blogs while the majority of those who use multimedia only use video as the most preferred form and the usage is only in the range of 1 -3 per web page. Since blog is a form of social network and is personal in

nature, the emphasis should be focused on the importance of social relationships and social structures in understanding the environments (Marin and Wellman, 2011).

Social network is a collection of network members (nodes) that are connected to one another by one or more relationships (edges). Relationships are multidimensional and are often built on shared experience and interests, as well as shared histories or organisations and work place (Burns and Friedman, 2012). Blogs have become the common source of learning, reporting and giving opinions about current events (Berendt, 2011) as well as dealing with topics of long-term interests. The restriction-free nature of blogs compared to other forms of sources, helped to establish blogs as an important alternative source of information. Van House (2007) suggests that there are four social uses of personal images. Firstly, personal photos are used for the purpose of memory, narrative and identity where images help to remember and build narratives and stories surrounding people's lives, individual and collectives. The second purpose for the social use of personal photography is to reflect and sustain relationships. Images of people, places, events and activities are important to create the sense of togetherness and are often used as gifts (Rose, 2004). The stories and histories surrounding the photos reinforce the relationships that are built around the content of the stories and the act of viewing the images together. Thirdly, images are used for self-representation where people attempt to present themselves in a way that they wish others to see them (Goffman, 1955). Lastly, images are used for self-expression reflecting the owner's view, creativity and aesthetic abilities. This purpose comes into view when images are taken solely for enjoyment and self-purpose.

There are also studies that focus on the motivations for media capturing and sharing. Among the motivations is story-telling, identity presentation, social information sharing and serendipitous discovery (Goh, et al., 2009). In addition, there are also studies that focus on the motivations for annotation and tagging images on social networks. The identified motivations are social purposes and functional dimension. Social purposes refer to personal usage of images while functional dimension refers to intended use of images such as organisation and communication. Studies have also found that images that are captured and shared are personal, short-lived and for individual self-keeping (Gye, 2007; Okabe and Ito, 2006). Furthermore, Rodden and Wood (2003) found that images that are shared online contain aspects of daily life that are shared with friends

and acquaintances. Scifo (2005) suggests that three types of images are shared online: image of places that a recipient has or would go to, images that are used to convey information, and images that are taken to address an issue or to strengthen argument.

Goh et al. (2009) group the motivations for media sharing into five categories: creating and maintaining social relationships, as a reminder of individual and group experiences, self-presentation, for self-expression and lastly, for task performance. Apart from the motivational factors, Goh et al. (2009) also found that emotional and social influences have a part to play in media sharing of images. The study also suggests that positive emotions have a greater influence on media sharing behaviour compared to negative emotions, with happiness, excitement and surprise as the top three types of emotion found to be significantly reported by the respondents. Happiness and excitement tend to create the sense of openness and cooperation leading to higher inclination to share, while negative emotions such as anger may cause a person to be reclusive and less motivated to share (Bryant, 1983). Image sharing in the media exists in a social setting context with its own norms, values, languages, trends and incentives. The people and the group around the intended viewers may also exert influences on the recipient. Goh et al. (2009) found that image submissions are, indeed, influenced by other people and social norms and identify four categories of social influence that motivate the senders of photos to share images. Firstly, people that the senders know who include the recipients of the media and the senders' companion. Secondly, people that set the trends involving the influence of current affairs and issues in the society or group. Thirdly, individuals who the recipient or the sender does not know; the images that are shared may contain actions or behaviours of people that piqued the interest of the sender or the recipient of the image and prompt them to send similar images on the media. Lastly, the influence of incentives or reward expected from image sharing in the forms of praise, attention or monetary.

6.3.3 Information design: The interpersonal aspect of blogs

The interpersonal aspect of blogs involves how information or blogs' content are presented. Irrespective of whatever the type or purpose of a blog, the content of a blog remains a virtual environment controlled by the author of the blog. The interactions in blogs take place through leaving messages, audio-visual items and images in the content section of the blog. These virtual interactions serve as self-representation of the author

of the blog looking at the amount of information on blogs and the variety of topics being discussed. Marcus and Gould (2001) suggest that items shown in the information section of a web page could indicate the cultural background of the author. They argue that design elements such as layout and the statement of a disclaimer could pinpoint the cultural influence of uncertainty avoidance. The results of this research, however, show rather different results. Countries with low uncertainty avoidance like China and Sweden have layout structure that is complex while countries that are high in uncertainty avoidance countries like South Korea, Japan, Germany and France, have layout structure that is simple and the content carries a copyright or statement of disclaimer.

As opposed to the cultural analysis, the percentages of bloggers in both China and Sweden that prefer to use a simple layout are similar to the bloggers in South Korea, Japan, Germany and France. In addition, the percentages of bloggers in high uncertainty avoidance countries that use the statement of disclaimer or copyright are restricted only to the global bloggers in Germany, both the global and local bloggers in France, and the local bloggers in South Korea. Surprisingly, there are global bloggers in China that display the statement of disclaimer or copyright, which contradicts the cultural analysis when China is a low uncertainty avoidance country. In comparison between the global and local blogs, the similarities in the layout structure used by both the global and local bloggers, our hypothesis of similar layout structure is supported only in China and Germany. In contrast to our hypothesis, the layout structure of the global and local bloggers in South Korea, Japan, France and Sweden are found to be significantly different. With regard to the statement of disclaimer or copyright and in support of our hypothesis, the similarities on the display of the copyright or disclaimer statement are found to be significant in Japan and Sweden where the percentages of both categories of bloggers that display the copyright statement are nil. The similarities and the differences, however, could be attributed to other factors apart from culture.

Scheidt and Wright's (2004) study on design elements of weblogs found structural changes to the layout of blogs by users are not that substantive. They conclude that simple changes could be made to the blogs by altering the colour, images and sidebar. Therefore, they claim that blogs users prefer structures that are simple as they see no reason to alter the structure that they have adopted or because they lack the

technological skills to do so. Most customisation of blogs is found to be within the templates that are provided by the blogs services. The low level of influence to exercise customisation on blogs design is due to the lack in visual customisation points by the provider. In addition, they also argue that since blogs act as a tool to personal expression and connectivity, the element of artistic creativity on blogs by customising and changing the blog structure does not impair the function of the blog as a social medium. Papacharissi's (2006) content analysis on blogs found that blogs on average feature personalised accounts of information which more resemble a diary than independent journalism ideas. He also found that blogs are influenced by templates, frequently extensive and textual, offer moderate interactivity and use less graphical interface or multimedia tools. The metaphors and the structure which blogs use in context, are suitable for the purpose of blogging since blogs are disorganised, fragmented and self-referenced. The format and the structure used are being developed that way to align blogs with the author's uses and gratifications. This is because blogs, as a self-expression medium, serve a purpose by fulfilling the author's personal reflection and self-fulfilment and, thus, the organisation and the structure should comply with the best interest of the individual. Therefore, the choice of the layout and format of blogs are done in the interests of the individual author to enable self expression in the manner tailor-made to the individual's choice.

Users maintain personal journal blogs to archive and organise their thoughts, to connect with others, to obtain feedback on ideas (Hollenbaugh, 2011), to express creativity and to entertain others (Lenhart and Fox, 2006). Blogs also create additional opportunities for maintaining and supporting relationships beyond those afforded by phones and face-to-face visits. However, the issue of intellectual property has been raised to advocate that ideas, creativity, expressions and thoughts are included as private domains (Quinn, 2006). To protect this private domain of ideas and thoughts, the use of disclaimer and copyright statements is common. Blogs, on the other hand, have the potency to blur private and public information in which once the content has been created, it has the characteristic of being a public good which is non-rivalry in nature (Herring, et al., 2007). In addition, blogs facilitate the ease to reproduce, store and transmit information that changes the cost-benefit analysis of intellectual property. With almost zero cost to copy and store information, and with a large base of blogs users, the benefits of

information provided by blogs are enjoyed by a large number of users that perceive the information to be of low value.

Attempts to exercise the copyright or disclaimer claims are futile and will also hinder the purpose of the blogs as a medium that provides the larger social benefits to the common. Since blogs are informal and less emphasis is placed on getting the content to sound right than is placed on getting a point across (Chesney and Su, 2010), most users of blogs forego the statement of copyright and disclaimer. On the other hand, Child et al. (2011) found that bloggers are motivated by cost-benefit assessments and personal motivation to update, revise and alter their privacy rules. The study also found that while a group of bloggers tends to be proactively managing their privacy rules, there exist a group of bloggers that do not deviate from their initial privacy rules. The authors conclude that such extremes are due to the individual characteristics of either being a risk-taker or a risk-averse person.

By allowing the blogs to function as a social medium and not resorting to privacy rules, bloggers are motivated to share information in an online environment (Nov and Ye, 2010). By sharing information between bloggers, they emulate their social presence in an online community. The removal of private information and privacy rules would serve to focus the attention of bloggers from a private goal to norms and goals of the collaborating group (Rogers and Lea, 2005). Therefore, blogs could be regarded as an indication of a modified public sphere approach (Youngs, 2009) by integrating new forms of individual engagement with more collective forms.

6.4 Group and peer influence in networks of blogs

The hypothesis provided support to the claim that blogs design preferences are also influenced by other factors apart from cultural differences. The testing of design similarities preferences among the global blogs from difference cultures shows the majority of design preferences are significantly similar. The similarities in the design preferences among the global blogs from different cultures indicate a sense of belongingness as a group through the creation of a shared social identity (Rogers and Lea, 2005) through similar design features. Taking into consideration that blog is a communication medium that is global in nature; blog provides the opportunities to reach out to a potentially world-wide audience compared to local-based medium. It transcends

cross-cultural encounters and pervades implicit and explicit design associations and meanings (De Angeli, 2009).

To reach the target group and audience, the social presence of the author would have to be communicated through the social medium. Latane and Nida (1981) studied the effects of social presence on individual behaviour that supports the use of presence as a psychological construct rather than a physical presence. In the context of blogs, the social ties between bloggers are illustrated through online interactions. As more interactions take place, the social ties between bloggers become persuasive and influential (Axelsson and Regan, 2006; Mason et al., 2007). Hinde (1976) stresses that people exchange information during interactions. By exchanging information, they tend to share more information and more shared knowledge.

As regards to the design features that are similar, it was noted that the similarities are found in design features that strengthened the social presence of the author on the global medium. The features include personal identity (picture, name, age and gender of the author), self-representation on blogs (number of images and award) and the interpersonal aspect (layout structure) may foster social categorisation based on the available characteristics of the blogs' authors. Whenever the authors' social identity is salient, the online communication is ruled by social norms of the blogging group, thereby, allowing the stereotyping of online behaviour to follow more closely the expected standard based on design features. The sense of sharing among member bloggers in a virtual community is in line with findings of Bagozzi (2007), Dholakia et al. (2004), and Postmes (2001) that members of virtual communities tend to share sense of belonging, values and preferences among each other. The blogger-to-blogger communication is influential in shaping opinions and behaviours (Bagozzi et al., 2002) such that member bloggers in the same network have influence on design elements preferences in blogs. Bagozzi et al. (2002) suggest groups that are formed through identification are very influential in shaping and changing members' opinions, preferences and actions.

For personal blogs, maintaining interpersonal connectivity and social interactions are coherent attributes that emphasise the types of influence available in online communities. Increasing social presence is supplemented with graphics, animation,

video and sound that increase the velocity of interactions, support collaboration and maintain online connections (Wellman et al., 1996). People sharing strong attachment to a group will be more likely to participate and provide support to others in the group and online social groupings tend to share similar senses of belonging, values and preferences among members of the same online communities.

6.5 Design diversity between networks of blogs

Friedkin and Cook (1990) stress that network models of social influence are based on episodes of dyadic interaction. The two way communication between individuals in groups may increase, maintain, reduce or eliminate individual differences of opinion in a group. Marsden and Friedkin (1993) argue that influence does not require face-to-face interaction. They found that the precondition for social influence is information and awareness and argue that one possibility of the homogeneity effect of social influence networks is by selection and association of members based on similarity of response on certain issues, which influence some cognitive process followed by outward behaviours. Vandell (2000) found that peer groups are the primary environmental influence on psychological functioning. She argues that these forms of relationships are potential influences on psychological well-being, motivation and the development of competencies. Furthermore, Wellman et al.(1996) found that the lack of social presence in online networks allows relationships between members to develop on the basis of shared interests rather than social status. They argue that when shared interests are important to members, those in the same online communities may have more in common than those who live in the same physical area.

Blogs in linked networks are those with similar age characteristics and similar interests. Social influence in this case appears in the form of peer influence and sense of belonging, disseminated through online interactions. As interactions increase in number and frequency, the levels of social influence becomes stronger. Miller and Brunner (2008) found that an online participant's total number of contributions illustrates a consistent presence throughout the interaction while the participant's number of words demonstrates an immediate physical presence. Furthermore, the higher numbers of contribution and increased totals in words by online participants correspond positively with social influence. This coincides with the effects of social presence on individual behaviour that supports the use of presence as a psychological construct rather than a

physical presence (Latane and Nida, 1981). In the context of blogs, the social ties between bloggers are illustrated through online interactions. As more interactions take place, the social ties between bloggers become persuasive and influential (Axelsson and Regan, 2006; Mason et al., 2007). Hinde (1976) stresses that people exchange information during interactions and through the information exchange, people tend to share more information and more shared knowledge. In addition, the interaction between individuals is a basic element of social structure (Hinde, 1976) and relationships are interpreted to involve a succession of interactions between two individuals. Therefore, interactions influence and are influenced by relationships and, thus, by social structure, and in online communities, the online relationship could be explicitly portrayed by the choice of design elements.

For personal blogs, maintaining interpersonal connectivity and social interactions are coherent attributes that emphasise the types of influence available in online communities. Bagozzi et al. (2007) stressed that in online high-interactivity groups, the shared values and goals of members is affected through social influence. The longer the existence of the group, the level of interactions between members becomes stronger resulting in a collective behaviour among members. The longer they are in groups, the stronger the impact of group norms on intention (White et al., 2009). The norms of social groups should influence the willingness to engage in behaviours according to the group interactions rather than individual intention (Terry and Hogg, 1996). Similarly, the choice of design on personal blogs will be determined by either culture or social depending on how that choice is influenced by other bloggers through online interactions.

People sharing strong attachment to a group will be more likely to participate and provide support to others in the group and online social grouping tend to share similar senses of belonging, values and preferences among members of the same online communities (Hinkle and Brown, 1990; Piper et al., 1983). The similarities in design preferences corresponding to the blogs within a network and illustrated differences in design preferences between networks of blogs could be seen as a form of group cohesion as a cohesive group should be characterised by 'connectedness' (O'Reilly and Roberts, 1977) and a sense of 'we-ness' (Owen, 1985). By displaying similar design

characteristics, members of linked networks of blogs are showing their relatedness as groups that are joined through online interactions and communications.

6.6 Summary

The above discussion centred on the issues of cultural differences on design preferences and the nature of blogs as a social communication medium which provides support to the claim that design preferences on blogs are influenced by other factors apart from cultural differences. Judging by the mixed results of the analyses completed in the previous chapter, the observations are supported in consistency with other literatures on blogs function as an individual self-representation and a social identity medium. The fact remains that designing for a global population requires an understanding in the differences and similarities between heterogeneous groups of people and the type of medium being offered. The next chapter will provide a conclusion for the research and will provide recommendations in addition to presenting the research limitations and contributions.

CHAPTER SEVEN: CONCLUSION

7.1 Introduction

This chapter aims to offer the conclusion to the research question which is: does group culture have a stronger impact on design preferences than national culture in a linked network of blogs? The chapter also extends the discussion of this research by explaining the findings in terms of its contribution to the Information Systems theory and the relevance to blog providers' and online advertising managers. The implications of the research findings, its limitations and recommendations as well as proposing future further research are explored.

To summarise, web design is about creating the interface between people and technology. Culture, therefore, has long been recognised as one of the deciding factors in web design. Judging by the challenges faced by web designers and providers given the fluidity of the medium and the dynamics posed by the number in users' accessibility over time, national culture influence on web design can be expected to be weakened due to the rise in the number of web innovations that are personal in nature. The study provided a different level of cultural influence that could be used to assess design preferences on the web, specifically for personal blogs. The cluster analysis found that linked networks of blogs are a group of their own. Thus, the level of influence involved is group rather than national. The national indicators used for web design show that design preferences between the global and local blogs in a country differ, indicating different types of influence are at play to provide impact on design elements. This study, thus, has answered the main research question i.e. '**Does group culture have a stronger impact on design preferences than national culture in a linked network of blogs?**' The next section will elaborate the findings of the research in terms of the theoretical and managerial implications. In addition, this chapter also explores future research avenues arising from the current study.

7.2 Implications of the research findings

The research findings have two implications, namely the theoretical implications and the managerial implications.

7.2.1 Theoretical implications

The gap found in the literature which is ‘Does group culture have a stronger influence than national culture on design preferences in linked networks of blogs’ is the basis where this research was conducted. The gap is summarised as follows. Firstly, Hofstede’s national culture model has been the prominent tool in web design evaluation across the globe because it is unique and provides a mechanism that assigns cultural values according to national boundaries (Straub et al., 2002). Most of the IS research assumes that an individual living in a particular place belongs to a single culture where the culture is classified as national. Thus, the design behaviour of most web sites in a particular country or nation would follow single cultural traits identified with the particular nation. However, Hofstede’s national culture concept has been criticised, particularly on its two fundamentals, that is, the concept of national culture and the assumption that each country has its own single culture. Secondly, individual behaviour is a simultaneous function of all different levels of culture and the level varies depending on the nature of behaviour (Karahanna et al., 2005). The social psychology literatures suggest that each individual is influenced by a variety of cultures and sub-cultures in the form of ethnicity, nationality and organisation. An individual’s social identity represents an accumulation of cultures across the boundaries of nations, organisations and professions which combine together to create one’s overall culture (Straub et al., 2002). Thirdly, the context within which the influence occurs should be taken into account (Ali and Brooks, 2009). The nature of behaviour under investigation should determine the relative influence of the different levels of culture on individual behaviour. The context within which this research has been undertaken is personal blog, a form of online social network where the ownership of the site is individual. Different levels of influence on blogs’ design preferences have not been tested or validated for yet. This study used a content analysis method for data collection procedures and a cluster analysis technique has been performed for a comprehensive analysis of data. The summary on the theoretical implications is presented below.

Aspects of national culture have gained substantial coverage in the literatures of IS with models of national culture being used to develop indicators and apprehension that built up the humanistic approach to technology. Similarly, the internet and web design are not neutral from this form of scholarly debates and enquiry. The national culture concept managed to insinuate itself into design aspects and brought about a significant

contribution towards web's successful acceptance in various cultures. The first contribution to this research is the evaluation of the influence of national culture on the design preferences in linked networks of blogs. Using both the Hofstede and Hall models of culture, the testing of both models on blogs design explained and challenged the influence of national culture on design preferences of bloggers in countries of different cultures. The study explored aspects of national culture influence across six different cultures on blogs, an online social media that is a publication communication medium.

The existing body of knowledge also shows a gap in using different levels of influence in the IS research (Straub et al., 2002). The gap exists due to the consistent use of the concept of national level influence on design features of web pages. This research provides a new insight on evaluating design features on the web particularly networks of blogs using cluster analysis, as an attempt to address the gap. The focus on group level influence on blogs design features was carried out to gain another perspective of showing that there is a possibility that group level culture plays a role in influencing the preferences of design in web pages. The findings show that linked networks of blogs are, indeed, clusters of web pages that share similar design characteristics with one another within the network. Furthermore, each linked network of blogs is found to be of different clusters from one to the other. The results will help scholars and researchers in IS and web design studies to better understand how design features in social network such as blogs are chosen by users, taking into consideration the interactions and communications between users as one of the instrument of influence. The proposed theoretical model as per the research finding is shown in Figure 7.1.

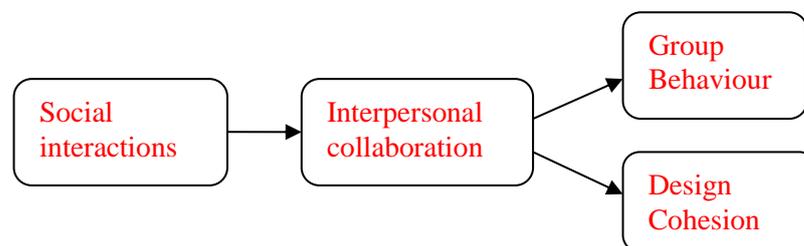


Figure 7. 1: Blog design behaviour model

This study used cluster analysis to sort design preferences in linked networks of blogs. It used the mathematical method to sort design preferences in blogs and classified them into the same cluster. Although cluster analysis has been used for a variety of research

goal, the use of cluster analysis has not been used in the IS research to evaluate design preferences. In addition, the use of cluster analysis in blogs design features allowed the researcher to obtain results based on group level influence classification. This has not been previously examined and applied in the context of IS research and web design literatures. This study, therefore, makes a contribution to the literature by applying the cluster analysis to evaluate design preferences in linked networks of blogs by testing them for similarities within and between clusters.

The results of the hypotheses testing show that national culture influence on blogs design preferences has been weakened. At the same time, group level influence may be another factor to consider in evaluating design preferences on web pages. The theoretical implications of results are statistically significant and the significant relationships are presented in this study. This research is one of the first to empirically validate the different level influence on design preferences of web pages, and proves that national culture influence on design preferences in linked networks of blogs has been weakened. The conclusion is that group culture has a greater impact on the design preferences of linked networks of blogs compared to national culture.

7.2.2 Managerial implications

The focus of this study is on the impact of culture on design preferences of linked networks of blogs and the different level of influence involved from the perspective of national and group level influences. The findings may suggest a number of implications for blog providers and online advertisers' managers as well as providing some guidance on the type of influence on design preferences depending upon the type of social medium under investigation.

The use of web design on various users' interactions media has increased substantially with the rise in the numbers of online communication and social media. Managers of the communication service providers have been facing dilemmas in determining the significant factors that would enhance customers experience since design stimulates smooth interactive communication among users. Since user interface experience depends on user interface design, user quality design would be valuable information in enhancing user quality experience in online communication technology. As more and more products have digital components, the dynamics role of web design in social

media will be more prominent. On one hand, the existing paradigm recognises that national culture has significant impact on the determinant of design preferences on web pages. On the other, the popularity of blogs as a medium of communication has seen a significant rise in online groups and communities. These online groups have their own identities, shared opinions among themselves and are influential. One possibility is that their influence may transcend beyond culture into the area of design preferences among members of the group.

The findings of this research assist the managers of the blogging providers to improve the quality of services to bloggers as it identifies and explains key insights that might help them in dealing with customers' experience. Managers could use the findings of this research to offer design templates, communication policy and system boundary to suit the target groups instead of offering design templates according to culture based on nation. The profile and demographic of the group as well as the influential bloggers are critical factors for the group cultural homogeneity instead of the national culture differences. These tools equipped with the information on the group are a powerful combination for blogging managers to determine the type of design the blogging communities prefer. By doing so, the managers could provide better consumers' experience as well as providing services that meet the needs of the consumers.

The managers could start by profiling and monitoring online groups that are under the patronage of their blogging platform to examine design preferences behaviour using internal software. The preferences in design behaviour are then compared between groups looking at demographic profiles. Design features that are most preferred by both inter and intra groups would be promoted to the present and future group members. The present online group members could be offered design features in members' package form, while the prospective members could be offered blogs templates with design features that are similar to the members of the online networks that the new members intend to join. Apart from monitoring bloggers' design preferences, managers of the blogs service provider could also monitor the behaviour of the lead bloggers in online networks. Lead bloggers could be found through monitoring the number of hits and followers that a blogger received based on the blogger's postings (Drezner and Farrell, 2004). Lead bloggers exert a big influence within the online communities that they join into (Drezner and Farrell, 2004) and their influence could also be extended to design

features that are chosen to ease and smooth the process of interactions between them and their readers. Therefore, the lead bloggers design behaviour could be monitored by blogging managers so that new design templates take into account design features that are most preferred by lead bloggers and existing online members.

Apart from the blogging providers' managers, the online advertising providers could also benefit from the findings of this study. Although many marketers acknowledge the importance of social influence on product buying and loyalty, they have little knowledge about the party that contributes to the influence in the blogging communities. The results of this research show national culture influence is not as strong as the group level influence in the linked blogging communities as thought before. Since group influence is stronger, online advertisements should be planned to emphasise and influence target groups. This could be achieved by placing advertisements with bloggers with substantial linkages across the blogging networks, and content of the advertisements is tailor-made to suit the demography of the group in attendance. The design of the online advertisements should also consider the preferred design by the group. Therefore, the study on online advertisements in linked blogging communities should focus on the groups itself rather than advertisements items that are produced in mass and are nationwide in nature.

Thus, this study provides an understanding regarding the nature of influence in the linked blogging communities and that national culture may not be a strong influence in design preferences. Moreover, the findings also indicate that peer influence is the level involved in determining the type of influence under study. This knowledge provides input that can aid the blog providers and online advertising managers to design and plan better customer experience and service, to meet the requirements of existing and potential customers.

7.3 Limitations and future research

7.3.1 Limitations of the study

This study only addressed the impact of national and group culture on linked networks of blogs, particularly blogspot.com. Drawing from one type of social media and one type of blog provider was a major limitation of the study. Despite the fact that blog providers have much in common, each blog provider has its own specialties and

characteristics. However, in order to challenge the concept of national culture influence on blog design preferences and due to the limit in the time available for the study, the use of one type of blog was pertinent since similar types of blog are used across six nations to contradict the existing paradigm. Furthermore, the use of only one local blog from each country was also cost and time effective for the research. In contrast, it answers the first research question on Hofstede's claim of homogenous national cultures by rejecting the assumption that design behaviour follows the cultural traits identified with that nation, similarly with web design.

Another limitation of this research was the limited number of existing typologies for national culture. This study was based on the existing dimensions of culture by Hofstede and Hall. Although both models of culture are testable, the dimensions of culture have been extensively studied. Limiting the research to Hofstede's two dimensions of culture, individualism versus collectivism and uncertainty avoidance without including the remaining dimensions of culture, was due to the context being tested in the research. Personal blogs ownership is individual. The two cultural dimensions chosen are closely linked with individual characteristics and the design indicators are easily seen on blog pages compared to the remaining cultural dimensions indicators. Power distance, masculinity versus femininity and time orientation indicators tested on blogs pages design are non-functional and non-existence. The indicators chosen are specifically linked to the two cultural dimensions providing evident results of the weakening influence of national culture on linked blogs design preferences.

The research boundary covered six countries namely China, Japan, South Korea, Germany, France and Sweden. Having conducted the cross-cultural study across six nations would allow the generalisation of the study. However, cultural heterogeneity between countries is negligible since the results show that the term national culture could not be applicable to linked networks of blogs. A suitable cross-cultural study would be among different types of blogging communities and different types of blogging services. The basis for this research, which is differences in the culture among countries, is no more valid and the context of this research, which is blogs, could generalise the findings to other social media within the landscape of social media that uses Web 2.0 technology. Therefore, there is a need to replicate and extend this study to other types of blog providers.

In addition, the researcher recognise that there is a possibility that cultural homogeneity may not be applicable within a single country. Cultural heterogeneity within the society on the other hand, may be the norm of most countries taking into consideration issues of migration and globalisation. Therefore, a country may have two or more than two dominant culture depending on the population strata and ethnicity involved. This however, would not affect the validity of the measurement of cultural traits in this studies. This is because the measurement of national culture traits on web design that are used in this study are only the replicate of past studies on national culture markers on similar web pages. The measurement are used only as a barometre to ensure that the same exact measurement are applied on blogs pages to alleviate issues on validity.

Furthermore, the use of content analysis method may limit the findings on the basis of seeing the end results, but not the process itself. Since content analysis involves examining documents, pages and manuscripts that are visual in nature, the proces invoved in producing those documentations are rarely known and explored. It is possible to conduct a study using a combination of content analysis and another, a survey perhaps, to find factors influencing design preferences from the perspective of blog users. The change in method would provide an insight into how design choices are made and the possibility of how peers play a role in influencing design preferences in online communities. The use of a single method in this study however, is suitable since it serves the purpose of the research, which is to find the possibility of group level influence on design preferences in blogs. Therefore, content analysis method is chosen to see whether design choices have group level influence by examining design features in networks of blogs.

The limitations stated above do not minimise the significance of the findings in this research. However, these limitations direct the focus of future research by identifying further improvement in the area of research.

7.3.2 Future research

Based on the limitations of the research, the researcher has proposed some suggestions regarding future research that, if conducted, would enrich the body of knowledge in the literature of IS, web design and group culture.

This study was the first study on the possibility of group impact on the design preferences of bloggers in linked networks of blogs. It attempts to empirically examine group level influence on design preferences using content analysis while testing and validating the group impact using cluster analysis. This study has examined only one blogging service, that is, blogspot.com, which could be significantly different from other blogging services. Future research should be replicated to other blogging services such as livejournal, wordpress, and dig, as well as other social media that uses Web 2.0 technology.

In addition, this study provided the foundation for further research on group influence in the social medium, namely on the issue of design preferences. However, determining group influence on design preferences in blogs could also be examined from the perspective of the bloggers themselves. Future research, therefore, should conduct investigations into group level influences from the perspectives of users of blogs through questionnaires on design preferences influence. This research used a cross-cultural study of six nations that are different according to the clusters of culture. Future research could benefit from using countries that are grouped in similar clusters as those identified by this research using similar or different blogging services.

7.4 Conclusions

This study adopted a positivist methodology to focus on determining the possibility of group level influence on design preferences in blogging communities across six nations. An extensive review of the literature has been conducted based on which the hypotheses about the relationships between culture and design preferences have been established. Based on the literature review, appropriate data were collected using content analysis within the context of linked networks of blogs. Findings with respect to national culture and group level influence are of particular research interest regarding the generalisation of the findings. In order to provide a better understanding of group level influence on design preferences, a cluster analysis was conducted to allow accurate assessment between the two levels of influences. In this respect, the research is significant in drawing support from the weakening influence of national culture and the possibility of group level influence on design preferences in linked blogs. This research, therefore,

challenged the findings of previous research to the extent of national culture effect on design features on web pages.

The research also established new findings of group level influence on design preferences in web pages. The analysis demonstrated that a linked network of blogs is a cluster with similar design characteristics with each other within the network. Further analysis taken to strengthen the findings also confirmed that between clusters of blogs, design characteristics are different from one cluster to the next. The findings of this research provide a new insight into design features on web pages. Websites and online communities that use Web 2.0 technology are groups of their own that have the potential to influence and persuade members to collectively choose design preferences that are similar and familiar to them.

The aim of this research has been achieved as the research confirms that in linked networks of blogs, group level influence has a greater impact than national culture on design preferences. This coincides with Karahanna et al.'s, (2005) argument that the context within which the behaviour occurs will have to be taken into consideration depending on the nature of the behaviour itself. Therefore, social online communities and groups should be examined using group levels tools rather than national level dimensions. The findings of this research significantly contribute to the literature in studying the effect of different levels of influence on design features as a variety of influences exist that has to be taken into consideration given the context and nature of behaviour. In addition, this research has proven that cultural differences between clustered nations based on common attributes like demographic location has no significant influence on design preferences in linked networks of blogs. Furthermore, the research has provided the data on the proposed existence of group level influence in linked blogs. The new findings have yet to be studied and supported in a theoretical background in order to address the appropriateness of the results as there was no theoretical justification from prior research.

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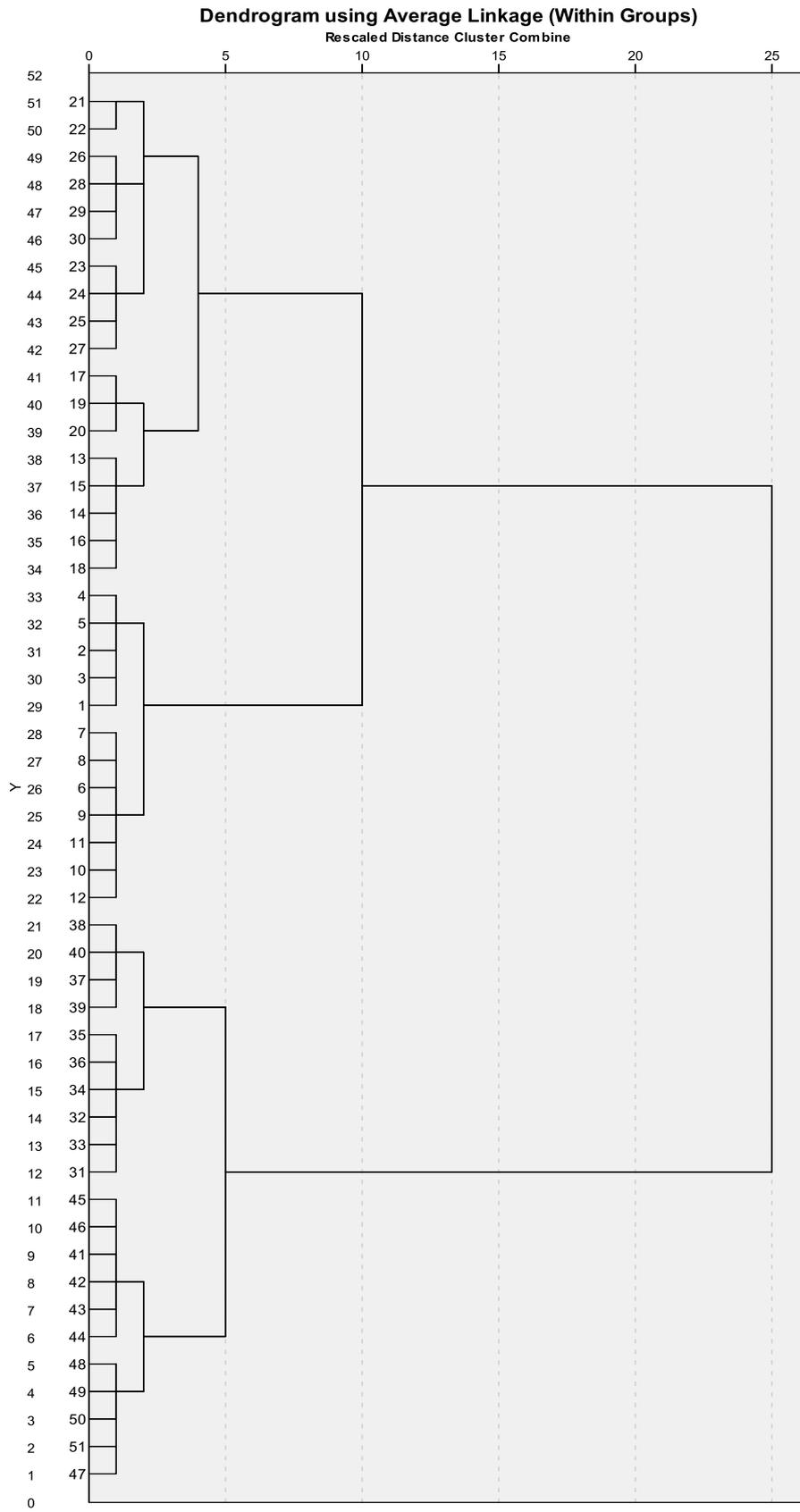
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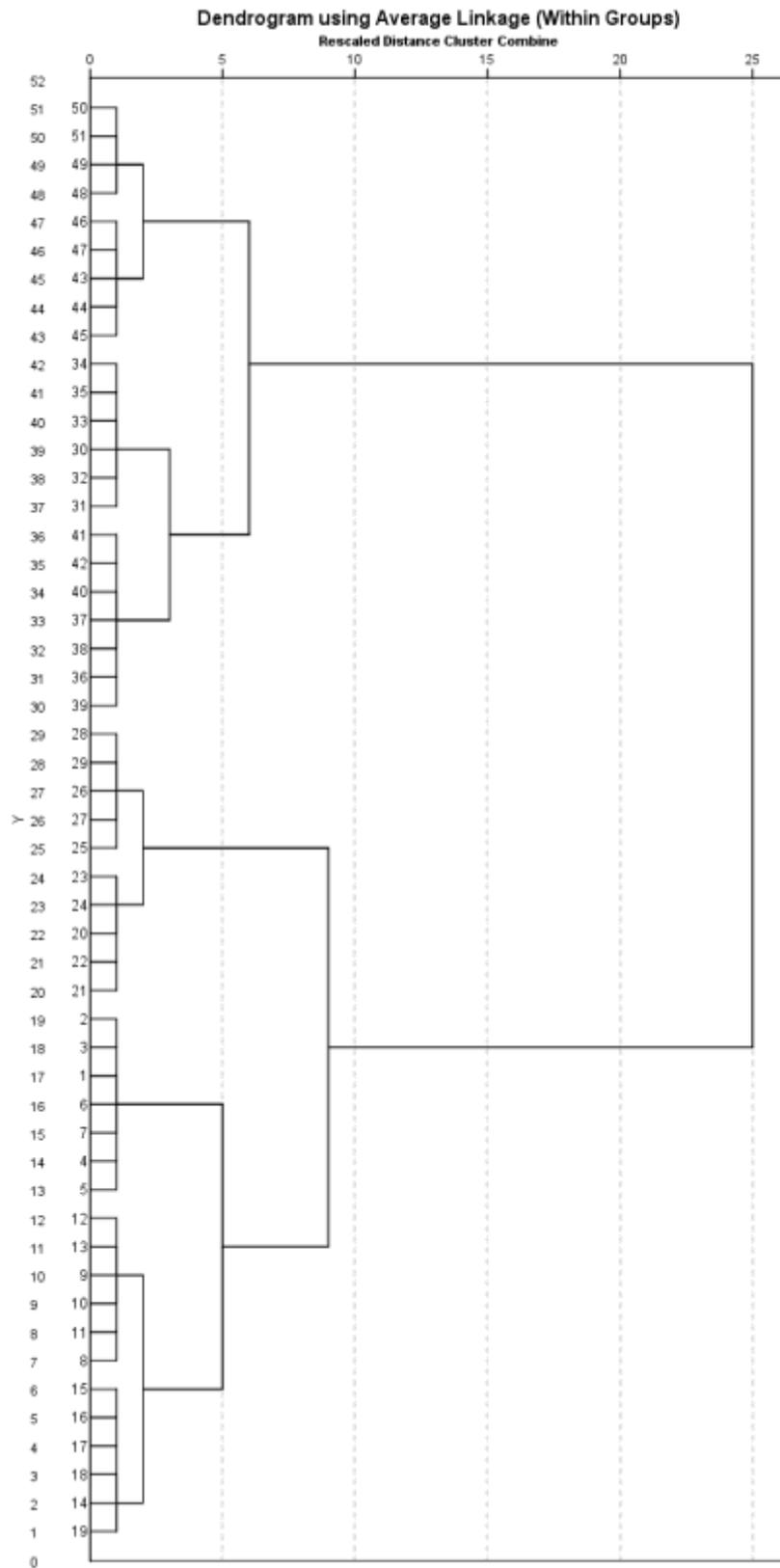
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