



The Value of Visual Art Education for Pupils with Visual Impairment

A BEd 4 Capstone Project Submitted in Partial Fulfilment of the
Requirements for the Degree of Bachelor of Education (Hons) in

Art and Design by

Kate Phoenix

St Mary's University College Belfast

January 2018

Table of Contents

Acknowledgments	4
Abstract	5
Chapter 1: Introduction	7
1.1 Project Overview	8
1.2 Rationale.....	8
1.3 Aims.....	8
1.4 Objectives	9
Chapter 2: Literature Review	11
2.1 Introduction	12
2.2 Recent Development in Visual Art Education for Pupils with Visual Impairment.....	12
2.3 Attitudes Towards the Relevance of Art Education for Pupils with Visual Impairment.....	14
2.4 The Challenges to Learning and Development in Art Education for Pupils with Visual Impairment.....	17
2.5 The Benefits of Art Education for Pupils with Visual Impairment	20
2.6 The Impact Art Education has on the Visually Impaired’s Overall Education in Relation to their Thinking Skills and Personal Capabilities, Attitudes Towards Learning and Level of Engagement.....	22
Chapter 3: Methodology	26
3.1 Research context	27
3.2 Participants	29
3.3 Ethical Consideration.....	30
3.4 Data collection	30
3.4.1 Semi-Structured Interview.....	30
3.4.2 Focus Group.....	32
3.4.3 Semi-Structured Observations	33
3.5 Qualitative Data Analysis.....	34
Chapter 4: Data Analysis	37
4.1 The Results.....	38
4.1.2 The Observation	38
4.1.3 The Focus Group Interview	40
4.1.4 Interview Results Table.....	41
4.2 The Analysis	44
4.2.1 The Relevance of Art Education for the Visually Impaired.....	45
4.2.2 Aesthetics as a Challenge	47
4.2.3 The Benefits of Visual Art Education for Pupils with Visual Impairment	48
4.2.4 The Impact of Art Education on the Visually Impaired Pupils’ Levels of Engagement and Attitudes Towards Learning	51
Chapter 5: Conclusion	54
5.1 Conclusions.....	54
5.2 Limitations and Recommendations.....	59
Bibliography	60

Acknowledgments

The completion of this capstone project would not have been possible without the guidance and support of many. I would like to express my gratitude and thanks to everyone involved.

In particular, I would like to thank Mary Flanagan, for extending her generosity when agreeing to be my supervisor for this research project. Her guidance and support has been invaluable. I thank her for her extreme dedication, direction and inspiration.

I would like to express my great appreciation to all who participated in the case study, whose eagerness to be involved was particularly reassuring in my pursuit of the project, and without whose contribution it would not have been possible.

Finally, I would like to thank all, family and friends who supported me through this journey.

Abstract

The primary aim of this research project is to explore the question of how valuable is visual art education is for pupils with visual impairment? The project additionally aims to develop my knowledge and understanding on the topic, in order to contribute to my professional development by applying the findings to real life situations. Furthermore it aims to draw conclusions from any definitive findings to add to and update existing research on the matter, in order to better inform and prepare fellow inspiring teachers and positively impact upon visual art education for pupils with visual impairment through worthwhile learning experiences.

I began this project by reviewing the relevant literature on the topic, to identify research previously undertaken and further inform and support the direction of my research question. I then conducted a case study, interviewing two art specialist teachers; one for pupils with moderate visual impairment and one for severe. I then observed an art lesson for a sample of pupils whose visual impairment ranged in severity. Subsequently I held a focus group interview with

this sample of pupils. The collected data was then thoroughly analysed. This triangulation of data and methods provided the findings and conclusions with increased validity and gave greater insight in to the experience of those directly involved with the research question.

From the final results of this study I concluded that visual art education has great potential to be valuable for pupils with visual impairment. This was found to be dependent on the innovation of the teacher and his or her appreciation of the individuals needs, abilities and levels of vision. The results identified the specific and wider educational benefits visual art education can provide especially for the visually impaired and suggests how to apply this further in practice.

Chapter 1: Introduction

Chapter 1: Introduction

1.1 Project Overview

This research project originated in my passion for education in both art and design and in special educational needs (SEN). The research project is a small-scale investigation into the value of visual art education for pupils with visual impairment. Visual art meaning Art and Design and may be referred to as simply art education.

1.2 Rationale

I felt this research necessary due to the gap within the relevant literature, which does not allow one to readily access up to date information on the topic. Due to the limited contemporary research, awareness and general knowledge on the matter I felt this research was essential not only for myself, but for fellow student teachers, to better inform and prepare us for the world of teaching in the hope of positively impacting art education for pupils with visual impairment.

1.3 Aims

The primary research aim is to determine if visual art education is a worthwhile subject for pupils with visual impairment. As an inspiring teacher I acknowledge I am a life long learner, therefore an additional aim is to develop my knowledge

and understanding on the topic, in order to contribute to my professional development and to my potential success as an educator for pupils with SEN by applying my findings to real life situations. Furthermore I aim to provide an updated perspective on the topic.

1.4 Objectives

In order to achieve the project aims I plan to investigate: the relevance of visual art education for pupils with visual impairment; the benefits, if any; the challenges that arise; and how or if it impacts upon their overall education in terms of their Thinking Skills and Personal Capabilities (TSPC), levels of engagement and attitudes towards learning. To achieve this I will review the relevant literature to identify research previously undertaken and further inform the direction of my research question. I then intend to conduct research in a school for the visually impaired. This will consist of interviews with art specialist teachers for the visually impaired, an observation of an art lesson for a sample of pupils whose visual impairment ranges in severity and a focus group interview with this sample of pupils. The results from the research will then be analysed to address the research question, using both the results and evidence from the literature review to support the analysis.

It is to be hoped that any definitive findings and conclusions can be used to inform my practice, impact the art education for pupils with visual impairment in real life settings and add to existing research in this important field.

Chapter 2: Literature Review

Chapter 2: Literature Review

2.1 Introduction

This review will explore the relevant literature on the value of visual art education for visually impaired pupils. A wide variety of sources hold potential value for the topic, however, given limitations of time, those most pertinent to the aims of the project will be focused upon. As such, I will review recent developments in art education and attitudes towards the relevance of art education for visually impaired pupils; the challenges and benefits encountered in their learning and development; and the impact of art education on their overall education.

2.2 Recent Development in Visual Art Education for Pupils with Visual Impairment

It is important to recognise that each student's vision impairment is unique. Visual impairment is an umbrella term, representing two main categories: partially sighted and blind (Naidoo et al, 2016). It is widely thought that complete blindness makes the creation of visual art virtually impossible, (Marmor, 2014) however legal blindness does not always mean complete lack of vision, as usually those with severe visual impairment still have some level of visual perception (Rothman, 2015). Environmental factors including, "inappropriate lighting, light

glare and fatigue” can also have an impact on levels of visual impairment (Lawther, 2013, p112).

The 1981 Education Act greatly impacted on the transformation of art education for pupils with visual impairment. Prior to this Act all areas of art education, except product-based crafts were excluded, and haptic perception was thought to be an inadequate way of understanding aesthetic and intellectual subjects (Hayhoe, 2005). Social progression has occurred since. This is evident in the organisations, which have created an inclusive community to support art education for those with visual impairment.

Legal and policy developments have also taken place, with the Equality Act (2010) and Every School a Good School (2009); these have reinforced inclusion and equality, which positively impacted the education and lives of those with visual impairment. Additionally the SEND Code of Practice (2015) has enhanced the rights of pupils with SEN to attend mainstream schools and receive a broad and balanced curriculum (Department for Education and Health, 2015). In Northern Ireland, 2012, approximately two thirds of pupils with visual impairment were

educated in a mainstream school, one third attended special schools, and two percent attended specialised schools for visually impaired learners (Kiel, 2012).

Due to the Northern Ireland curriculum's aim for inclusive education, each school is required to offer full access to the broad and balanced curriculum, which includes Art and Design (Department of Education and Health, 2015). This demonstrates the development of art education for the visually impaired from the 1981 Education Act to 2017 and how art education is now firmly placed within the curriculum for the full spectrum of pupils.

2.3 Attitudes Towards the Relevance of Art Education for Pupils with Visual Impairment

Many have questioned the relevance and place of art education for the visually impaired, going as far back as the philosophers Locke, Berkeley and Diderot during the time of the enlightenment and psychologists such as Senden, Revesz and Hopkins during the 20th Century (Hayhoe, 2013). This attitude adopts the principle that art is understood through vision alone. Contrasting with this are the talented artists Claude Monet and Edgar Degas, who were legally blind (Marmor, 2014).

Revesz (1950) disregarded the visually impaired's ability to produce art, on the basis that they cannot derive experiences of colour nor form in our world (Revesz, 1950). However, we all learn about our world in a unique way and each express these experiences differently through art (Dissanayake, 2015). Indeed, Penketh (2016) describes how art can facilitate this individual expression in an infinite variety of ways, therefore if the visual impairment of the student does not allow them to see colour, the purposeful use of colour may not be necessary in their artwork.

There is dissonance in the research approaches, with Hopkins (2004) disregarding the visually impaired's ability to appreciate and create two-dimensional art, yet raised line drawings have been explored for decades to overcome such a barrier. Contrastingly Arnheim (1990) found that visually impaired participants took to line drawings naturally, due to the fact that "lines are not derived from line like shapes observed in nature, but from the boundaries of shapes and objects" (Arnheim, 1990, p62), something they have much experience of exploring through their haptic perceptions. Rothman's (2015) work is a fitting example of this. Figure 1

demonstrates how Rothman (2015) bridged the gap between two-dimensional and three-dimensional art by transferring his ink drawings on to clay.



Figure 1. (Rothman, 2015, p17)

Indeed, Macpherson et al (2016) and Shih and Chao (2010) successfully taught line drawing to pupils with severe visual impairment. They found it to be purposeful as it resulted in positive feelings of accomplishment in the pupils. This contrasts with Hayhoe's (2005) research which found line drawing to be detrimental for the visually impaired, leading one to enquire how beneficial the two-dimensional art form actually is for them, being only one among many equally valid styles.

Wenham (2003) asks us to be realistic and recognise that visual art is a visual language and acknowledge that vision provides more reference to information, giving the sighted an advantage when appreciating and creating art (Rothman, 2016). However, Malley and Silverstein (2014) argue that it should not be about advantage and disadvantage: "regardless of barriers, physical or environmental, all students need the opportunity to learn in and through the arts" (Malley and Silverstein, 2014, p39). Discordantly, Lawther (2013, p113) recognises the "untouchable", such as an airplane in the sky or a cloud. The key issue, it seems, is one of providing the tailored opportunities to learn for all rather than judging learning only by the deemed quality of the output.

2.4 The Challenges to Learning and Development in Art Education for Pupils with Visual Impairment

Appreciating the art of others is an important area for learning and development in art education, as stated by Northern Ireland's Statutory Requirements for Art and Design (CCEA, 2014), however, many have questioned the visually impaired's ability to do so (Wing, 2016). Various services are available to facilitate them in museums, including touch collections, exhibitions, tours, audio guides and braille information (Argyropoulos et al, 2015). However barriers remain which challenge

their learning and development, as the art accessible is only “a fraction of a fraction of all that is within the museums” (Weisen, 2008, p247).

Howell and Porter (2003) insightfully ask: “How then can someone who is congenitally blind be given intellectual access to non-tactile artworks that are not artefacts and do not have clear descriptive relationships to objects?” (Howell and Porter, 2003, p2). Three-dimensional replicas appear to be the current solution, such as iMap and printers that create tactile interpretations of paintings (Krivec et al, 2014). However the Northern Ireland Statutory Requirements for Art and Design also require students to evaluate their own and others’ work (CCEA, 2014). This further challenges the visually impaired’s learning and development, as description is the only aid to interpreting their peers’ two-dimensional art. However reliance on description is again a challenge, as Berger (2008) stated, “there is an always present gap between words and seeing” (Berger, 2008, p1).

Hehir (2002) suggests the key challenge is overcoming ableism in relation to assessment in education. Hehir (2002) describes ableism as how society would prefer disabled students to act and do the same as non-disabled students. The

ultimate conclusion of this approach is that art should allow for only one level of assessment, one level of experience and one level of ability. Contrary to this 'one size' approach, Arnheim (1990, p64) insightfully argues:

It is the task for the art teacher of the blind to convince his students that the aesthetic standards of the social majority are not automatically binding. Rather than be urged to make up for the lack of sight beyond what is practically useful, they should be encouraged to take pride in the unique contributions they can make to the culture to which they belong as a respected minority.

This is a powerful argument and something to be embraced, however it is still essential to ensure equal access to all areas within art education, as only the individual can determine its worth and relevance to themselves (Department of Education, 2015). Arnheim's (1990) argument aligns with the Statutory Requirements of the Northern Ireland Curriculum (2016), which requires the teacher to identify areas of learning presenting specific difficulties. They can then differentiate to provide the pupil with 'worthwhile experiences' to develop their knowledge, skills and understanding within Art and Design (CCEA, 2016). Hayhoe's (2013) theoretical framework opposes Arnheim's (1990), stating that the inclusion for the visually impaired pupils in mainstream art classes acts in itself as exclusion. This links to Hehir's (2002) argument that the aesthetic standards of the social majority are enforced, even when harmful. Hayhoe's (2005) case study exposes

this practice by exploring different experiences of visually impaired students in mainstream art classes. He identified one A Level student who immersed himself in the discovery and creative process, only to be discouraged by the teacher's insistence on perfecting the technical product. Hayhoe (2013) stresses the true learning actually occurred through the creative process and contrasts this with the aesthetic standards of the sighted being inflicted upon the student through the teacher's assessment, resulting in the demotivation of the student. This case contrasts markedly with CCEA's (2007) guidelines which state in art "the emphasis should be on process and enjoyment, rather than the finished product" (CCEA, 2007, p28), and stresses that "assessment for students with SEN should focus on the progression of the individual and be used to monitor progression in Knowledge and Understanding, Thinking Skills and Personal Capabilities, Cross-Curricular Skills and Areas of Learning (CCEA, 2013, p11). The overall conclusion from this research and guidelines is that the actual process of art education can provide valuable and intrinsic learning, almost regardless of the finished product.

2.5 The Benefits of Art Education for Pupils with Visual Impairment

While Revesz (1950) remained focused on the aesthetic elements and final product of the visual arts where sight is vital (Wenham, 2003), it is evident that there is more to art education, with exploratory, experimental and experiential

learning taking place through the process (Jagodzinski, 2016). Art Education For the Blind Inc. (AEB) (2003) reinforces this and encourages the emphasis to be placed on the "process of discovering art and making creative choices," setting aside our ideas about the final artwork (Axel and Levent, 2003, p21). This links to the contemporary art understanding which the Royal Institute of Blind People (RNIB) (2014) explains, "creativity is more to do with the processes that are used to arrive at the product than the product itself," describing the ability to make decisions and solve problems as being at the core of this process and fundamental to all successful learning (RNIB, 2014, p78). This closely links to Dewey's (1938) theory that children learn through experience (Pound, 2012). In 'Art as Experience', Dewey (2009) powerfully explains how the initial learning in art education emerges experientially through doing and emergent learning occurs through exploration, experimentation and improvisation within the creative process of art making. This type of pedagogy in art education is beneficial to the learning and development of the visually impaired, as its premise is that sight is not necessary to explore, experience or experiment.

In art, problem solving, decision-making, divergent thinking skills, risk taking and learning from failure are all part of the doing process, something the visually impaired are capable of and interact with instinctively because of their vision impairment (Granville, 2012). This is due to the alternative techniques and compensatory skills the visually impaired pupil must develop in order to achieve what their sighted peers do through vision (Sapp and Hatlen, 2010). Due to this the visually impaired may develop further in certain skill areas than their sighted peers. Supporting this concept are Al-Dababneh et al (2015) who found that visually impaired pupils showed superiority in creativity, creative thinking and in their imagination. This demonstrates that well planned tailored art education, which takes full account of individual needs can highlight the visually impaired's strengths in areas favourable in art education. As research has identified, pupils with visual impairment have less information about the environment, the responsibility is on the teacher to plan the development of their imagination as an outcome (Ibrahim, 2003). Conversely in this case the visually impaired's barrier to sight could benefit them in art, as their imagination is not limited by visual reality. While Al-Dababneh et al (2015) and Ibrahim (2003) take different research perspectives, both validate the benefits of art education for the visually impaired,

in either developing their imagination further or by using their unique imagination to their advantage.

2.6 The Impact Art Education has on the Visually Impaired's Overall Education in Relation to their Thinking Skills and Personal Capabilities, Attitudes Towards Learning and Level of Engagement

Visual art education is known for developing expression, observation, reflection, evaluation, engagement, persistence and the ability to envision (Hetland, 2015).

Such skills obtained in art education can indeed be transferred to other areas of learning to improve levels of engagement, overall learning and achievement given a well-planned and resourced real-life setting (Winner et al, 2013).

Research has identified the benefits of art in education. For example Fiske (1999) conducted seven studies, demonstrating the connection between high levels of arts participation and higher grades in reading and numeracy (Fiske, 1999). Similarly, Burton et al (2000) found that pupils with more art education were assessed as having better creativity, fluency, and originality. They were also more able to take risks in their learning, be publicly expressive with thoughts and ideas, were more cooperative and willing to contribute in class (Lloyd, 2017). This demonstrates the impact art education has on the development of TSPC and their attitudes towards learning (Lloyd, 2017). Additionally Fiske (1999) found art

education to improve social connectedness such as working with others (Lloyd, 2017). This is particularly beneficial for pupils with visual impairment, as studies show that social isolation is very probable for them (Perez-Pereira and Conti-Ramsden, 2013).

Synthesising the existing relevant literature, there is no doubt that different theoretical frameworks have been used by researchers in assessing the value of art education for the visually impaired pupil. The trend of more recent evidence focuses on how a capable teacher can enhance the pupils learning experience and benefits derived from the actual process of art education itself. The question remains relevant: How valuable is visual art education for the visually impaired pupils and can real life practice be developed further to enhance its value?

Chapter 3: Methodology

Chapter 3: Methodology

3.1 Research context

This study's principle aim was to investigate the value of visual art education for pupils with visual impairment. To achieve this aim a case study approach was used to conduct a small-scale investigation through a range of data collection methods to achieve the most reliable and valid results. Yin (2013) defines a case study as, "an empirical inquiry about a contemporary phenomenon, set within its real world context" (Yin, 2013, p18).

A case study has advantages and disadvantages (Yin, 2013) for this particular research, which must be recognised in the interpretation of results and confidence level assigned to the conclusions. One advantage is that it uses a range of data collection methods and different perspectives (Hamilton and Corbett-Whittier, 2013). This helps to triangulate the data and strengthen the validity of the conclusions drawn (Hamilton and Corbett-Whittier, 2013). In addition the case study is a method of learning (Flyvbjerg, 2006) through discovering and documenting (Stenhouse, 1979), which suitably meets one of the project's aims. Favourably a case study's results are immediately intelligible to a wider audience

due to the informal language used and therefore can impact real life settings (Mangal and Mangal, 2013). Since the case study "begins in a world of action and contributes to it" (Cohen et al, 2013, p292), it allows practice to be informed by detailed analysis of the student and teacher experience.

On the other hand, the results of case studies are often influenced by the biased views of the researcher's interpretation of the data analysed (Zainal, 2017). However, I took strong account of the potential bias and ensured it did not occur by engaging in extensive research reflection using a social constructivist approach and by continually challenging my assumptions and hypotheses. Furthermore, a case study is a small-scale investigation providing limited grounds for generalising conclusions (Zainal, 2017). In order to overcome this all conclusions drawn in this research will be tested against the literature reviewed (Lodico, Spaulding and Voegtler, 2010, p165). Case studies also involve interactions with others, therefore ethical issues must be carefully considered (Hamilton and Corbett-Whittier, 2013). As outlined above, all disadvantages can be overcome by firstly recognising them and then by instituting best case study practice.

Weighing up the above, I concluded that a case study was an appropriate methodology to provide evidence for the research question as firstly, it allows for a single researcher (Cohen et al, 2013). Secondly, it fits the purpose of developing my knowledge, as learning and theory emerge naturally from the case process (Harland, 2014). This includes learning from the experiences of others, which Eisner (2017) suggests to be "one of the most useful human abilities" (Eisner, 2017, p202). Thirdly it is useful when asking descriptive and explanatory questions (Yin, 2012) and can help link cause and effect by observing effects in real contexts through qualitative data collection methods (Cohen et al, 2013). This directly relates to the purpose of the research question, which aims to discover if art education is of value for pupils with visual impairment.

3.2 Participants

I used purposeful sampling by selecting two teachers and nine pupils from a school for the visually impaired as the participants for the case study. Typical case sampling was chosen to further exemplify the focus of interest. The samples included a group of nine pupils with different levels of visual impairment, their classroom teacher who was also an art specialist and another art teacher for pupils with severe visual impairment (Lochmiller and Lester, 2015).

3.3 Ethical Consideration

Ethics is defined as; "norms of conduct that distinguish between acceptable and unacceptable behaviour" (Hamilton and Corbett-Whittier, 2013, p64). I followed BERA's (2011) Ethical Guidelines for Educational Research to protect the rights of all participants involved in the case study. I sought voluntary consent from all participants by informing them of the process, explaining why their participation was necessary, how data would be used, who it would be reported to, and that it would be destroyed after use. Furthermore, I informed the participants that they were entitled to full privacy and would receive confidentiality and anonymity and have the right to withdraw at any time. Additionally, consent forms were signed by or on behalf of all participants and received before undertaking research (BERA, 2011).

3.4 Data collection

3.4.1 Semi-Structured Interview

An interview is a qualitative data collection method (Lochmiller and Lester, 2015), which Cohen et al (2013) described as an "interchange of views between two or more people on a topic of mutual interest" (Cohen et al, 2013, p267). I chose interviews, as they are intersubjective and can provide data with depth and richness. This allowed me to learn from the experiences and interpretations of

those involved, meeting one of the objectives of the research question (Cohen et al, 2013).

A semi-structured interview was chosen as the most suitable method to extract the data to provide the evidence to thoroughly test the research question. Favourably, in a semi-structured interview the questions are predetermined, this provides a focus and considers the time limitations of the participants (Lochmiller and Lester, 2015). Unlike a structured interview a semi-structured interview is flexible and therefore allows the questions to be rephrased to provide in-depth understanding for the participants (Lochmiller and Lester, 2015). Additionally, open-ended questions were allowed to enable respondents to talk freely, emotionally and in depth about their experiences (Cohen et al, 2013). I used this exploratory element as it develops a hypothesis, rather than a collection of facts, which meets the objectives of the case study (Cohen et al, 2013).

A disadvantage of an interview is that the data collected will inevitably have a bias (Cohen et al, 2013). The bias can be due to many factors such as, the participants' unique experiences and interpretations, the interviewer's influence, or

natural human error (Cohen et al, 2013). I considered this and as a result conducted three interviews including a focus group with different participants, to provide enhanced reliability of evidence and the validity of results.

I interviewed both teachers about their interpretations of art education for pupils with visual impairment before observing an art lesson, for the chosen sample. This aimed to better inform my analysis of the interviews and focus group. Next I conducted a focus group with the sample to access their personal experiences of the value of art education. A voice recorder was used during the three interviews to allow for full analysis of the collected data.

3.4.2 Focus Group

A focus group is an interview with multiple participants (Lochmiller and Lester, 2015). I held a focus group with the visually impaired pupils as it is less intimidating for them to participate with their peers than a one to one interview with myself, with whom they have no relationship (Lochmiller and Lester, 2015). Whilst appreciating the potential for some pupils holding back certain information in front of their peers, I decided it was the most suitable method to document in-depth experiences in order to generate findings. I found this facilitated

experiences and views to emerge, providing insights not possible from a one-to-one interview. Additionally, it was a practical way to collect a large amount of data in a short period of time (Cohen et al, 2013).

3.4.3 Semi-Structured Observations

Observations move beyond perception based data and enable the researcher to see the details not discussed in interviews (Cohen et al 2013). Observation was suitable as it provided a better understanding of the situations being described in the complementary interviews and focus groups. A semi-structured observation was chosen, in order to generate a hypothesis rather than test one (Cohen et al, 2013). I chose a non-participant role in order to minimize my interactions with the participants and gain a better understanding of experiences (Lochmiller and Lester, 2015). However I am conscious my presence may have brought about different behaviours regardless (Cohen et al, 2013).

The disadvantage of observations for collecting data is that behaviour may be seen which is unusual or a one off. Additionally, only one observation was conducted, which can be used to support understandings from the interview but cannot be used to generate a hypothesis alone. However taking account of all of this, the methods fit the purpose, which was to support my understanding of the

interviews through interpretations. Observations can have biased interpretations, however due to the additional methods of data collection employed, triangulation was provided. (Cohen et al, 2013). Triangulation was used to establish validity and trustworthiness of the data collected (Lochmiller and Lester, 2015). I adopted Lincon and Guba's (1985) observational recording method by using an observation box of predetermined themes to record notes during the observation and to develop a tentative running record of on-going analysis and interpretations (Cohen et al, 2013).

3.5 Qualitative Data Analysis

I partook in qualitative data analysis in order to inductively interpret the data and highlight how I came to the final conclusions and how these conclusions were grounded in the words of the participant in an objective manner (Lochmiller and Lester, 2015). Firstly I familiarised myself with the data and documented key analytical questions (Lochmiller and Lester, 2015). Next an edited transcript was produced to capture all relevant data in the interviews or recorded from the observation (Paulus et al, 2014). I then made memoranda of the data to further develop understanding, analytical ideas and make suggestive links supported by theoretical perspectives.

The data were coded and sorted in to smaller categories by bridging the data with my interpretations. This began by interpreting and applying meaning in a manner true to the participants' reality, before identifying relationships among variables, patterns and themes, as well as the distinct differences among them (Lochmiller and Lester, 2015). Finally, the categories were generalised in to themes with regards to a formalized body of knowledge (Miles and Huberman, 1994).

Eisner (2017) describes how the validity of qualitative research analysis can be challenged, stating that the validity is relative to the degree to which the researcher's account matches the reality of the participants. I considered the several strategies to increase validity throughout the case study, including mentor checking, audit trails, triangulation and mentor debriefing. The primary drawback to this case study's validity lies in the limited timeframe given for the overall project (Lochmiller and Lester, 2015).

Chapter 4: Data

Analysis

Chapter 4: Data Analysis

4.1 The Results

Below I have outlined the results from the observed art lesson for the visually impaired student sample, the focus group within the sample, and both interviews; interviewee one being the art teacher of the sample and interviewee two being an art teacher for pupils with severe visual impairment.

4.1.2 The Observation

I observed an art lesson for eight pupils with visual impairment. The severity of their impairment ranged, however all pupils could see colour. The lesson consisted of two parts; part one involved exploring and experimenting with clay, whilst part two followed a procedure to make Christmas decorations using clay.

The idea of touching the clay challenged pupils, however, gloves were provided to ameliorate this sensory issue. All pupils were able to explore and experiment with their clay sample and appeared very engaged. This was evident from their concentration when pulling, stretching and rolling the clay, their participation in discussion and their comments such as, "WOW", "Yes I love clay!." and "Look at what it can do." Language was promoted and used by the pupils throughout part one, for example "I stretched the clay and moulded it around my thumb". TSPC

were used and promoted, such as managing information when asking questions, for example, "Why is the clay wet?." and being creative when exploring, experimenting and imagining: "It feels cold – like glue tack – it smells like sand." The teacher praised the pupils; resulting in eager responses such as, "Look what I made with mine." High levels of engagement, enjoyment and positive attitudes to learning occurred. Evidence of this lies in the pupils' positive responses and inquisitive questions such as, "Can I smell it?" and their eagerness to overcome challenges. For example, when the teacher said, "this might be too hard for them to roll" the pupils responded, "It won't be! It won't be!"

In part two templates were used to create decorations. This involved rolling out clay slabs, tracing around a Christmas template, cutting out the traced shape and decorating the clay with different textures using stampers and etching tools. The range of resources provided differentiation for the different levels of fine motor skills. Levels of engagement significantly dropped in part two as the pupils watched the teacher roll each clay slab out for them, as well as during step-by-step demonstrations of how to make the Christmas decorations and the different

textures to be created. Their disengagement was evident as pupils wandered around the room, did not pay attention, and became unresponsive to questions.

The pupils also appeared disengaged during the tracing and cutting tasks. This was evident as all but one abandoned their work. The teacher and assistant then completed the tasks for them. There was no differentiation for those unable to partake in the cutting, rolling, and tracing. The pupils became more engaged when making textures on the clay slab. This was evident, as they appeared focused on their work. TSPC were used, as seen when the pupils made decisions, selecting tools to use, and when being creative in making textures. Throughout the lesson the pupils did not engage with each other but solely with the teacher.

4.1.3 The Focus Group Interview

The pupils were asked, "What did you enjoy in art today?" to which they responded "Feeling the clay - smelling it – making textures - and lines - making patterns – moulding – rolling." When asked what they found difficult they replied, "Cutting because it was difficult - hard to trace around." The remaining pupils agreed, stating "Yeah but then Mr cut mine for me." The pupils were asked what they learnt during the lesson observed to which they responded, "It was wet and

soft – it was made under the ground – a kiln.” They later stated their discoveries of how the clay could be manipulated stating, “I rolled mine in to a hot dog - mine got very thin - I made a big ball and a wee ball - I moulded mine around my thumb.”

The focus group interview provides evidence that TSPC are used in the sample’s art education. This is evident in the pupil’s statement, “Art is important to me because it helps me learn how to do stuff – like making things or finding what something can do.” When asked “How does art help you in other areas of school?” the pupils responded, “It helps me with a lot of knowledge in school and in other subjects – like if you are cooking - art helps you learn what’s in our world.”

4.1.4 Interview Results Table

The results from the interviews with the art teachers have been presented in a table format. This was to ensure the questions and responses are coherent to the reader and for reference purposes, as questions and responses will be referred to in 4.2 The Analysis.

Questions Asked	Interviewee One's Response	Interviewee Two's Response
1. In your experience how relevant is art education for pupils with visual impairment?	Very relevant, especially for the VI kids as they rely on tactile media.	It is a lot to do with how the teacher interprets the curriculum and makes it accessible to the children.
2. What are the benefits of art education for pupils with visual impairment?	Art is cross-curricular, this benefits them in other areas.	They need it for their senses and tactile needs. It makes them think and helps them build up a real picture of things... so they've got more of a link to real life.
3. Is the emphasis of learning through the process beneficial?	Yes, for their organisation, independent thinking and processes.	Yes ... the actions involved in the process are more important for their development and thinking skills than the final result.
4. How is the learning experience tailored to accommodate the different levels of visual impairment and each student's individual ability?	There they could make their own patterns or use the stamps – so they can delve in according to their needs and ability - some can cut out, some cant, but there wouldn't be much of a differentiation for those with very severe	We use colour for Child A who is losing his sight, he loves wiki sticks and he can make shapes out of them and stick it on card, it's raised and has colour.

	visual impairment.	
5. How does art education impact their overall education in terms of their thinking skills and personal capabilities?	They can transfer those skills to everyday life and across the curriculum.	I use art in all the other subjects to help meet their TSPC targets. Working together improved their communication skills and teamwork skills.
6. How does art education impact their overall education in terms of their attitudes towards learning and levels of engagement?	With art there is a workman ethic ... less competitive attitudes.	I interlink art in all other subjects. If art is brought in to other subjects they are engaged if it's tactile and they enjoy it – you know more engaged so then better attitudes to learning.
7. What challenges do these pupils face in terms of their learning and development in art education?	Their vision impairment is a challenge but not something which is going to stop them from being creative - there is art media which doesn't have to be visual – sound and sculpture.	Being independent, colour. Some of them don't like different textures and if they are blind all their lives 2D just isn't suitable, so everything has to be 3D - they would have to feel a tree's shape and texture because they have abstract ideas in their head. So for Child E's clay work I got him to feel a toy octopus and feel the

		different parts you know the head, arms, suction cups - and then got him to feel textures that would be similar to an octopus.
8. What challenges are faced for them in terms of accessing the curriculum and assessment?	You have to adapt the curriculum to suit their needs. Their fine motor skills are a challenge - their independence can be the biggest challenge holding them back - going in to GCSE, the restraints of an assessment criteria, their talent, the look, but for me art is about the experience not the final product.	It depends on the teacher - I would assess them probably, how independent they've been, their own ideas and their thinking skills.

4.2 The Analysis

Below I have analysed the results in relation to the research question: 'How valuable is visual art education for pupils with visual impairment?', using both the results and evidence from the literature review to support the analysis.

4.2.1 The Relevance of Art Education for the Visually Impaired

The results from the focus group indicate all learning and enjoyment identified by the pupils occurred during tasks suited to their needs and ability which involved their active participation in the process and through discussion. This corresponds to the results from the observation, which identified high levels of engagement, enjoyment and positive attitudes towards learning in similar situations. This interpretation supports Hayhoe's (2013) research and Dewey's (2009) theory, which agree that learning in art education emerges experientially within the creative process of art making.

One could point out that the tasks of cutting and tracing in the lesson are experiential, however the pupils described these tasks as 'too difficult' and consequently the teacher completed these tasks. Such results suggest that the difficult tasks were not appropriate for the needs and abilities of the pupils. This is supported through the findings from the observation, as levels of engagement greatly decreased during demonstrations and the tasks of tracing and cutting. This would suggest that the relevance of art education for these pupils depends on appropriate learning experiences tailored to the individual needs and abilities and occurs within the creative process as theorised by Dewey (2009). This is

supported by interviewee two's opinion that the relevance of art education for pupils with visual impairment "is a lot to do with how the teacher interprets the curriculum and makes it accessible to the children." This is further reinforced by the lesson observed which clearly highlights that the teacher's planned learning experiences within part one made the learning relevant for the pupils whereas the planned tasks of cutting and tracing, which were too difficult, did not.

The issue was that the learning experiences became final product orientated. This was evident from the templates and demonstrations used that eliminated creativity, for example when the teacher showed the different textures which could be created and how, which limited the pupils' use of TSPC. Furthermore, the teacher completing the tasks of cutting, tracing and rolling out slabs limited the learning experience for the pupils and suggested the need for a final outcome of a certain standard. Arnheim's (1990) proposal of focusing on the process is significant here and could be applied to further support the practice of relevant art education for these pupils, as observed in part one. He states, "It is the task for the art teacher of the blind to convince his students that the aesthetic

standards of the social majority are not automatically binding.” (Arnheim, 1990, p64).

4.2.2 Aesthetics as a Challenge

Interviewee one identifies “the restraints of an assessment criteria, their talent, the look” as a challenge. This relates to the final product focus, evident from the observation, which challenged the pupils’ learning, development and creativity. This corresponds to the results of Hayhoe’s (2013) case study, however Hayhoe (2013) does not identify aesthetics as a challenge but as pressure placed on the pupil by the teacher, which relates to Hehir’s (2002) idea of ableism. Arnheim’s (1990) advice previously discussed would improve art education for the pupils and provide them with an accurate idea of the true purpose of visual art. This is supported by AEB’s (2003) findings which show development and learning emerges through the “process of discovering art and making creative choices,” whilst setting aside our ideas about the final artwork (Axel & Levent, 2003, p21). This understanding could be adopted in practice to avoid any unnecessary barriers to the pupils’ creativity and in turn provide a more valuable art education for the visually impaired pupils. This suggestion is strengthened by Dewey (2009) and Jagodzinski (2016), who argue that exploratory, experimental and experiential learning take place through the process within art and design, and CCEA’s (2007)

guidelines, which state in art, "the emphasis should be on the process and enjoyment, rather than the finished product." (CCEA, 2007, P1).

4.2.3 The Benefits of Visual Art Education for Pupils with Visual Impairment

Similarly both interviewees identify the emphasis of learning through the process to be beneficial, this is evident in their response to question two outlined in the results. This matches with my own interpretation from the triangulation of data that most learning occurred and higher levels of TSPC were used during the creative process within part one. Such results align with the research of Hayhoe (2013) and Dewey (2009), as they also identified an emphasis on learning through process in art as beneficial for learning, development and TSPC. Further strengthening this analysis is interviewee two's use of the relationship between art and the development of TSPC to "help meet (the pupils') TSPC targets." This is evident in her response to interview question five and highlights how useful art education can be for pupils with visual impairment.

However, in the observed lesson there were missed opportunities to promote TSPC due to the inappropriate resources, tasks and rigid demonstration previously

discussed. Planning tasks tailored to the ability and needs of the pupils would support their independence, develop their TSPC and consequently be even more valuable for them. TSPC could be further promoted by encouraging discovery based learning and supporting pupils' engagement in the doing process where such learning occurs. For example, addressing the pupils' curiosity by facilitating their use of their imagination and the exploration of their own ideas to discover ways to make texture rather than informing them. These suggestions are supported by RNIB's (2014) findings that "creativity is more to do with the processes that are used to arrive at the product than the product itself," describing the ability to make decisions and solve problems as fundamental to all successful learning (RNIB, 2014, p78). Granville's (2012) research supports this suggestion further as it found problem solving, decision-making, divergent thinking skills, risk taking and making mistakes to be fundamental to successful learning within art.

Ibrahim's (2003) research has identified that pupils with visual impairment have less information about the environment. This corresponded to the results as interviewee two identifies that pupils with severe visual impairment must always,

"feel the shape ... because they have their own abstract ideas in their head" as a challenge for them. This demonstrates how valuable art education is for the visually impaired in particular, as it provides them with these essential first hand experiences necessary for their development. This analysis is strengthened by the voice of the pupils in the focus group who state, "Art helps you learn what's in our world." This is further supported by interviewee two's response to interview question two.

This challenge relates to Lawther's (2013) studies that recognise the difficulties these pupils face when confronting the 'untouchable'. However this challenge is not limited to art education, as Berger (2008) stated "there is an always a present gap between words and seeing" (Berger, 2008, p1). The results demonstrate how art education can bridge this gap as interviewee two identifies in response to interview question seven her efforts to overcome such difficulties through art education. This exemplifies how valuable art education can be particularly for these pupils in overcoming the barriers they face.

The results of the observation found the pupils did not engage with peers but connected solely with the teacher. This parallels to Perez-Pereira & Conti-

Ramsden's (2013) studies that show social isolation is unfortunately very probable for visually impaired pupils. However, interviewee two identified the benefits group art had on the pupils' ability to work together when stating, "Working together improved their communication skills and teamwork skills." This finding corresponds with Lloyd's (2017) research, which found art education improved social connectedness, and thus emphasises how valuable group art can be especially for the pupils with visual impairment. Working with others was not promoted in the lesson observed therefore this could be introduced to further develop the value of art education for the visually impaired.

4.2.4 The Impact of Art Education on the Visually Impaired Pupils' Levels of Engagement and Attitudes Towards Learning

The data collected did not suggest art impacted the pupils' attitudes to learning or levels of engagement in other subjects and this could indeed be viewed as an opportunity to improve practice. However, interviewee two interlinks art in other subjects, finding this to aid positive attitudes and engagement levels. This illustrates the value of art education for the visually impaired and encourages practice, which interlinks art within other subjects to benefit the pupils' engagement and overall education.

Furthermore the results show confidence and self-esteem was increased through praise, which promoted the pupils' levels of engagement and attitudes towards learning. This was evident as they became more open to discussion and sharing of ideas, which corresponds to the studies of Burton et al (2000) that show pupils in art intensive settings are more cooperative and willing to contribute in class (Lloyd, 2017). Connectively, a pupil demonstrates how such skills are transferrable when stating, "[art] helps me in other subjects." This parallels to Winner et al (2013) who found skills obtained in art education to be transferred to other areas of learning, improving levels of engagement and achievement. This demonstrates the potential impact art education could have on attitudes to overall learning if these skills were to be transferred to other areas of learning.

Chapter 5:

Conclusion

Chapter 5: Conclusion

5.1 Conclusions

Having analysed and interpreted the results I can now determine if the aims and objectives of the research project have been met.

A main aim was to determine if visual art is a worthwhile subject for pupils with visual impairment. My study meets this aim by illustrating the benefits art education can reap for the visually impaired pupils. I can now conclude that visual art education has great potential to be valuable for pupils with visual impairment, however I understand that this may be circumstantial. As outlined below, this newfound understanding meets an aim of this project, which was to develop my knowledge and understanding of the topic in order to contribute to my professional development and to my potential success as an educator for pupils with SEN through applying my findings to real life situations.

The teachers identified aesthetics to be a challenge, however, I was able to conclude that this is true only to the extent that it is placed on pupils by their teachers. Similarly, I found that the challenge faced by the pupils in accessing the

curriculum and assessment criteria is reliant on the innovation of their teacher.

Therefore, I must conclude that in order to further enhance the value of visual art and support learning and development for pupils with visual impairment it is of crucial importance for the educator to be aware of the uniqueness of each pupil in terms of their level of visual impairment and the individual challenges the pupil faces due to this, as well as the pupils' strengths and abilities. This could be achieved through constructive feedback to the teacher either from self-reflection or more importantly through peer-to-peer observation and feedback. This is vital in order to provide worthwhile learning experiences and promote independence and development of TSPC. Additionally, the research outlined here and the results of this study show where and how true learning occurs in art and where to be innovative and creative in planning for individuals to provide every opportunity for the pupils to benefit from this learning.

I must also conclude that for the sample, visual art education was most valuable when the emphasis was placed on the experimental, experiential and exploratory learning process rather than the final product, as this was most beneficial for aiding learning, independence and consequently the development of TSPC.

Furthermore, TSPC obtained in visual art education proved to be transferrable, illustrating the potential of art to positively impact their overall education. Productively, pupils became increasingly expressive with thoughts, ideas and were more cooperative and willing to contribute when emerged in the learning process. This highlights the potential of such skills to be adopted in other subjects to positively impact levels of engagement and attitudes towards learning. In addition, when art is interlinked in other subjects it favourably proved to advance the pupils' levels of engagement and attitudes to learning.

Furthermore, aspects of visual art education can be concluded to be particularly valuable for visually impaired pupils as they provide essential first hand experiences which are fundamental for the building up of realistic images and aiding comprehension amongst such pupil groups. In addition an innovative art teacher can support the visually impaired in overcoming challenges to the 'untouchable' through visual art education, which again illustrates its value for them. Furthermore, I can conclude that art is useful in supporting visually impaired pupils with their social skills of working together through group art. This

is extremely pertinent when recalling existing research indicating high probability of social isolation for the visually impaired.

There is a major prize to be obtained if the teacher can interlink the evident benefits from art education for the visually impaired pupils to other subjects. The benefits for the teacher in preparing such lessons tailored to individual needs are that engagement, enthusiasm, attention and the quality of learning can all be substantially improved. For the visually impaired pupil, the benefits could be life-enhancing.

This project has been an excellent learning experience for myself and extremely relevant for my future career as a teacher for pupils with SEN. The knowledge I obtained is instructive, and my comprehension of planning for and executing differentiation has expanded. As a result, all suggestions for further development discussed in Chapter 4 and 5 can be adapted and applied in my own practice to positively impact my planning, my teaching and the art education of not only the visually impaired pupils but for all individuals who may be in my care. Consequently this has met a research aim by developing my knowledge and

understanding of the topic, in order to contribute to my professional development by applying my findings to real life situations.

5.2 Limitations and Recommendations

From the entire study, analysis and conclusions drawn, I have successfully met the last aim of this project, which was to provide an updated perspective on the topic and add to existing literature in this area. However, this small-scale project had limitations, in particular time, which limited the amount of research which could be conducted. For instance the research only considers Northern Ireland, was conducted in one school and based upon one observation, one focus group and the experiences of two teachers. However, there is sufficient support from the theories and results of other researchers outlined throughout to support the conclusions drawn. Still, further research is appropriate to further validate the conclusions drawn and consider how such findings may be comprehensively applied to improve the value of visual art education for visually impaired pupils.

Bibliography

Bibliography

Al-Dababneh, K.A., al-Masa'deh, M.T.M. and Oliemat, E.M., (2015) 'The effect of a training programme in creativity on developing the creative abilities among children with visual impairment.' *Early Child Development and Care*, 185(2), 317-339.

Argyropoulos, V.S. and Kanari, C., (2015) 'Re-imagining the museum through "touch": Reflections of individuals with visual disability on their experience of museum-visiting in Greece.' *ALTER-European Journal of Disability Research/Revue Européenne de Recherche sur le Handicap*, 9(2), 130-143.

Arnheim, R., (1990) 'Perceptual aspects of art for the blind.' *Journal of Aesthetic Education*, 24(3), 57-65.

Axel, E.S. and Levent, N.S. (2003) *Art beyond sight: a resource guide to art, creativity, and visual impairment*. New York: American Foundation for the Blind and AFB Press of the American Foundation for the Blind.

Berger, J (2008) *Ways of seeing*, London: Penguin .

British Educational Research Association (BERA). (2011) *Ethical guidelines for educational research*. Available at: <https://www.bera.ac.uk/researchers-resources/publications/ethical-guidelines-for-educational-research-2011> (Accessed: 7 August 2017).

Burton, J.M., Horowitz, R. and Abeles, H., (2000) 'Learning in and through the arts: The question of transfer.' *Studies in art education*, 41(3), 228-257.

CCEA. (2007) *The Northern Ireland curriculum primary*. Available at: http://ccea.org.uk/sites/default/files/docs/curriculum/area_of_learning/fs_northern_ireland_curriculum_primary.pdf(Accessed: 2nd September 2017).

CCEA. (2013) *Guidance on assessment in the primary school*. Available at: http://ccea.org.uk/sites/default/files/docs/curriculum/area_of_learning/fs_northern_ireland_curriculum_primary.pdf(Accessed: 2nd September 2017).

CCEA. (2014) *Non-statutory guidance using CCEA assessment tasks for pupils with special educational needs (primary)*. Available at: http://ccea.org.uk/sites/default/files/docs/curriculum/assessment/sen-non_stat_guidance_using_assessment_tasks.pdf (Accessed: 22nd September 2017).

CCEA. (2014) *Statutory requirements for the arts at key stage two*. Available at: http://ccea.org.uk/sites/default/files/docs/curriculum/area_of_learning/the_arts/ks2_statutory_requirements.pdf(Accessed: 2nd September 2017).

CCEA. (2016) *Art and design*. Available at: http://www.nicurriculum.org.uk/curriculum_microsite/the_arts/art/ (Accessed: 2nd September 2017).

Cohen, L., Manion, L. and Morrison, K., (2013) *Research methods in education*, 7th edn., London: Routledge.

Department of Education (2009) *Every School a Good School*. Available at:
<https://www.education-ni.gov.uk/sites/default/files/publications/de/ESAGS%20Policy%20for%20School%20Improvement%20-%20Final%20Version%2005-05-2009.pdf> (Accessed: September 24th 2017).

Department of Education and Department of Health. (2015) *Special educational needs and disability code of practice: 0 to 25 years*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf (Accessed: 20th September 2017).

Dewey, J. (2009) *Art as experience*, 5th edn., London :Perigee Books.

Dissanayake, E., (2015) *What is art for?*, 5th edn., Seattle: University of Washington Press.

United Kingdom. *Education Act (1981) Chapter 60*, Available at:
<http://www.legislation.gov.uk/ukpga/1981/60/enacted> (Accessed: 20th September 2017).

Eisner, E. (2017) *The enlightened eye. Qualitative inquiry and the enhancement of educational practice*. New York: Teachers College Press [2017].

United Kingdom. *Equality Act (2010) Part 6 Chapter 1*, Available at:
<https://www.legislation.gov.uk/ukpga/2010/15/contents> (Accessed: September 24th 2017).

Fiske, E., B. (1999) *Champions of Change: The Impact of the Arts on Learning*. President's Committee on the Arts and the Humanities, Washington, DC.; Arts Education Partnership, Washington, DC. Available at:
<https://eric.ed.gov/?id=ED435581> (Accessed: September 24th 2017).

Flanagan, M. (2005) *Sociocultural processes of learning in art among early years learners*. British Educational Research Association Annual Conference, University of Glamorgan, 14-17 September 2005. Available at: <http://www.leeds.ac.uk/educol/documents/143470.htm> (Accessed: September 24th 2017).

Flyvbjerg, B. (2006) 'Five misunderstandings about case-study research', *Qualitative Inquiry*, 12(2), 219-245.

Winner, E., Goldstein, T., and Vincent-Lancin, S.(2013) *Educational research and innovation art for art's sake? The impact of arts education*. Educational research and innovation. Paris: OECD publishing.

Granville (2012) *Art Education and Contemporary Culture*, Bristol: Intellect.

Hamilton, L and Corbett-Whittier, C (2013) *Using Case Study in Education Research*. London: SAGE.

Harland, T., (2014). 'Learning about case study methodology to research higher education.' *Higher Education Research & Development*, 33(6), 1113-1122.

Hayhoe, S., (2005) *An examination of social and cultural factors affecting art education in English schools for the blind*. Doctoral dissertation. University of Birmingham.

Hayhoe, S., (2013) 'Expanding our vision of museum education and perception: An analysis of three case studies of independent blind arts learners'. *Harvard Educational Review*, 83(1), 67-86.

Hehir, T., (2002) 'Eliminating ableism in education'. *Harvard Educational Review*, 72(1), 1-33.

Hetland, L (2015) *Studio thinking 2: The real benefits of visual arts education.*, 2nd edn., New York: Teachers College Press and The National Art Education Association.

Hopkins, R., (2004) 'Painting, sculpture, sight, and touch'. *The British Journal of Aesthetics*, 44(2), 149-166.

Howell, C. and Porter, D., (2003). *Re-Assessing Practice: Visual Art, Visually Impaired People and the Web*. Bearman, D. and Trant, J. (ed.). *In Museums and the Web 2003*. Proceedings. Charlotte, North Carolina, USA: Archives & Museum Informatics, pp. 1-10.

Ibrahim, S. A. (2003). *The effectiveness of activities of the previous initialization to tell the story in the development of the imagination in a child kindergarten blind*. Masters Thesis. Cairo University, Cairo, Egypt.

Jagodzinski, J. (ed.) (2016) *What Is Art Education? After Deleuze and Guattari*, United Kingdom: Palgrave Macmillan .

Kiel, S. (2010) *RNIB survey of VI services in England and Wales 2012*, Final. Available at: <http://www.rnib.org.uk/knowledge-and-research-hub/research-reports/education-research/vi-services-england> (Accessed: 20th September 2017)

Krivec, T, Muck, T, Fugger Germadnik, R, Majnarić, I, & Golob, G (2014), 'Adapting Artworks for People Who Are Blind or Visually Impaired Using Raised Printing', *Journal Of Visual Impairment & Blindness*, 108(1), 68-76.

Lloyd, K., (2017). 'Benefits of Art Education: A Review of the Literature.' *Scholarship and Engagement in Education*, 1(1), 6.

Lochmiller, C.R., Lester, J.N. (2015) *An Introduction to Educational Research: Connecting methods to Practice*. California: SAGE.

Lodico, M.G., Spaulding, D.T. and Voegtle, K.H., (2010) *Methods in educational research: From theory to practice*, 2nd edn., California: Jossey-Bass.

Macpherson, H., Hart, A. and Heaver, B., (2015) 'Building resilience through group visual arts activities: Findings from a scoping study with young people who experience mental health complexities and/or learning difficulties'. *Journal of Social Work*, 16(5), 541-560.

Malley, S. M., and Silverstein, L. B. (2014). 'Examining the intersection of arts education and special education.' *Arts Education Policy Review*, 115(2), 39-43.

Mangal, S.K. and Mangal, S., (2013) *Research methodology in behavioural sciences*. Delhi: PHI Learning Pvt. Ltd.

Marmor, M.F., (2014). 'Vision loss and hearing loss in painting and musical composition.' *Ophthalmology*, 121(7), 1480-1485.

McGuigan, B., and Lawther, G. (2013) 'Jordanstown School Applies The Leonardo Effect in Teaching with Children who are Deaf or Visually Impaired', in Flanagan, M., Hickey, I., Robson, D., Magennis, G., Campbell, P., Davies, C., Bebb, L., Davies, G., Richards, S., Parks, R., Loudon, F., Vance, E., Vance, F., Anderson, J., McKernan,

H., Ellis, D. (ed.) *The Leonardo effect: motivating children to achieve through interdisciplinary learning*. Oxon: Routledge, pp. 108-114.

Miles, M.B., and Huberman, A. M. (1994). *An expanded sourcebook: Qualitative data analysis*, 2nd ed.. California: SAGE Publications.

Naidoo, K.S., Leasher, J., Bourne, R.R., Flaxman, S.R., Jonas, J.B., Keeffe, J., Limburg, H., Pesudovs, K., Price, H., White, R.A., Wong, T.Y., Taylor, H.R., Resnikoff, S., (2016) 'Global Vision Impairment and Blindness Due to Uncorrected Refractive Error, 1990–2010', *Optometry and Vision Science*, 93(3), 227-234.

Paulus, T. M., Lester, J. N., and Dempster, P.G. (2014) *Digital tools for qualitative research*. London, UK: SAGE.

Penketh, C., (2016) 'Special educational needs and art and design education: plural perspectives on exclusion', *Journal Of Education Policy*, 31(4), 432-442.

Perez-Pereira, M. and Conti-Ramsden, G., (2013) *Language development and social interaction in blind children*. Sussex: Psychology Press.

Pound, L. (2012) *How children learn: From Montessori to Vygotsky-educational theories and approaches made easy*, 2nd edn., London: Andrews UK Limited.

Available at: <https://books.google.co.uk/books?hl=en&lr=&id=x5->

[_BAAAQBAJ&oi=fnd&pg=PT3&ots=YHLRQtbMwS&sig=D7gS36UwOSCQunLfFmGcv-oGIVc#v=onepage&q&f=false](#) (Accessed: 17th September 2017).

Pungkanon, K. (27th July 2017) 'How blind students can "see" art ', *The Nation*, pp. 1-2. Available: <http://www.nationmultimedia.com/detail/art/30321887> (Accessed: 22th September 2017).

Wing, A., Giacritsis, C., Roberts, R., Spence, C., Geller, M., Geisbusch, J., Candlin, F., MacDonald, S., Pye., E (ed.), Rowlands, M., Jacques, C., Cassim, J., Khayami, S., Trewinnard-Boyle, T., Tabassi, E., Lamb, A., Johnson, J., Prytherch, D., Jefsoutine, M., Geary, A. (2016) *The power of touch: handling objects in museum and heritage context*. New York: Routledge.

Revesz, G., (1950) *Psychology and art of the blind*. Oxford, England: Longmans, Green & Co.

RNIB (2014) *National Curriculum Guide*, Available at: <http://www.rnib.org.uk/services-we-offer-advice-professionals-education-professionals/education-resources> (Accessed: 22nd November 2017).

Rothman, S. (2015) *Losing vision: What can art gain in the absence of sight?* Senior thesis. Claremont College.

Sapp, W. and Hatlen, P., (2010) 'The expanded core curriculum: Where we have been, where we are going, and how we can get there.' *Journal of Visual Impairment & Blindness*, 104(6), 338.

Shih, C.M. and Chao, H.Y., (2010) 'Ink and wash painting for children with visual impairment.' *British Journal of Visual Impairment*, 28(2), 157-163.

Stenhouse, L., (1979). *What is action research?* CARE, University of East Anglia, Norwich (mimeo)(en) Cohen Louis y Manon, Lawrence,(1997). *Research Methods in Education*. London: Routledge

Weisen, M. (2008) 'How accessible are museums today?' In H.J. Chatterjee (Ed.), *Touch in museums. Policy and practice in object handling* (pp. 243-252). Oxford: BERG Press

Wenham, M., 2003. *Understanding art: a guide for teachers*. London: SAGE.

Yin, R. K. (2013) *Case study research: Design and methods*, 5th edn., London: SAGE Publications.

Yin, R.K. (2012) *Applications of Case Study Research*, 3rd edn., California: SAGE Publications.

Zainal, Z., (2017) 'Case study as a research method'. *Jurnal Kemanusiaan*, 5(1), 1-6.