Enhancing Audio Description: Accessible Filmmaking, Sound Design and the importance of Educating Filmmakers

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Abstract

The Enhancing Audio Description project explored the design of an alternative to traditional Audio Description for film and television for visually impaired audiences, by maximising the potential of sound design strategies for storytelling. The project's methodology sits within the field of accessible filmmaking, advocating for the integration of accessibility strategies to creative workflows while also acknowledging their artistic potential. The present article explores the use of the Enhancing Audio Description (EAD) methods by a group of film students and recent graduates in the creation of a short film, while also discussing the process and end result in the context of the lack of inclusion of education on accessibility in filmmaking degrees. The authors discuss how a lack of teaching in the field of accessibility to film students results in a reinforcement of harmful stereotypes that exclude disabled audiences. A greater interest in accessibility sparked at university level might contribute towards a more inclusive film industry.

Keywords: media accessibility, audio description, filmmaking degrees

1. Introduction

The Enhancing Audio Description (EAD) project was funded by the UK Arts and Humanities Research Council and ran from 2016 to 2018. The aim of the project was to explore an alternative to traditional Audio Description (AD) for film and television for visually impaired audiences, which could be offered alongside traditional accessibility methods. The alternative designed was one that focused on the potential of sound design to provide accessible experiences and reduce the need for verbal descriptions. Whereas traditional AD consists of a third person commentary that is added to a film or television production; Enhancing Audio Description proposes the combination of three methods. The three strategies employed involve, firstly, the addition of sound effects to elicit information on actions, indicate the use of establishing shots, convey abstract scenes as well as indicate the presence of characters, time and place. Secondly, the use of sound spatialisation through binaural audio (which in very simple terms, is 3D sound through headphones), which involves, among other things, the panning of dialogue to indicate the positions of characters. Thirdly, the use of the *I-voice* (or first-person narration) (Chion 1999) to indicate feelings and clarify actions. The implementation of these methods to the digital film and television workflows is considered crucial in order to create an accessible version of an audio-visual piece in which accessibility is integral, rather than an add-on at the end of the creative process.

The findings from previous stages of the project have been reported in earlier articles by the research team. Such findings included a study on the current state of play of accessibility for visually impaired film and television audiences and highlighted the need for personalisation of

access services due to the variety of preferences among visually impaired end users, which are not always linked to sight loss but also to aesthetic predilections (Lopez, Kearney and Hofstädter 2018). Such diversity of preferences is one that is also discussed in Kleege (2016) and can result in different needs in terms of the amount of detail provided in descriptions. In a second stage, feedback from focus groups was applied to the redesign of the soundtrack of a short film, *Pearl* (Palumbo and Feng 2014), following the three Enhancing Audio Description (EAD) methods outlined above. A series of interviews with visually impaired participants indicated that the EAD methods were as successful as traditional AD in conveying information, providing enjoyment and accessibility, demonstrating that it could provide a welcome alternative to traditional accessibility practices (Lopez, Kearney and Hofstädter 2020). Finally, an analysis of the potential of the format to foster inclusive experiences was also conducted through focus groups that included participants with and without sight loss.

The present article reflects on the final stage of the EAD project, which focused on exploring whether the techniques developed and tested by the research team, could be integrated to filmmaking workflows, through the development, pre-production, production and post-production phases. The aim of this stage was to determine what the opportunities and challenges of the designed methods were, when taken beyond the research team that had developed and tested them. Furthermore, it was also considered as an opportunity to explore the integration of accessibility to teaching in filmmaking degrees, by inviting recent graduates and current students at the Department of Theatre, Film, Television and Interactive Media at the University of York to take part in the process.

We start by giving an overview of the research and practice related to integrated access and accessible filmmaking, before proceeding to analyse and critique the lack of integration of media accessibility to filmmaking degrees and the challenges that such lack of integration poses to the achievement of universal design practices and a greater awareness of diverse audiences. These theoretical enquiries are then followed by an analysis of the work carried out by a group of students and recent graduates in the creation of the short film, *Shelf Life* (Balla 2018), in the context of an educational setting. The article then ends by reflecting on possible paths for future exploration in the field.

2. Integrated Access and Accessible Filmmaking: An Overview

The Enhancing Audio Description (EAD) project championed the notion of integrated access, that is, the belief that accessibility methods could and should be integrated to the workflows of a creative piece, rather than tagged on at the end, embracing the need for the creative team and the accessibility experts to work together. Integrated access has been discussed by several scholars and practitioners in relation to theatre, film and television, such as Fryer (2018), Naraine, Fels and Whitfield (2018), Thompson (2018) and Udo and Fels (2010). A more expansive discussion on the subject is provided by the authors in Lopez, Kearney and Hofstädter (2020).

Closely linked to the work on integrated access is *accessible filmmaking*, a field in which Pablo Romero-Fresco has done pioneering work (2013, 2019). Accessible Filmmaking refers to the integration of accessibility to the film workflows with, for example, Audio Description, considered as key to the filmmaking process rather than an add-on. It advocates for joining forces between film teams and accessibility experts to provide the end product, ensuring that the creative aim of the team is maintained in the creation of an accessible version. Thus,

avoiding inadvertently creating an accessible end product that is of inferior quality than the one intended by the filmmaker and is perceived as such by the end user (Romero-Fresco and Fryer 2018). An example of a film that follows the tenets of accessible filmmaking is *Chasing Chaplin* by Spinney and Middleton (forthcoming) (Romero-Fresco 2019).

A previous article by the authors (Lopez, Kearney and Hofstädter 2020) has discussed how EAD is linked to notions of accessible filmmaking and integrated access. Furthermore, they have established the link between the project and universal design practices (Lopez, Kearney and Hofstädter 2020). Universal Design refers to designing products and environments that are free of barriers, and which benefit not just people with disabilities but everyone (Story, Mueller and Mace 1998). Considering universal design strategies from the start of the design process allows for more cost effective and aesthetically pleasing outcomes that benefit a greater percentage of the population than we might have anticipated (Story, Mueller and Mace 1998).

Universal Design is also linked to the Social Model of Disability, a term coined by Michael Oliver in 1983 and reflecting the work started in the 1970s by UPIAS (Union of the Physically Impaired Against Segregation) in the UK (Barnes 2012; Oliver, 1983, 2009). This model considers disability to be the result of barriers set by society, who should work to remove them and foster inclusion. Disability is, as a result, not linked to the individual lacking in ability but is instead the result of shortcomings of the environments and social structures that we inhabit. Someone having a visual impairment, does not necessarily have a disability, it is the lack of removal of societal barriers that is the source of disabilities; reorganising society to remove said barriers should, therefore, be considered as a way forward (Oliver 2009). However, it is worth noting that everyone's experience of disability is different and, as Beauchamp-Pryor (2012) highlights, a combination of individual and social considerations is needed to achieve equality and work towards an inclusive society. These notions resonate with the aims of the Enhancing Audio Description project, in which the existence of a variety of versions of accessibility for visually impaired film and television audiences is considered crucial to ensure equality, as different audience members might have different needs and preferences. As a result, a personalised approach in which individuals can choose what works best for them, paves the way towards a more inclusive provision of accessibility. At the same time, the Enhancing Audio Description project considers it the responsibility of the creative sector to remove obstacles to the access of content. Oliver (2009) expresses a regret that the focus on discussions on the social model of disability has been on its merits and shortcomings, whereas in his opinion, implementation should be central to all discussions.

Kleege (2016) also mentions that they hope that moving forward filmmakers use the potential of AD creatively, which is partly the aim of the EAD format, which encourages filmmakers to look at the creative paths opened up by these accessibility methods. Related to this, Louise Fryer (2017: 11-12) explores the connection between art and AD and reflects that "…AD, too should focus on conveying beauty and emotional power to convey a sense of wonder and awe." AD can then be considered as an experience in its own right, which is similar to the notion behind the EAD format, in which the accessible version is a complete artistic expression in itself.

3. Integrating Accessibility to Film Degrees

It is possible to argue that the widespread acceptance of accessible filmmaking practices requires an educational framework in which young filmmakers are encouraged to consider their

audiences more widely. If they are introduced to the idea of accessible filmmaking during their studies, it is more likely that it will come more naturally to them when entering the industry and they might even become advocates for integrated accessibility.

There are a number of publications and resources that reflect on the importance of understanding film and television conventions in the education of accessibility experts, such as Fryer (2016) and Perego (2014) as well as the work conducted as part of the project ADLAB PRO (2016-2019), which resulted in a number of didactic materials for the training of audio describers. The free course materials include a unit on film language to help the audio describer determine the role of different elements in film, such as editing and cinematography, while also including resources on innovative research such as that on accessible filmmaking, which is key to the training of describers who are knowledgeable on different accessibility styles.

Greco (2019) reflects on the need for a "pedagogy of accessibility" that does not just consider the practical and technical needs of audio-visual translators, such as audio describers, but also acknowledges the importance of a greater reflection within educational settings. Such critical reflection, Greco (2019) argues, should include disability, accessibility and the role of personal and societal attitudes. He supports the introduction of notions on universal design to accessibility teaching as well as further reflection on the need for everyone to take on an active participation in the matter. Similarly to Bolt (2018), he reflects on how opening spaces for reflection on accessibility can help avoid crystallising harmful stereotypes, which are then taken into the workplace and passed on to others. Greco (2019) encourages educators to challenge assumptions on end users, their needs, experience and capabilities, while also acknowledging, as Kleege (2018) also suggests, that they are experts in their own right.

Unfortunately, there is a lack of specialised publications on teaching accessibility and its integration to industry workflows in the context of filmmaking courses, pointing towards a lack of development in this area. As a result, film graduates may end up completing a whole undergraduate or postgraduate degree with no understanding of the potential of accessibility and a disregard for what they may consider 'minority' audiences, and even progress through their careers with the false belief that blind people do not watch film or television, helping perpetuate stereotypes. As Greco (2019) reflects, the students of today may well become the policy makers of the future, and educational paths that encourage critical reflection on accessibility can help avoid said stereotypes. The lack of incorporation of accessibility to film courses reflects the disinterest of the industry towards accessibility, which results in a narrow understanding of film audiences and one that goes against inclusive practices, a trend that educators can help rectify.

Greco's (2019) "pedagogy of accessibility" is focused on the training of audio-visual translators, but we suggest this can be adapted and incorporated to filmmaking education. It is time for the film education sector to reflect on the need to include accessibility as a key learning outcome in their courses. The filmmakers of the future should be filmmakers that consider all audiences, and that challenge "normative positivisms" (Bolt 2018: 5). Educational settings also seem key to changing attitudes towards disabled people which, as Watson (2012) points out, could also have an impact on social and environmental changes that increase social inclusion. On a similar note, Shildrik (2012) reflects on everyone's responsibility, regardless of whether they are disabled or not, to challenge normative assumptions linked to disability. An educational setting is the perfect arena for these challenges to take place.

There are a number of authors that have explored how media accessibility discussions can be incorporated to a variety of fields, and film courses could benefit from their suggestions as a source of inspiration. Bolt (2018) explores how educational settings can accidentally help perpetuate stereotypes linked to disability and explores the combination of disability studies with a number of other fields, such as film studies. Bolt (2018) proposes a complex approach to disability that is not focused on "special needs" but is instead opened up to considerations on aspects of community, relationships as well as culture and knowledge. He proposes a number of texts for analysis, which educators can bring into their classes directly or use as a starting point for other activities.

Kleege and Wallin (2015) discuss a range of activities that can be adapted to courses on a variety of topics and in which audio description is used as a main driver for critical analysis. Such activities include a discussion on different potential descriptions of the same image and their impact on listeners who cannot see said image. Another proposal focuses on reflecting on the variety of nouns and adjectives different individuals might choose for the same description. Finally, using the *YouDescribe* website to encourage students to provide their own descriptions for videos is explored as an avenue to engage learners with the topic. These are excellent first steps to include aspects of accessibility to courses in a wide range of fields, including filmmaking, and might play an important part in writing for film and television modules and courses.

It is also worth noting that Pablo Romero-Fresco's book *Accessible Filmmaking* (2019) includes a chapter on audio-visual translation and accessibility, which is aimed at filmmakers and could be used as a starting point in educational settings. Understanding the 'language' and workflows of different teams can provide a good first step towards the integration of discussions on the matter in film degrees.

Romero-Fresco (2018) suggests that the widening of the meaning of the term 'Media Accessibility' can be helpful and he invites us, similarly to Greco (2019), to consider Media Accessibility beyond catering for audiences with hearing or visual impairments. He embraces a notion by which we acknowledge the potential that such media has for other groups, including, for example, second language users. He reminds us that accessible filmmaking embraces this universalistic approach, which is similar to the one that anchored the Enhancing Audio Description project, in which shared experiences between visually impaired and sighted audiences were considered key to the success of the format and its potential embracement by the film industry. Furthermore, when second language audiences are considered in combination with audiences with sensory impairments, they constitute a significant percentage of consumers, which might help make the case for better quality in media accessibility (Romero-Fresco 2018, 2019). Currently, a narrow view of media accessibility focusing on disability might be contributing to the lack of advancement in the quality of access services, as the film industry considers people with disabilities to be minority audiences (Romero-Fresco 2018, 2019). Kleege (2016) also reflects on a similar point, discussing how AD would benefit from being considered more widely, with a universalistic approach, which could in turn expand the range of users and push for greater innovation in the field.

It is also worth noting that explorations of AD with film students can help boost their analytical skills. For example, Zoe Partington (2017) mentions that AD for visual arts can often help the viewer of the piece connect more meaningfully with it, resulting in a greater amount of time spent engaging with the art piece. Accessibility in filmmaking degrees has the potential to

inspire students to engage more meaningfully and differently with shot and soundtrack analysis, reflecting on how sound and picture come together to tell a story.

It is in the spirit of addressing shortcomings in the training of film students in the field of accessibility and universal design that the research team embarked on the production of a short film – *Shelf Life* (Balla 2018) at the University of York.

4. *Shelf Life*: Project Development

Nineteen production roles and three acting positions were filled for the creation of a short film that followed the principles of EAD. The budget was set at approximately £5,000 and students and alumni were drawn from courses taught both at undergraduate and postgraduate level at the Department of Theatre, Film, Television and Interactive Media at the University of York. Students and alumni fulfilled all development, production and postproduction roles. All positions were paid and recruitment was done through a personal statement and an interview, with students matched to their skillset, and the process meant to help students practice for future job interviews. Although applicants indicated their preferred role, it was the hiring team, which consisted of the Principal Investigator and the Co-Investigator, that matched the students to the different roles depending on their experience.

An initial meeting took place involving the hired team as well as the research team, in which the story for the short film was decided on after the writer pitched a number of possible ideas. The selected storyline resulted in the short film (8'43"), *Shelf Life* (Balla 2018). The film is set in 2083 and follows the female lead who is looking for shelter in a devastated world in which Artificial Intelligence (AI) has exterminated most humans. The film starts as she finds a trap door within a cave that leads her to a father and his son. She begs them to allow her to take shelter but they are not convinced she is human. In a final attempt to convince them she cuts her palm open revealing the blood flowing. At that instance we find out that the father and son are indeed AI. She is left horrified by the realisation as she fears for her life. The film features an open ending in which we do not find out what becomes of the lead.

The decision on the idea was not influenced by the accessibility requirements of the project, on the contrary the aim of the production was to explore a pipeline that could be adaptable to multiple productions, regardless of the genre. However, the filmmaking team was asked to follow the tenets of integrated access and accessible filmmaking which are key to the EAD methods, and the accessible version needed to cater for both visually impaired and sighted audiences. The needs of the EAD project and the workflows established by the research team were also to inform the directorial decisions taken. Once these basic requirements were put forward, the research team gave the filmmakers the freedom to develop the project and navigate their way through the guidelines, as a way of exploring what their interpretation would be and what challenges they might face.

Various meetings were arranged between the director and the camera/sound departments. The development stage was characterised by a consistent and constructive discussion between the director and the writer to achieve a result that considered the accessibility requirements and the budget limitations. Once the script was deemed ready, it was circulated within all the departments, a storyboard was made to speed up the principal photography, and work on the sound design started. The locations were confirmed after some scouting sessions in the first days of pre-production and included Victoria Cave in the Yorkshire Dales as well as the backstage of the Scenic Stage Theatre at the Department of Theatre, Film, Television and

Interactive Media at the University of York. The film took three months to be completed and involved three days of shooting.

4.1 *Shelf Life*: One Film, Two Soundtracks

Two soundtracks for *Shelf Life* (Balla 2018) were created: one with the EAD methods and another one without any accessibility features. The picture elements were to remain the same for both versions. The key to the accessible version was that it needed to incorporate the three methods developed in the project: use of sound effects to convey meaning; use of binaural audio to render information on location of objects and characters; and the use of the *I-voice*. How those elements were to be used was left to the creative team to decide. The short film *Pearl* (Palumbo and Feng 2014), which was redesigned using the EAD methods, was made available to the team so as to understand more fully the aim of the accessible version and the avenues to accomplish the end product in terms of integrated accessibility and creativity.

The sections below explore how the techniques were used by the filmmaking team as well as a reflection on the outcome. It is worth noting that there are not many differences between the accessible and non-accessible versions of the film. The main difference is that the accessible version includes the *I-voice* and the mix is in binaural, whereas the non-accessible one does not include the *I-voice* and was mixed for 5.1 and downmixed to stereo. The use of sound effects is the same, although it is worth noting that the overuse at times of the *I-voice* for the accessible version means that some of those sound effects are masked, whereas they are more clearly audible in the non-accessible version.

    A. Use of the I-Voice or First-Person Narration

The start of the film, inspired by *Blade Runner* (Scott 1982), features written text on screen, which is used to introduce audiences to the fictional world (see Figure 1). In the EAD version the text is also read by the main protagonist. Although this could be, in isolation, considered as a voice over, the fact that it is only available in the accessible version and read by the main character and with the same reverb settings that differentiate it from regular speech, position it as part of the suite of accessibility methods. However, there is a difference in tone between this initial section, which sets the scene by reading out the text on screen, and the start of the first-person narration, which is more focused on her feelings, actions and what she is experiencing (see Figure 2).

Figure 1 – *Shelf Life*'s (Balla 2018) opening scene.

The *I-voice* was written alongside the first draft of the script and embedded in the action; however, the pace of the narration in the final edit resulted in changes being needed to ensure synchronisation of first-person narration and actions. As a result, the *I-voice* was entirely re-written after finalising the edit (picture lock) and it was recorded in an audio suite at the Department of Theatre, Film, Television and Interactive Media at the University of York.

Despite such changes in the final version, the timing of the *I-voice* to the visuals is not always appropriately matched. For example, at the start of the film due to issues in timing between finalising reading out the text on screen and the start of the first- person section, the line "From out of the fog an enormous cave looms before me" is not edited to the shot that actually shows the looming cave (see Figure 2). For visually impaired audiences the content is delivered and, hopefully, engagement is not lost by what would have otherwise been a rushed line. However, sighted audiences wanting to experience the accessible version might find the mismatch between the picture and the audio jarring. A similar mismatch is present in the scene that follows in which the *I-voice* says: "Something catches my eye, I can scarcely believe what I'm seeing, I crouch down slowly. A trap door lies in the ground covered in rocks and twigs that must have been blown in by the storms." (see Figure 2)

Another issue worth noting in relation to the application of first-person narration to the film is that the team used it to justify changes in the set that are not part of the storyline and were the result of practicalities. For example, a plastic cover was used in production to shield the floor from dirt and fake blood: this scenery element was not mentioned in the first drafts of the script but it was in frame and added a particular sound whenever the characters stepped on it. In the final rewriting of the *I-voice*, the protagonist states that she notices plastic sheets covering the ground, believing it to be a rudimentary alarm system set by the hosts to hear intruders. Although this is a clever device to justify the presence of the plastic sheets, the accessible

version should not be used to justify such choices and ends up presenting information that is not actually available in the non-accessible version. One could also question why there was a need to mention it in the EAD version but not in the non-accessible one.
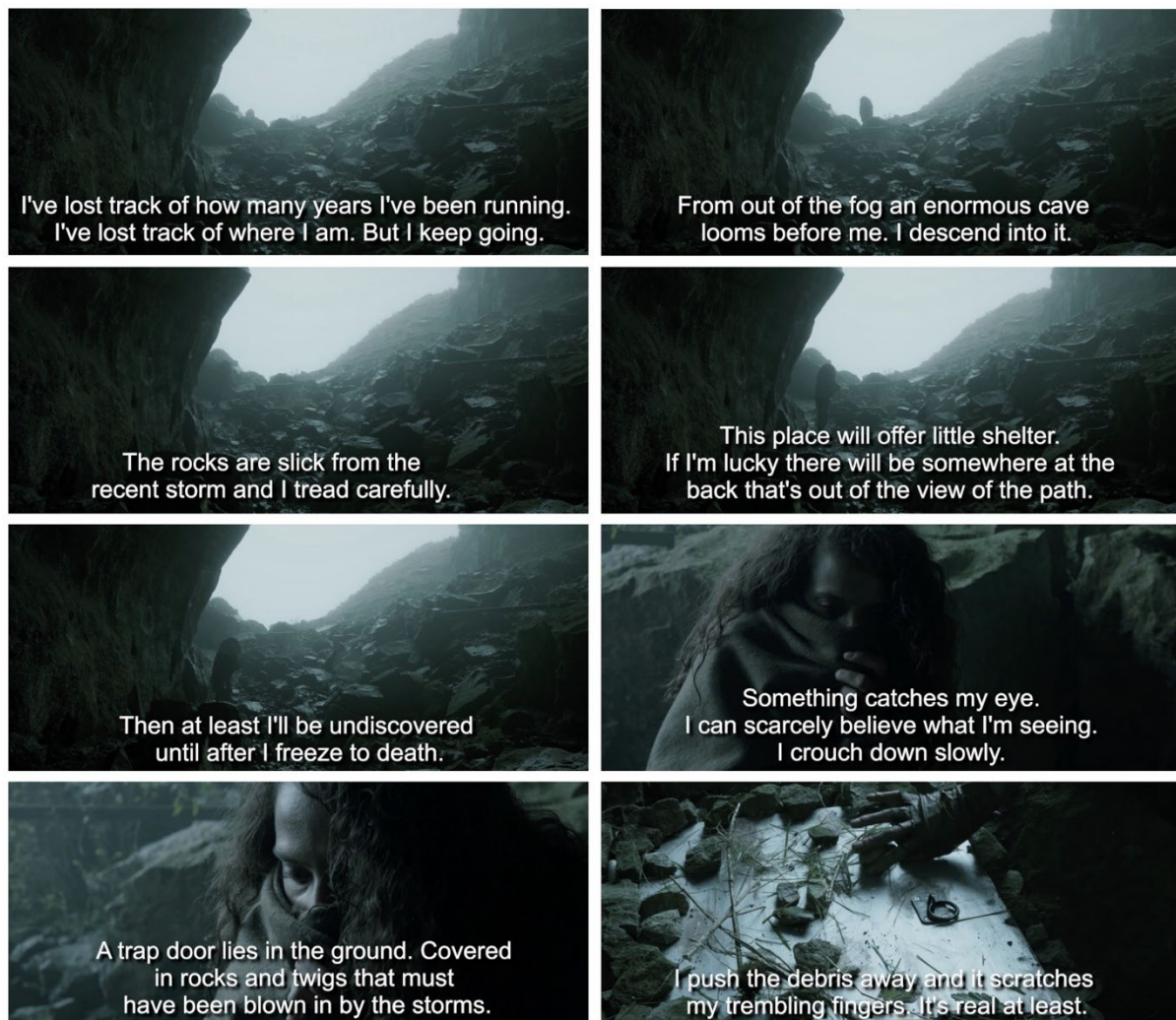

Figure 2 – The use of the I-voice in *Shelf Life* (Balla 2018)

It is also worth mentioning that the *I-voice* could have been used more sparingly. For example, we hear the actress say that she can hear voices, but as audience members we can actually hear those voices and from her point of audition as well (Chion 1994), as they are processed to sound as if they came from a distance within the space through a combination of reverb, equalisation and level reduction. As a result, there is no need to remind the audience that this is the case. Removing the *I-voice* line would have avoided redundancy and allowed other sonic elements such as sound effects and music to tell the story.

It is worth highlighting that by incorporating the descriptive elements through the *I-voice* and having them written by the scriptwriter, there is potential for capturing more effectively the emotional impact of the film and conveying it to audiences. Vercauteren (2017) provides an approach on how to analyse the filmic text in order to convey that emotional dimension. However, in the EAD approach this is incorporated to the workflows and that analysis is integral to the film itself as well as to accessibility, and a result of a collaborative effort by a number of key members of the creative team, in this case, the writer and the director.

The music, produced by Daniele Mariani, is subtle but constant, designed to accompany the narration without drawing attention to it. For example, when the father and son are revealed as AI, the protagonist describes what she sees – like their pupils turning white – and the music rises in intensity. A more relaxing score accompanies the end credits, which are read aloud in the accessible version by a voice over actor. Music and narration complement each other perfectly, avoiding one masking the other.

B. Use of Sound Effects

Heavy-breathing was added throughout the whole film to convey a sense of uncertainty, danger and suffering, as well as to remind visually impaired audiences of the presence of a character - a technique that was successful in *Pearl* (Palumbo and Feng 2014) (Lopez, Kearney and Hofstädter 2020).

In terms of the use of sound effects to convey meaning, both the accessible and non-accessible versions were designed with the same sound effects, as the filmmaking team decided to have as many sound effects as needed in both versions. An example of this is the start of the film, in which the presence of a black screen is accompanied by outdoor ambience, mostly wind. We start hearing the footsteps of the main character before we see the first shot of the film, which reveals a wide outdoor area as the main character gradually comes into shot. Her approach towards the cave is indicated through the volume automation of her footsteps, which become louder as she approaches the camera to go gradually from a wide to a close up shot. It is also worth noting that as the character approaches the entrance of the cave we start hearing a change in ambience, mainly consisting of water drops.

It is possible that specific storyboards with sound cues in the pre-production stage would have significantly helped the process and will be a key consideration in future research in the field.

C. Use of Binaural Sound

Although the process of directing actors did not require a special approach in terms of directing method, the blocking of the actors was planned so as to convey a sense of three-dimensionality. The aim was to facilitate work on audio spatialisation, and provide a clear rendition of the environment inhabited by the characters. An example of the use of binaural audio and the potential of panning is at the start of the film, in which the position of the main character is determined by matching the sound effects to her visual position on screen.

Another interesting example is the use of panning of dialogue lines to indicate the characters' positions on screen, for example, in the scene shown in figure 3a we hear the father's voice towards the right and the son's voice towards the left to indicate their position on screen. Whereas in figure 3b the dialogue is positioned in the phantom centre to sound as if it is coming directly from the front to match the central position of the character in the shot. Panning choices followed the findings reported by the research team (Lopez, Kearney and Hofstädter 2020) and made available to students

Figure 3a (left) shows the son and the father, whose voices were panned to match their position on screen. **Figure 3b** (right) shows the main character positioned at the centre of the shot; her voice was panned to the phantom centre to match the shot composition.

In future instances the research team will be exploring nuances in the panning of dialogue lines in relation to the distance of the characters to each other on screen, so as to determine the optimum position related to the shot composition. Furthermore, the completion of the production did highlight the need to involve the sound editor and the dubbing mixer in the production stage as well as providing greater guidance on the use of binaural audio, as it would have helped the crew make informed decisions on set.

4.2 Observations on the Filmmaking Process

Throughout the process of completing *Shelf Life* as well as once completed, the research team discussed their experiences with participants, including what the students and recent graduates knew about accessibility before-hand and what they had learnt through the process of making the short film.

The majority mentioned that being part of the production encouraged them to learn more about accessibility in film and that they had undertaken some research in preparation for the project, with one of the students mentioning that, although they knew AD existed, they had never thought about the possibility of integrating it to the creative process. Participants mentioned using *Pearl* as a source of inspiration as well as listening to traditional AD examples. Conciseness was thought of as a strong point of traditional AD, whereas weaknesses mentioned were the "lack of elegance" and its "expositional" qualities.

Students also mentioned their interest in learning more about the perception of colour in partially sighted people, as they had worked on the assumption that clear contrasts would be helpful but did not feel they knew enough about the subject matter to make decisions. A comment that points to the need for better integration of accessibility expertise, through an accessibility expert, to the filmmaking workflows, as championed by Branson (2018) and Romero-Fresco (2019).

It was also interesting to note that students commented on information on hearing loss and film being more readily available than that on sight loss and film accessibility. A comment that is not surprising considering that AD and subtitling have significantly different quotas and are present in significantly different percentages in television channels broadcasting to the UK. For example, AD has set quotas ranging from 3-10% with achieved percentages ranging from 7% to 76% (the highest percentage being for E4); whereas for subtitles, quotas range from 10-100% and achievements from 35-100% (Ofcom 2019). So, a higher familiarity of students with subtitling is probably linked to its greater presence in the media. Furthermore, subtitling

for social media assets has become more common, whereas finding those same social media assets with audio description is a rarity.

Students also suggested that it would have been more efficient to write the *I-voice* after the picture lock so as to avoid writing several versions. This, they also believed, might provide an opportunity to consult with the sound design team to make sure the *I-voice* does not clash with other methods utilised. That is, if there is a sound effect and/or audio processing technique that can be used to clarify an element of the story, then there might not be a need for a verbal description. In this regard, there was a feeling among the students that more emphasis should have been placed on the importance of sound, and that the shoot had run like a regular shoot, when maybe more could have been done to remember that an accessible version was going to be provided. This was commented on together with a reminder by one of the students that visuals and dialogue do not always have to be prioritised, and that keeping an open mind on the process is crucial. For example, they felt they could have used longer shots to allow for the introduction of the *I-voice* and maybe a greater collaboration between the scriptwriter and the sound department would have allowed for a more holistic, organic approach to accessibility. A point that invites us to reflect on the possible need of allocating time during pre-production and the shoot itself for those conversations to take place. It was encouraging to hear students and recent graduates critique their own approach and suggest ways in which it could be more effective.

It is also worth noting that the *I-voice* was written for it to be engaging regardless of the sight condition of the audiences, which is a clear reflection on the aims of the EAD project. However, it was less certain whether the team had worked in a similar way with other elements. The final outcome indicates that the production and post-production teams had held on tightly to the presence of verbal descriptions with a lesser engagement with other sonic elements, and had ultimately created a more conventional version of accessibility than expected. As an educational exercise on the application of guidelines by the students, it highlighted the need for a more active role of the research team and a greater level of support in the areas highlighted above, including the need to have an expert in team meetings and specific advice on recording techniques, as indicated by the participating students.

5. Discussion, Conclusion and Future Work

The Enhancing Audio Description project explored how sound design strategies could be utilised to provide an alternative to traditional AD, while also integrating accessibility to film workflows. The EAD strategies focus on reducing the number of verbal descriptions, through the use of additional sound effects and audio spatialisation, as well as the inclusion of a sparse first-person narration to communicate feelings, gestures and other crucial elements, which would be deemed challenging with the other methods.

The present article explored how said methods were integrated to the creation of a new short film, *Shelf Life*, in which students and recent graduates of film degrees worked on all phases of the production. The aim of this stage of the project was twofold. Firstly, to explore how the guidelines and techniques developed by the EAD project would be implemented by independent filmmakers, that is, independent from the research team. Secondly, how teaching on accessibility could be integrated or made available to current film students, considering the gap in provision in this area.

Regarding workflows, the research team was keen to explore how students would apply and balance the EAD methods. It is evident from the end product that students and recent graduates were over-reliant on the use of the first-person narration, even in instances in which sound effects or audio spatialisation would have been more suitable. As a result, a more 'traditional' version than expected was created. Although the hands-off approach taken by the research team was purposefully selected in order to explore student choices, feedback suggests that additional guidance is needed. In future stages we will be incorporating coaching and discussion instances to allow for greater guidance, including a set of workshops on the EAD methods. Furthermore, it is worth considering how to best encourage students to focus further on sonic elements, by potentially shifting emphasis away from the picture side. Additionally, particular guidelines for specific film roles would be useful in aiding the process of engagement with accessibility and also to inspire students to take ownership of their part in providing an accessible experience.

Another interesting finding was in relation to the process of writing the *I-voice*. Although students were advised to write this alongside the main script, it was noticed afterwards that it would have been more efficient to write it after the picture lock, as the original text did not necessarily match the timings and what was shown on screen, resulting in the writer having to adapt the text. Future advice would then involve moving the writing of the *I-voice* to the post-production stage and reflect on the advantages and disadvantages of said change.

Regarding workflows, it is also worth reflecting on the fact that a greater consideration of the sound design strategy for accessibility in the pre-production stage would have been helpful in order to communicate strategies and decisions to the sound recordist, the sound editor and dubbing mixer. This process might even include the incorporation of sound cues to the storyboarding process. It is worth considering, though, that the director embraced the sound spatialisation strategies involved in the EAD methods when working on actor blocking, in order to optimise the shots that enable the rendition of diegetic environments through binaural audio. However, it was also indicated by students that they would have benefitted from having an accessibility expert on set, who they could consult, when in doubt as to the merits of different techniques, a strategy that could be extended to the post-production stage.

An interesting finding is that, by matching the music composition to the presence of the *I-voice* in the accessible version, these two sonic elements did not clash with each other, making the mixing stage smoother and more successful, as it was not necessary to lower the level of the music (ducking) every time the *I-voice* was present.

In terms of integrating aspects of accessibility to filmmaking education, it is interesting to note that students participating in the project mentioned they knew very little about AD before starting, but that the project itself had incentivised them to find out more and also invited them, for the first time, to consider how accessibility could be integrated to filmmaking, rather than regarding it as an aspect outside of their remit as future filmmakers. Although this project was a brief stage in their training, we hope that their experience had an impact in their future decisions as filmmakers. It is crucial to consider that the film students of today are the filmmakers that influence the industry of tomorrow and can have a great impact in advocating for accessibility.

It is also worth reflecting on the challenges of working with student crews as they had other constraints related to their studies, which the research team needed to be aware of and sympathetic to. Therefore, a greater level of flexibility was allowed than would have been the

case with a professional crew. This should be the case with the integration of accessibility as an extra-curricular activity, and could be potentially more carefully monitored if it were to be incorporated to a module as part of a degree.

The findings of this project have the potential to feed into strategies of integrated accessibility across the creative sector, indicating paths forward. Furthermore, the critique on current educational practices in filmmaking and the need for further consideration by academics can be key to sparking change in the sector, and paving the way to a disintegration of harmful stereotypes and the creation of a more inclusive film industry.

Acknowledgements

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