An exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

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Acknowledgements

I would like to firstly thank my supervisor for all their continuous support, guidance and patience throughout my research project, it was greatly appreciated. I would also like to thank my family and my friends for their support and direction throughout. Finally, I would like to thank all the participants for their honesty and kindness throughout the process of my research project.

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List of Abbreviations

Abbreviation	Description
ICT	Information and Communications Technology
TEL	Technology-Enhanced Learning
IT	Information Technology
SDT	Self-determination theory

An exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

Abstract

The research study looked to examine how art teachers adapted to online learning using enhanced technologies with the emergency closure of schools resulting from COVID-19. This research study examined the opinions of six participating art teachers and how they continued to deliver adequate content while moving from a hands-on teaching, to an online platform with little or no training what so ever.

Through this investigative, qualitative study using semi-structed interviews, it has provided significant perspectives from art teachers on how enhanced technologies can be integrated into art classes in the art classroom, after experiencing and developing technology skills while learning and teaching online. Data gathered, suggested a need for change in art curriculum and the urgent need for the introduction of enhanced technologies to cater for digital drawing and digital enhancements on art works of students. For this to work, data gathered found an urgent need for teacher training in enhanced technologies.

During this study, I discovered that student engagement and motivation had been greatly impacted with the move to online learning and teaching. Teachers should be aware of the role they have in motivating student's and how they can encourage them in and outside the classroom.

Teacher training was identified as a key weakness in the interviewing process. I found there was a concerning lack of technological training delivered to teachers to succeed in online learning as well as to enhance learning when in the classroom.

Chapter 1: Introduction

1.1 Introduction

Covid-19 resulted in a global pandemic that impacted the education of students worldwide. With the rapid spread of Covid-19, schools around the world had no choice but close due to emergency lockdowns. As a result of school closures, students were affected unequally, as some students had no access to digital technologies to transition to an online learning environment. ("Pandemic's Dire Global Impact on Education", 2021). According to UNESCO (2021) an estimated 90 percent of children world-wide that are of school age, have had their education impacted due to the global pandemic.

This research dissertation examined art teachers views on their relationship concerning enhanced technologies and the use of technologies in art education during remote learning and teaching as a result to the global pandemic. This research study looked to issues relating to attitudinal data on educational engagement and learning outcomes for post-Primary students. The study investigated motivation, specifically looking at ways in which teacher educators view their role in encouraging student learning and achievement while learning online. The study also looked to consider how teachers might interpret their view of their roles in mediating the relationship between enhanced technology and both student engagement and achievement.

The study mainly investigated the elements of enhanced technologies, looking at how teacher educators can integrate technology to enhance student learning taking key learning skills learned while teaching remotely. The study considered the importance of enhanced technologies in art education and how educators can develop and improve their IT skills moving forward.

1.2 Background and rationale

The rationale for this research was to explore the continued development of creative pedagogies and technology enhanced strategies in post-primary art education during a global pandemic. The reasoning behind this is linked to personal, practical and intellectual goals as outlined by Maxwell (2008).

As an artist and educator, I have a personal interest in exploring how art, as a traditionally

kinaesthetic practice has evolved before and during the pandemic in relation to creative pedagogies (Aleinikov, 2013), techniques and transferable value to student development. As an educator, I myself have very limited skills and knowledge around enhanced technologies. I myself found the sudden adaption to online learning and teaching very daunting and also found it very challenging for students. I wanted to examine the impact of online learning and teaching, and if teachers can implement the use of enhanced technology into art education moving forward in line with the digital time, we live in.

Practical and intellectual – As an educator hoping to teach art, I want to contribute to the development of national good practices and explore how current challenges could be improved. Art should be accessible to all students, through universal design and technology enhanced learning this has become possible. Moreover, the integration of enhanced technology into art education will further enhance digital literacy across curriculum.

As part of this process, I, the researcher gathered the views of teachers of art in post-primary settings within ETB schools. Through this process, I, the researcher hoped to contribute to the knowledge surrounding visual arts education. In relation to the conceptual underpinnings of the work, I considered the concepts of creativity and imagination as being core to the process of teaching. These have been identified as being the driving force of artistic expression (Liang and Lin, 2015, Liang, Hsu, Chang, and Lin, 2013).

In the teaching of art, facilitating the creative process allows students to envision multiple pathways, strategies and approaches to achieve their goals. In this way, art itself can be seen as a co-constructed process (Vygotsky, 1980; Lajevic, 2021) to help develop creative thinking and adaptable problem-solving skills, within a cluster of transferable, twenty first century skills (Cassel, and Kolstad, 1998).

Interestingly, Gates (2016) suggests that whilst art has been linked to the development of 21st century and transferable skills such as creativity and problem solving, the development of these is reliant on shifting the pedagogic approach, from a teacher-centred, "repeat as I do", to a more student-centred, critical approach that promotes deeper engagement:

"Rather than require students to create a brightly coloured painting of a piece of pop culture and repeat the image using various color schemes, which unfortunately reduces the understanding of pop art to the formal characteristics of a few of Andy Warhol's paintings, teachers could engage students with the very concept of pop art by asking them to produce a piece of art that blurs the boundaries between visual culture and fine art (cf. Gude, 2013). The former assignment gives students only the ability to choose an object of visual culture and the colors in their work; the latter provides students with a problem and a broader range of choices for solving it" (Gates, 2016)

This linkage to choice and problem based learning is linked to the further adaption of inquiry based learning in art, and in the joy of learning itself (Schutz and DeCuir, 2002). This trend is promoted by Duncum (2009, p100) who claims that traditional teacher-driven art pedagogies are increasingly challenged by evolving social, pedagogical and technological innovations in the twenty first century. One example of this can be seen in the work Lajevic (2021) and Hick (2021) who have adapted to new landscape of art education.

I have chosen this topic to try and gather information for future practice and classroom implementation in their role of teaching. In doing this research project it will also allow me to gain more knowledge around the different backgrounds and challenges that art teachers are facing in implementing enhanced technologies into their teaching. This dissertation has also looked at teacher views on factors in which cause individual students to lack motivation and engagement.

1.3 Objectives

The primary objective of this work was to explore how art teachers can continue to facilitate the development of both art specific skills as well as transferable skills using both technologies enhanced learning (TEL) and traditional approaches. Secondly, the study aimed to explore the benefits and challenges to implementing a Technology Enhanced Learning strategy within art education in post primary settings in Ireland. The specific areas that the I aimed to answer through the research include:

- Teacher's adaption to teaching online using enhanced technologies during the pandemic.

- Teacher views on the challenges and benefits using technology to teach art education.

- Enhanced focus on teacher sensitivity in relation to student well-being in an online environment.

- Training requirements to meet the needs of teacher using enhanced technologies to teach.

Research Question: What are the experiences of post-primary art teachers in using technology to teach during the Covid Pandemic?

• Sub question: How has art pedagogy evolved during the Covid period?

• Sub question: What strategies can be retained and refined in a post-covid art classroom?

1.4 Guide to Methodology

A qualitative approach is adopted for the study.

Conceptual framework

Maxwell (2008) identifies three types of goals in carrying our research, personal, practical and intellectual. As an artist, fashion designer and teacher, I have both personal and practical goals in considering how the teaching of art is changing. Combined then with an intellectual curiosity of this process, this research is expected to have practical and transferable value, within the Irish post-primary sector. With this said, Ravitch and Riggan (2016) define a study's conceptual framework as an argument about the importance of the study, motivators, its means, purpose and one which requires specific ontological and epistemological foundations. With this said, my ontological position for this study is influenced by an appreciation of artistic post-modernism and a constructionist perspective (Moon, and Blackman, 2014). Therefore, this work has a constructivist epistemology which places value on an inductive approach and co-creation of knowledge through engagement with participants and their experiences of teaching art online.

Methodological framework.

"Qualitative data is information that is represented usually as words, not numbers. If you have pages of text before you, recordings of interviews or notes from observation, for all practical purposes you have qualitative data" (Guthrie, 2012, p.157).

The research method for this study will be qualitative in nature, comprising of semi-structured interviews. Through six semi structured interviews the aim was to identify the opinions and views of art educators and their understanding on the advantages and limitations of the use of enhanced technologies. This method is considered to be the most appropriate data capturing method to explore complex phenomenon and develop rich data that can be considered in relation to previous works. The research was determined by ethical consideration and approval before these interviews take place. Also, in consideration of ethical principles, all participants were made aware, through a declaration of informed consent and plain language statements that their participation is completely voluntary and can withdraw their consent at any time. In terms of data security, all interviews where be carried out online, recorded and such recordings were placed in a password-protected folder.

In relation to the treatment of data, thematic analysis (Braun & Clarke, 2013) will be employed to identify emerging themes from the interviews which will be considered upon, reflected on and discussed in relation to current literature.

1.5 Outline of dissertation

This chapter has outlined to the reader the main objectives and the rationale of this study and the method of research being used. Chapter two will outline the relevant literature in relation to Art Education through journal articles, books, newspapers, laws and related theories and policies. Chapter three contains the methodology used, the data collection process, the participants' selection process and the ethical considerations. Chapter four presents the findings from the interviews and from the literature examined for the study. It consists of a discussion on the findings that the author has obtained.

Finally, Chapter 5 consists of a conclusion and recommendations made by the author.

1.6 Conclusion

This research study has looked at art teacher attitudes towards the use of enhanced technology in art education during remote learning. I, the researcher have examined the views of art teachers using enhanced technology to teach during a global pandemic. I wanted to assess the knowledge and skills of teachers using enhanced technology while learning and teaching online and explore how these teachers use enhanced technology to deliver adequate content online and, in the classroom, to heighten student learning in art education.

The results from this research study are hugely important to my own professional development for future teaching. This research study has allowed me to deepen my knowledge on the integration and use of enhanced technology in art education.

Chapter 2: Literature review

2.1 Introduction

The objective for this literature review was to explore the literature in relation to creative pedagogies and technology enhanced strategies in post-primary art education during a global pandemic. The primary objective of this work was to explore how art teachers can continue to facilitate the development of artistic skills and transferable skills using both technology enhanced learning and traditional approaches. Secondly, the study aimed to explore the benefits and challenges to implementing a Technology Enhanced Learning strategy within art education in post primary settings in Ireland. The reasoning behind this is linked to personal, practical and intellectual goals as outlined by Maxwell (2008).

As an artist and educator, I have a personal interest in exploring how art, as a traditionally kinaesthetic practice has evolved before and during the pandemic in relation to creative pedagogies (Aleinikov, 2013), techniques and transferable value to student development. I wanted to examine the impact of online learning and if teachers can implement the use of technology moving forward in line with the digital time, we live in.

In this research dissertation the literature will support a larger study related to creative pedagogies and technology enhanced strategies in art education during a global pandemic.

The areas that are considered in this review are the wider theoretical, pedagogical evolution of art education, including the wider sociological perceptions of art as a subject.

In this first section, the perception of art will be explored in order to contextualise its importance as a subject.

2.2 Cultural perspectives of art in society that the research has explored

Beliefs, values and enhanced technology for the arts. I explored and discussed art education in a post primary setting and looked at how art can be improved at leaving cert level with the introduction of enhanced technologies.

The teaching of Art, looking at the different roles a teacher plays and how teachers moved to online

learning. I also explored Technology Enhanced Strategies in Art Education and Online Art Education: Benefits and Challenges of remote learning.

Tok 22 (2019) notes," within society there are two main perspectives on the place of Art. Art can be viewed as a way of understanding and of expressing the structures and forces latent or manifest in the day-to-day life of a society. A society to itself is represented and interpreted trough art by its beliefs, values and aspirations. The good artist communicates insights to his public which can lead to a heightened perception of life within that society.

In relation to the first, the second perspective, sees art as the means by which the human need to transcend day- to-day life is satisfied. A society with a vision of life as it might be lived is provided by the artist."

Considering these perspectives in terms of the religious or humanistic beliefs of a people, their political ideals, their personal hopes. In this context, art can be a most potent means for conveying a sense of direction to a society. In addition, there is no aspect of life within a society which cannot be celebrated or given significance by the good artist, and such celebration often transforms the obvious and the mundane into something remarkable" (Benson, 1979).

In relation to the conceptual underpinnings of the work, I considered the concepts of creativity and Imagination as being core to the process of teaching.

These have been identified as being the driving force of artistic expression (Liang and Lin, 2015, Liang, Hsu, Chang, and Lin, 2013). The potential for innovation is lost, if design lacks imagination (Liang and Lin, 2015, p271)." Imagination can be used as a semiotic tool of engagement, which is transformative in the sense of learners becoming more knowledgeable and creative in their thinking (Egan, 2005). One of the most important skills a child can develop is creativity and imagination. By having a good imagination as stated by (Byrnes, 2020) "children are better able to demonstrate critical thinking, decision making, visualisation, empathy and understanding". It is also noted that children who are creative are more curious and have better inter personal skills. (Byrnes, 2020) "They tend to become more independent, as they can solve their own

problems, and they are more likely to have more enhanced cognitive abilities, particularly when it comes to language usage". Translating creativity and imagination effectively onto an online platform to ensure they remain core to the teaching process of art is done through the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic. As Thunberg notes online options of existing strategies can often be limiting and have an adverse effect on the results.

2.3 Post Primary Art Education in Ireland

The current Art curriculum came into play in 1972 with a revised curriculum to follow in 2018. Delays happened that have resulted in the change of curriculum requirements not yet being put in place (ATAI, 2016) and with the current Covid-19 pandemic further delays have taken place meaning the new curriculum has not been introduced yet.

The current leaving cert Art syllabus for the art exam is broken down into four parts:

Imaginative composition or still life which consists of a descriptive passage in which students interpret in their own way. The time dedicated for this is 2.5hrs with a total of 100marks.

Design or Craftwork which give an option of the use of different mediums with a time of 2.5 hrs for design and 5hrs for craft with a total of 100marks.

Life sketching which consists of two poses over 1hrs with a total of 50marks.

History and appreciation of Art which looks at art in Ireland the European Art with a 2.5hr written exam with 150marks (NCCA, 2021).

It is important to consider, as an exam subject for leaving cert, art itself is not required or recognised as an entry requirement into 3rd level Art college. For a student to be eligible for 3rd level art college, they must produce an Art portfolio which have a list of requirements and these requirements differ from college to college. Because of this, there is a huge strain and pressure put on students and parents due to time restraints and financial pressure. Any student wanting to attend Art college must do a portfolio outside school or indeed progress onto a PLC portfolio course once they complete their leaving cert (ATAI, 2016) in order to make

them eligible for art college. This is a huge disadvantage on art students as it is a big undertaking which may affect other subjects which can often discourage students to take on art a leaving cert subject as it does not account for the portfolio (ATAI, 2016).

In 2016, research was conducted and out of the 32 leaving cert exam subjects, research concluded that art was the most challenging subject at higher level to achieve an A1 grade. It showed that students are four times more likely to get an A in higher level physics than in higher level art, and seven times more likely to get an A in ordinary level physics than in ordinary level art (ATAI, 2016). Out of 1011 male candidates sitting ordinary level Art at level cert, only one achieved an A1 (ATAI, 2016). When we consider the marks giving to Art History and Appreciation, its marks up for 37.5% of the overall leaving cert exam. With that in mind, students are expected to study the history of European and Irish art, craft and design from c.3200 BC to the present day in approximately 44 hours because of this, students sitting art at leaving cert level is decreasing from 10,783 in 2011 to 9,747 in 2016. With the numbers declining we will start to see a negative knock-on effect on not only 3rd level art and design education but also on the creative sector within the wider community, society and culture (ATAI, 2016). Arguably, this trend indicates that the teaching of art perhaps needs to be further reflected on and explored.

2.4 The teaching of Art - Theory and practice

It can be argued then, that basing contemporary art education on constructivist theories relying on problem solving and critical thinking adopts Dewey, Vygotsky and Bruner's ideas surrounding human development. Furthermore, Piaget's (1950, 1952) theories played a significant role in Bruner's theories of readiness (1996). Through this Piaget outlined children's development through art as a sequence of stages which were influenced by his own scientific thinking which poorly accounted for the cultural role in mental development according to Bruner (1996) and the 'acquired knowledge is more useful to the learner when it is acquired through the learner's own cognitive efforts' (p. xiv). Another psychologist, Vygotsky (1896-1934) supported Bruner's (2006) thinking that abstract thinking is formed through experience and action, learning through doing (Jordan, 2015). Hickman (2000) argues that the art teacher remains the primary contributor for

imaginative, creative and reflective art education. As an art teacher one must consider and explore and direct the different needs of each student. Art students are very creative thinkers and no two minds work the same. As an art teacher, one must be able to deliver strong content for a diverse classroom. With the global pandemic, Art teachers had to get creative and innovative with the use of technology and online learning to keep students motivated and contribute to online lessons (Laura lee, 2020). With the lack of materials, art supplies teachers needed to be aware a make sure student had access to what was required. The role of an art teacher is very diverse, collaborative and creative (Laura lee, 2020). Although I was investigating art teachers, research shows that teachers across the board found it difficult with the transition to learning and teaching online as quoted by (Nambiar, 2020).

"Teachers felt that online classes were not very safe and secure as a medium. However, teachers did agree to the fact that this new opportunity of conducting classes through online channel have increased their confidence and helped them to explore and use innovative teaching methods."

2.5 Technology Enhanced Strategies in Art Education

As early as the 1960s, digital media, was discussed by Art educators as a relevant and viable area for Art education (Lanier, 1966). There is an ever-increasing use of personal devices in schools since the 1980's which caused educators to question how to introduce such technology into the art classroom to aid learning.

Ettinger (1988) considered the best practice and need of computers in the art room, examining their purpose and the questions that arose surrounding this. There were four main pedagogical issues of digital media in the art classroom that are still to be seen today defined by Ettinger (1998) as:

1. Art disciplines traditions

2. The role of the device as an art medium

3. Human-computer interaction/relationship

4. Curriculum design

Currey (2008) states that art as a subject meets limitation when technology is introduced due to the

curriculum as it is designed for tactile arts. There has been a major shift in our relationship to the internet in terms of use, hardware and software since Ettinger made these recommendations in 1998 however, resistance from art teachers has steadily and firmly persisted (Delacrus, 2004; Lu, 2005). Teachers, as Lifelong learners, have a responsibility to contribute to their own educational development and because of this, they must adopt the responsibility of the teacher upon themselves as educators to keep up to date with the relevant tools to do this. "Good practice with information and communication technologies (ICT) in teacher education is responsive to its society's needs". (Davis, 2003, p. 59)

2.6. Online Art Education: Benefits and Challenges of remote learning

Distance learning has always proved challenging for both teachers and students when it comes to teaching practical courses such as Art. Due to the impact Covid-19 has had on face-to-face education, emergency remote teaching measures had to take place with the move to technology enhanced learning with the use of digital tools and technologies (San Murgesan, 2020).

It is important as educators to ensure that the learning and teaching of art students is aligned with the personal and academic needs of learners particularly during a pandemic. "Although personal artistic expression is not novel, educators can lose sight of the importance of expression when focused on learning standards" (Hash, 2021). During the pandemic trying to provide meaningful learning outcomes for student learning has had its challenges. "Personal expression is an effective method for educators to support their students, for students to support themselves, and for students to support each other. Especially during times of disrupted learning routines, it is important to remember that emotions are continuously interacting with cognition (Pearson & Wilson, 2009)". Without opportunities for expression, learning will not occur;

"From prehistoric times, up to today, Art has been using materials created by Technology, as its basic structural means of expression, while at the same time, Technology has often been the subject and the reference point for Art, as artists depict their time's Technology, declaring their experimentation with new means, many decades before the digital revolution" (Athanasiadis, Ilias & Fokiali, Persa & Ilias, Athanasiadis & Stefos, Efstathios, 2011, p.98.

The physical classroom has been the main venue for learning before technology was readily available. As methods for learning expands with modern society, art education remains primarily in the classroom setting due to its practical nature. However, the use of ICT in student learning gives opportunity to explore many realms of expression; "art education is quite different from science and engineering education, besides instilling professional art knowledge, it lays more emphasis on practice" (Nan Li. 2021 p.139). The benefits of using technology in the classroom may expand the students' opportunities to be more creative and not limited to traditional, practical methods. One example of how useful technology can be for art education is the use of the internet. The internet can be used to research different resources for learners to include in their portfolios or to share ideas and interact with other art students. The challenges of using technology for remote learning may result in students having less interaction with peers for support and advice on specific tasks. To achieve this, TEL needs to be introduced to the art room to enhance learning and teaching.

2.6.1 Integrating ICT in the Art Room

It is evident from the literature, that although ICT is both a necessary and beneficial factor to educational developments, there are multiple obstacles and challenges it presents. For it to be possible to integrate ICT into the enhancement of teaching and learning process in art, teachers need to be afforded the opportunity to upskill their technological understandings and their application to teaching and learning (UNESCO, 2005). Although teachers recognise art to be one of the most ideal subjects for ICT to be introduced, teachers lack confidence surrounding the technology through lack of knowledge of the software available as well as how to apply it in a meaningful manner so that learning is enhanced and developed over substituting artistic skill with digital skills which may make it easier (Kelleghan, 2020). This lack of knowledge and availability of training has inhibited the development and introduction of digital technologies in the classroom as a sole factor.

There is a multitude of ways technology can be integrated into Art Education such as, using specialised computer programs and software that teach the principles of visual art, CD-ROMs supported by galleries and museums for an interactive exploration of artwork, and the development of school blogs to

display artwork digitally are all examples of possible ICT integration (Government of Ireland, 1999a). More recently, there are even more ways in which educators can integrate enhanced technologies into their teaching. For example, the use of digital apps to manipulate art works, using smart phones to gather research images for projects, creating movies as an art form or graphic design (Robyler and Doering, 2010). Hackles (2012) states "there can be no doubt that learning art and design can be improved through the use of ICT in teaching" (p. 13), and it has been generally accepted that integrating ICT with visual arts increases knowledge and understanding (Hackles, 2012). With this said, there are potential risks that these applications pose for teaching and learning, as the teacher is trying to ensure students are building their skills and not using technology to build the skill for them, as well as the impact digital forms of physical manifestations such as galleries may impact the processes (Akinloye et al, 2020). This is a significant barrier to educating using technologies because of the implications it may pose in making learning stagnant. It is often believed that excellent visual arts teaching should combine technology with the development of artistic concepts (Hackles, 2012; Hilcenko et al., n.d.). Hackles discusses the ideal method of teaching using technology to enhance artistic development and learning through mixing traditional and technological methods to create work to a high standard. This means according to Hackles that artistic skill is manually and digitally developed avoiding this stagnated learning.

The introduction of technology in the art room is expected to act as an educational tool as mentioned above and not to replace the role of the teacher. ICT, when integrated into the teaching of art, is reported as having the power to improve the capability of pupils to delve into ideas by providing a new medium through which to explore art and expand upon artistic technique (Hackles, 2012).

This initial acceptance of the potential use of technology to enhance the experience of teaching art has opened further pathways in considering how the wider role social media can play in the approaches teachers can take when facilitating the development of knowledge and skills in the area of Art.

2.6.2 The growing use of social media within art education.

In the past, where it was standard to use galleries as means of displaying and discussing artwork in art

education, social media has taken on an aspect of this role;

"The function of galleries has been replaced by the emergence of social media platforms which offer columns or feed for artists to display their works for the public…the way appreciation is conveyed has also become easier- as easy as tapping the screen" (Sutiyono, 2020).

When introduced to an educational setting, appreciation expressed both on the platform but also in class face-to-face (Lemon, 2019). This means that art teachers have access to a wider range of artwork to enhance learning. Virtual tours of art galleries have been seen as a valuable alternative to art educators in light of the pandemic as Kelleghan (2020) notes, "the opportunity to visit virtual representations of famous art galleries and museums…is reported as having the power to improve the capability of pupils to delve into ideas by providing a new medium". One example of this potential can be seen in the use of Twitter, where the platform can be seen as a new foundation of art, becoming an almost immediate, inclusive gallery (Lemon, 2019).

With the growing use of social media in art, there is a pressure on artists to go viral which impacts on the artists authenticity, "the notion of virality changes the art world as artists compete to create works which attract the public or can become viral by following the trend development of the Instagram users' interest, instead of based on ideology or their personal desire" (Sutiyono, 2020). The increase of use of social media in art education encourages change in the world of art, where artists are trying to improve their work, constantly "competing to create interesting or viral works of art following the development of social media trends" (Sutiyono, 2020). This competition between artists to publish the next 'viral' piece encourages a greater audience into the art world, "art is no longer merely a form of expression of the artist and/or a commodity that are ready for the market. It has now become a platform for signifying the existence of artists to gain worldwide recognition through social media" (Sutiyono, 2020).

To create a safe online-platform where learning is enhanced and students aren't at risk of relying on social media trends, training for teachers is required.

2.7 Student well-being and maintaining relationships during remote learning and teaching.

As educators, it is essential to maintain good positive relationships with students. With the sudden disruption of Covid-19, and the move to remote learning and teaching, it is of the upmost importance for all teachers to build strong healthy relationships with students now and in the future (forster el al., 2017). Learning and teaching can prove more difficult with Covid-19 and can become quiet challenging for some students and teachers. Chronic stress impairs students' ability to learn, specifically in the areas of attention, concentration, impulse control, and memory (Raver, 2016). As mentioned by Minahen,2020, there are many ways teachers can support student well-being with the use of visual arts and prioritize students mental-health over academics. As educators it is important to promote behavioural, academic, and emotional growth to prevent anxious students escalating (Minadan,2020).

The school environment can be an escape for some students who may be experiencing issues at home. As educators it is important to build on strong teacher-student relationships and promote security and support for students. One supportive adult can help a student overcome a very difficult home situation and shield them from resultant anxiety (Brooks, 2003). With venerable students, a good connection with a caring teacher is a huge support and can be a great assistance in student well-being. Although some students may find the move to remote learning more challenging, research shows some students feel that an online learning environment is a safer space for them to learn than a traditional classroom (Huang, 2014).

Studies show a significant number of students having reported depressive symptoms during the outbreak of covid-19 (Song,2020). Studies conducted by Dr.Song show that serious infectious diseases along with other traumatic experiences may influence students mental health. The number of students worrying about contracting Covid-19 in this particular study by Dr.Song was significant. With that in mind, it is very important for teachers to promote and enhance the well-being of students during such unprecedented times. As educators it is important to equip ourselves with the skills and correct information provided by professionals to support the well-being of our students. With the guidance from the World Health Organization 2020, we as teachers can be able to identify the signs that children may show when responding to stress. If

students are being withdrawn, showing signs of anxiety, anger or become agitated during remote learning, teachers need to act in a way that they can show support and offer extra time and attention to vulnerable students (World Health Organisation, 2020) in response to helping children cope with stress during the Covid-19 outbreak.

Health professionals have suggested that children need to have regular routines and schedules as much as possible, or help create new ones in a new environment, including school/learning as well as time for safely playing and relaxing. As educators, we need to provide facts about what has happened, explain what is going on now and give students clear information about how to reduce their risk of being infected by the disease (covid-19) in words that they can understand depending on their age. This also includes providing information about what could happen in a re-assuring way (e.g. a family member and/or the child may start not feeling well and may have to go to the hospital for some time so doctors can help them feel better) (World Health Organisation, 2020).

As educators we need to assure our students that we are not only there to teach, but we are also there to provide support and promote student well-being. Although it is important to follow curriculum and push on with academia during online learning and teaching, teachers need to be aware that one of the most important tasks, is supporting student's mental health and making students feel safe during these covid times (Minahan, 2020). Considering then the importance of maintaining positive student relationships, in a remote capacity and mindful that enhanced technology is changing the way we live our lives on a day-to-day basis, it is important that teacher educators get adequate CPD in using technology safely to enhance the learning, well-being and teaching of students and teachers.

2.7.1 Teacher training in enhanced technology and providing safe use for students.

Technology at present is becoming more a part of everyday life. Innovations and technology have a great impact on education moving forward. During covid-19 there was a sudden shift to remote learning that neither teacher or students were prepared. The use of technology was at the forefront in delivering content to students during this online learning and teaching process. The integration of technology by educators is

difficult due to the lack of skills teachers have acquired in technology during teacher training (Sprague,2016). One of the biggest problems faced in integrating technology into their teaching is the lack of knowledge around these teaching pedagogies (Sprague,2016).

It has been highlighted in a recent report in the UK the importance of teacher training in ICT skills. It stated that there was a shortage of skills faced by the IT sector "a failure to understand the opportunities within the digital workplace by parents, pupils and teachers, has, in part, led to this digital skills shortage" (Isc,2021). With the rapid development in enhanced technologies, this has left teacher educators around the world in a difficult position struggling to keep up.

As educators it is important to get the much-needed training in TEL in order to teach in a safe environment and provide safety measures while teaching online and using technologies to protect the data of students and teacher. Cybersafe Ireland has stated in their most recent annual report that out of 4,000 pre-teens surveyed 93% owns smartphones and "65% of children are signed up to social media and messaging platforms despite minimum age restrictions of at least 13 on all of the most popular platforms and a Digital Age of Consent in Ireland being set at 16" (cybersafe kids 2020). With this in mind teachers need to be able to provide students with the safety measures and potential risks while having access to IT on a regular basics.

2.7.2 Student motivation and self-directed learning

Interest in school has been identified as a powerful motivational construct related to the formation and regulation of goal-directed behaviour (Wentzel, 1998). A suggestion that interpersonal relationships provide students with a sense of belongingness can be powerful motivators of children's interest in school (Wentzel, 1998). Due to the presence of diversity in schools, attention should be given on how schools can promote social norms for cohesiveness and mutual understanding (Madsen and Mabokela, 2005).

One of the teachers most important tasks in the classroom is to motivate student's in participating in activities and to ensure that they wish to learn. Piaget believes that children are already internally and intrinsically motivated to learn as part of their human identity (Moore, 2000). In this case the task for the teacher is not to motivate but to provide the child with what they need for the appropriate learning (Moore,

2000). Often, motivation if referred to as being encouraged to do something which can be driven by intrinsic or extrinsic motivation (Ryan and Deci, 2000). Motivation is regarded by experienced and inexperienced teachers as pivotal for effective learning, and the greatest challenge that many teachers will face is to make their student's want to learn (Petty, 2009). Evidence suggests that both teacher and parental engagement can have a significant impact on student motivation (Petty, 2009).

Due to the COVID-19 pandemic traditional methods of teaching have shifted significantly with the emergency delivery of online student education. The pandemic reveals the urgent need to augment the educational system's technological framework, expand the teachers' pedagogical expertise and the students' learning supply (Tsai et al. 2013). Under the circumstances, researchers and practitioners should carefully reconsider the role of teachers, students, as well as the technological environment for online learning and put ongoing efforts to adequately address the underlying epistemological basis of education (Tsai et al. 2013). Although motivational theories have proven successful in traditional settings of face-to-face learning, the pandemic may have decreased the motivation of students. It may be particularly difficult for students undertaking art modules to be self-motivated with the absence of practical guidance. This is a critical and urgent gap that cannot be ignored given the growing need for online learning in light of the pandemic.

Many teachers do not have access to technology systems sufficient to deliver online education. Thus, it may prove difficult to motivate students when they are independently logging in to online classes. Interaction and communication are the main purposes for participating in online discussions. A successful online discussion should be well facilitated and guided so that students feel the discussion is not only informative, but also interesting. As long as students perceive that online discussion is a useful and valuable way to communicate and get information, their intrinsic motivation will be promoted and they will show more willingness to continue to participate in this type of discussion.

2.8 Theoretical Framework

In consideration then of the literature, it becomes clear that the role of the art teacher is evolving, whether it be in their engagement strategies, technologies used, or in how they facilitate innovative art

experiences. What is also apparent however is that the role of the post-primary student is changing and evolving too, where their own motivation to engage with tasks during the pandemic and keep motivated is a constant factor.

With this in mind, this study can be linked to the principles of Self Determination Theory SDT (Deci and Ryan) which is a suitable framework for discussing motivation in the online learning environment. SDT may serve as a theoretical framework that integrates issues in online learning. Self-determination theory addresses autonomy, relatedness, and competency as determinants of motivation. The three constructs correspond to features of online learning such as flexible learning (Moore, 1993), computer mediated communication and social interaction (Gunawardena, 1995), and challenges for learning technical skills (Howland & Moore, 2002). The notion of contextual support is especially valuable, as online learners need a variety of support from instructors, peers, administrators, and technical support personnel (Mills, 2003; Tait, 2000, 2003) effective support strategies are those that address online learners' needs of autonomy, relatedness, and competency. In the online learning literature, there are many instructional strategies proposed to support online learners. For instance, instructors can provide flexible learning options, including assessment (Willems, 2005), design collaborative learning activities to foster peer interactions (Kreijns et al., 2003), and assist students with self-regulation and learning strategies (Motteram & Forrester, 2005).

In fact, it could be argued that because post-primary students have need to rely more on their own motivations to engage, collaborate and connect with students and their teachers, that the framework of heutagogy, (or self-directed learning) is a useful framework to explore how art teachers can further develop both their art related skills, but also contribute to their development of transferable, 21st century skills.

"A renewed interest in heutagogy has also been generated by Web 2.0 as a result of the affordances of social media that complement and support this learning approach. Heutagogy has been called a "net-centric" theory that takes advantage of the key affordances of the Internet; it is also a pedagogical approach that could be applied to emerging technologies in distance education, as well as serve as a framework for digital age teaching and learning (Anderson, 2010, p. 33; Wheeler, 2011)."

2.9 Conclusion

To conclude, the studies described above provide reasonable evidence for reform in the current art curriculum. It is clear that the number of students taking Art as a leaving cert exam subject is falling due to the marking criteria. With art being the hardest subject to get an A1 and the huge focus on the art history element along with 3rd level art college entry requirements, the need for change is vital. During the current covid-19 pandemic, Art education has evolved with the emergency introduction of ICT during remote learning. From this we also see a need for change with the introduction of enhanced technologies within the art classroom as a way of enhancing learning. The lived experiences of post primary teachers in continuing to develop their pedagogies and approaches towards students during the covid experience by using remote learning strategies, technology enhanced learning and examining how they have been able to develop their knowledge and skills are ongoing.

The art subject encounters barriers to the integration of technology mostly due to the curriculum since it is designed with the more tactile arts in mind (Currey, 2008). As methods for learning expands with modern society art education remains primarily in the classroom setting due to its practical nature. However, the use of ICT in student learning gives opportunity to explore many realms of expression. "Art education is quite different from science and engineering education, besides instilling professional art knowledge, it lays more emphasis on practice" (Nan Li. 2021 p.139). The benefits of using technology in the classroom may expand the students' opportunities to be more creative and not limited to traditional, practical methods.

Chapter 3 Methodology

3.1 Introduction

This research was carried out as a means to identify the continued development of creative pedagogies and technology enhance strategies in post-primary art education during a global pandemic amidst the COVID-19 outbreak. Through this study I intended to address the research question, by carrying out primary data collection and exploring emerging themes in the context of existing literature. This chapter sets out the rationale for the overall research design, including epistemology and ontology, the theoretical perspective, the methodology, sampling, data collection, analysis, ethical considerations, and design limitations. Through this chapter I gained a definitive insight into the research design used through the qualitative methods used within this investigation with the ethical issues taken into account before preceding to conduct and evaluate this research. I also considered the philosophical implications behind this chosen method outlining both this and the limitations I encounter when conducting the research.

3.2 Research Design

Philosophical underpinnings

Reflecting on the philosophical perspective is an important initial step in identifying and choosing whether to engage in qualitative and/or quantitative research. According to Maykut and Morehouse (1994), positivism and phenomenology are two principal views that form our understanding of research. Positivism refers to "A philosophy espousing that knowledge is objective, generalizable and quantifiable, and that such knowledge is best investigated through observation and measurement" (Hogan, Dolan and Donnelly, 2009, p.61). It has been argued that positivism has had a key impact on how social enquiry has advanced and offers a wider backdrop which qualitative research has progressed and developed (Richie, Ormston, and Lewis, 2013). "The positivist research orientation holds that science is or should be primarily concerned with the explanation and the prediction of observable events (Kincheloe, 1991 as cited by Maykut and Morehouse, 1994, p.3). Whilst recognising the value of positivism and realist approaches, this study adopts a relativist stance that considers there are multiple realities that are interpreted and socially constructed (Mackenzie and

Knipe, 2006, Mertens, 2005).

The interpretivist or constructivist generally tends to rely upon the worldviews of their participants, but is also aware of the impact of their own background, values and experiences and how these impact on their approach to interpreting results (Mackenzie and Knipe, 2006)

"Qualitative research is a multifaceted approach that investigates culture, society and behaviour through an analysis and synthesis of peoples' words and actions" (Hogan, Dolan and Donnelly, 2009, p.3). According to Maykut and Morehouse, (1994), research studies that are qualitative are formed to learn what can be found out about a phenomenon of interest in society, and particularly where human subjects are participants. This is relevant to me as the study was interested in interpreting how art teachers, worked with students using enhanced technologies during remote learning. Participants had an interest in translating the artistic practice onto a virtual environment. I also placed an interest in the participants' perception of the effect on creativity through these technologies.

Inductive and deductive approaches

When considering to take a deductive or inductive approach, it is important for a researcher to question how they will reach their conclusion of inference. Both deduction and induction are a type of inference, which means reaching a conclusion based on evidence and reasoning. Deduction moves from idea to observation, while induction moves from observation to idea. In this instance I have taking a deductive approach in order to guide the data collection and analysis.

Qualitative Research

This study was concerned with the lived experience of the participants. However, as the topic is of interest to the participants and myself, there sometimes can be issues of biases and personal opinion. In fact,

"It is true that qualitative research and social sciences are more vulnerable to the possible downsides of subjectivity that may influence the research negatively. This is mainly due to the fact that social sciences cope with issues that are close to the researcher's own experiences and daily life" (Diefenbach, 2009, p.877).

Due to the fact that many social sciences work with people on a personal and caring level qualitative

research may have its negative outcomes for the validity of the data analysis. The reason I selected to conduct a qualitative method of data collection was due to the nature of the study and the fact that I was not looking for numeric or quantitative results.

3.3 Sampling

"You cannot study everyone everywhere doing everything" (Miles and Huberman, 1994, as cited by Punch, 2013, p.160). That is why it is imperative to make decisions on the sample group to interview as their experiences must be relevant to the subject being researched. To undertake a meaningful research analysis, there requires enough data collection to insure a meaningful analysis, results and findings for the research objectives. "The sampling strategy for a study is an integral component of the research design as it will affect the usefulness of the data collected, the type of analysis possible and the extent of opportunities to draw wider inference" (Richie et al., 2014, p.112). Thus, sampling is important for researchers to ensure that the group or service that they choose is relevant to their study. Maykut and Morehouse, (1994), suggest that in qualitative research groups or organisations are selected on their possibility of expanding the variability of the sample. They believe that for qualitative researchers building a sample that will include people or settings with a different goal in mind is necessary.

3.3.1 Purposeful Sampling

Purposeful sampling is when a selection is made according to a known characteristic (May, 2011). It is done in a deliberate way with a purpose or focus in mind (Punch, 2013). As I am working in the area of art education and have access to staff in the same field, purposeful sampling and selection was adopted. The sample groups were picked as they had particular features or characteristics which enabled detailed examination and understanding of the principal themes and queries which I wished to study (Bryman, 2012 as cited by Punch, 2013). According to Richie, Ormston, and Lewis, 2013, purposeful sampling should be used in the early stages of participant selection. Informed choices will be made under influencing factors such as the aim of the study, existing knowledge or theories relevant to the topic and any gaps in the area being studied. Using these areas as a guide for selection ensured that all aspects of the research objectives were

explored and participants were serving a purpose towards the relevant data collection.

3.4 Selection of Participants

As discussed, purposeful sampling is the process of carefully selecting participants who will have a purpose in the study. Thus, as I work as an art educator access to participants was available and their experience pertinent to the research topic. I wanted to explore other art teacher's perspective on enhanced technologies and how it impacts creativity in art education. See table below:

Table 1 Research participants

Participant	Position Held	No. Years' Experience
Participant One (P1)	Art Teacher	17 years
Participant Two (P2)	Art Teacher	16 years
Participant Three (P3)	Art Teacher	18 years
Participant Four (P4)	Art Teacher	26 years
Participant Five (P5)	Art Teacher	20 years
Participant Six (P6)	Art Teacher	6 years

I contacted participants through a professional online platform for art educators to participate in the study. The participants who agreed to participate in the study were emailed a letter outlining the purpose of the study and method of data collection, a copy of this letter is included in appendices A. They were given the relevant information about the study and ask to give their consent to participate. The participants were selected on the basis of their position held within the organisation and the years of experience that they had in the area of art education. I wanted to seek what moving to an online platform meant to each staff member and their opinions on a professional and personal level.

3.5 Interviews

I collected data through semi-structured interviews using an interview schedule. In order to develop the questions, I drew from participants own experiences in using enhanced technology while moving to an

online learning and teaching environment. As both a teacher and student, I drew from some of the challenges faced by participants, such as adequate technology skills, motivation, engagement and also questions that arose throughout revised literature such as the need for change in art education (Jordan & O'Donoghue, 2018).

Interviews are a commonly used method of investigation in qualitative research. This means research is "guided by a flexible interview protocol and supplemented by follow-up questions, probes and comments." (DeJonkheere; Vaughn, 2019). The researcher can ensure the participant stays focused and help them through their answer when they get lost in thought when going in-dept with their responses. The researcher has the opportunity to lead the conversation into the results they want as well as allowing the participant free-range when new data arises if appropriate. It is a valuable method because they necessitate the need to open a dialogue between the researcher and the participating parties to allow data to be open-ended and flexible where certain participants can bring their unique expertise and experiences to the research data. It allows participants to express themselves and does not limit them to the researcher's specific research as a questionnaire would allowing additional data to arise that the researcher had not considered or been aware of. This allows participants to give informed consent on what their data will be used for, as they are given the opportunity to ask questions on the basis of their research (Doody & Noonan, 2013).

There are certain disadvantages to conducting research through interviews, because of the lack of anonymity interviews provide, there may be gaps in data where participants may feel questions are too intrusive whereas we see in anonymous questionnaires the anonymity allows for total honesty. Collecting and collating data gathered in this process can be very time-consuming as the researcher must transcribe and analyse the data and relate it to their research while trying to ensure the integrity of the results. Although it is important for the researcher to lead the interview to suit their research their biases may affect or skew the data gathered, therefore it is imperative that the researcher addresses these biases in the transcription and analysis of the data (Doody & Noonan, 2013).

COVID-19 has impacted upon the ways in which it is possible to carry out qualitative research in the ways it can be conducted appropriately and accurately to guarantee optimum data to evaluate objectively and

relate to our research. This has meant enhanced technologies had to be used to adapt interviews onto an online environment. Although this provided many benefits in terms of making it possible to conduct research remotely and across distances thus increasing sample size, it presents challenges in terms of technical difficulties which can have adverse effects on the interviewing process. Thunberg notes, In-person interviews have been seen as the 'gold standard' for qualitative interviews (Lofland & Lofland, 1995, as cited in McCoyd & Kerson, 2006), because they enable both verbal and non-verbal cues to be taken into account (Thunberg, 2021).

Translating the interview process into the remote environment given the pandemic presented many options but it was important to consider which of them offered us as close of experience as possible to the in-person format. This is offered through Microsoft Teams which made it possible to somewhat comprehend non-verbal cues as well as the dialogue where the researcher still has control and dictation of where they could push additional information out of the participant. This environment offers the researcher the opportunity to increase their sample size because physical limitations such as distance to the participants are removed as well as being able to carry them out in a time that would suit both parties comfortably. It also allows for the researcher to re-watch the interviews for further study.

3.6 Data Analysis

"Analysis is a challenging and exciting stage of the qualitative research process. It requires a mix of creativity and systematic searching, a blend of inspirational and diligent detection" (Richie, Ormston and Lewis, 2013, p.270). In relation to the treatment of data, thematic analysis (Braun & Clarke, 2013) will be employed to identify emerging themes from the interviews, which will be considered upon, reflected on and situated within current literature.

Each of the six interviews were recorded for the purpose of analysing and interpreting the information collected. According to Seidman (2005), to avoid the researcher interpreting and summarising the interviewees' points and opinions tape recording interviews is important. "Although inevitably the researcher's consciousness will play a major role in the interpretation of interview data, consciousness must

interact with the words of the participant recorded as fully and as accurately as possible" (Seidman, 2005, p.114).

Once the interviews had been completed and recorded, I had the job of listening back and transcribing the tape recordings. It is important that the researcher familiarises themselves with the data in order to start the coding process as outlined by Braun and Clarke (2006). This was a time consuming and tedious part of the data analysis process. After the interviews were transcribed, I emailed the final transcribed script to the intended participants for review and to make sure they were happy with the information they provided.

Once I had clarification from participants to use this data, I was able to print off each script and start the coding process. I started to see if I could find similar themes in the information that appeared to me throughout the interviews that was relevant to the literature and research question and objectives. I used different coloured highlighters to make it easier for me to identify the reoccurring themes throughout. I started by making a list of the emerging themes while all the time referring back to my research question. Once I had identified similar themes throughout out the data collected from participants I then revised, defined and named the themes the spoke out to me in response to the research question being asked. These themes where then be used as quotes in the findings, and assisted in the analysis of the data.

3.7 Reliability and Validity

"Reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions" (Bell, 2010, p.). It means to be consistent in our measurements to ensure the reliability of the data collected. According to May (2011), the reliability of your data collection tools and validity of documents sourced from internet sites may pose particular issues. When using websites or online resources the researcher must ensure that the information, they are using is reliable and factual. If it isn't the findings may be impacted as a result. "Validity refers to the extent to which a finding is well-founded and accurately reflects the phenomenon being studied" (Richie, Ormston and Lewis, 2013, p.354). Throughout the process of collecting data and conducting interviews the researchers' biases and personal opinions may affect the validity of the research evidence. For example, Richie, Ormston and Lewis (2013) outline how generalisation

can occur in qualitative research with a strong link to validity. They also outline how validity must be determined on its adequacy of the evidence made available for the phenomenon being described. "The assessment of the reliability and validity of research require criteria that are appropriate to the features and philosophical base of the methods used" (Richie, Ormston and Lewis, 2013, p. 359). While conducting the research ensuring the reliability of the evidence and its validity is important to insure the uniqueness of the study and its replicability.

3.8 Ethical Considerations

In all social research ethical issues are involved as research requires data collection from individuals and about individuals (Punch, 2009). Before research can commence ethical approval was obtained from the ethics board. I also had to ensure to review the code of ethics from college before commencing with any research. To ensure the ethical guidelines of this research study were being approved, I returned and referred to this code many times. There needs to be a purpose for the research to be undertaken and shouldn't pose any risk to the participants who are involved. "Research ethics refers to rules of morally good conduct for researchers" (Gomm, 2009, p.276-277). A form of consent was obtained from participants before becoming involved in the research. This consent form should outline that the participant will be recorded for the purpose of collecting data, but their privacy and confidentiality would be respected and maintained throughout. "Confidentiality arises from respect for the right of privacy and functions as a precautionary principle" (Hammersly & Traianou, 2012, as cited by Punch, 2013, p.47).

Any research study that uses people must take ethical issues into consideration. This is due to the nature of the research topic and the sensitivity of questions being asked. A letter outlining the study and the reasons for carrying out the study should also be given to participants before agreeing to become involved.

Ethical issues can arise in both qualitative and quantitative research but are more likely to in some qualitative approaches (Punch, 2013). The reason for this is that while all social research imposes in some part into peoples' lives, qualitative research does more so. Understandably for one reason or another, participants may feel that they want to withdraw from the study must be free to do so at any point without prejudice or

consequences. According to Gomm, (2004), when carrying out research I must be mindful to remain truthful throughout the study and to not allow bias to incur flaws in their judgements. A letter template, consent form and schedule of interview questions can be viewed in the appendices A, B and C of this research.

All participants in this research where anonymised using participant one, two, three etc. I ensured to ask the interviewees for permission to be recorded during interviews. Before I began to distribute interview questions by email to participants, I examined the questions to ensure that they were unbiased or would not offend any participant. I also made sure that all recordings and personal data was contained on a password protected file that will be deleted upon conclusion of the programme.

3.8.1 Limitations

Limitations to research may occur when carrying out a study as time may be a factor and the size of the sample group may result in biases occurring. While conducting this study I encountered situations that had limitations to the study. Due to time constraints. I had intended to interview more participants to minimise generalisation occurring in the study. I had hoped to interview students and their families but did not receive approval on this due to time limitation and child protection. These changes caused limitations me and reduced the possible number of participants and the probability of bias and generalisation occurring, that being said for a qualitative MA study, six participants is reasonable.

The use of interviews in the study proved to be time consuming, however they provided in-depth and relevant information pertinent to the research question and objectives. Some of the limitations that I encountered during the data collection were that arranging a suitable time with staff was challenging as meetings and personal commitments were difficult.

3.9 Conclusion

This chapter outlined the methods of data collection used, the limitations to the study and the ethical issues that needed consideration before the study could commence. The research method for this study is qualitative in nature, comprising of semi-structured interviews. Qualitative data usually takes the form of words rather than numbers. The benefit lies in the ability of words to facilitate a concrete, vivid and impactful

message which can prove more convincing to a reader (Miles and Hubrman 1994). Also, thick descriptions of the data aid the effectiveness of this approach. This method is considered to be the most appropriate data capturing method to explore complex phenomenon and develop rich data that can be considered in relation to previous works. The next chapter will discuss the findings and analysis the data collected.

Chapter 4: Findings and Discussions

4.1 Introduction

The aim of this study was to identify the opportunities and challenges of the use of enhanced technology in art education. By using semi-structured interviews with art teachers in post-primary education, I was able to explore teachers' opinions and experiences using enhanced technologies during a global pandemic to instruct students online. To ensure a detailed analysis of the data I explored the participants views of the challenges and opportunities of the use of technologies, participants' opinions on staff training, student interaction with online learning, impacts on student ability, student motivation, student wellbeing resources and gaps in implementing enhanced technologies. Through analysis of the data collected from interviews the main themes that emerged included:

- Teacher's adaption to teaching online using enhanced technologies during the pandemic.

- Teacher views on the challenges and benefits using technology to teach art education.

- Enhanced focus on teacher sensitivity in relation to student well-being in an online environment.

- Further Changes Needed in Art Education around enhanced technologies

- Training requirements to meet the needs of teacher using enhanced technologies to teach.

4.2 Participants

The participants involved in this study all work in Post primary Art education. Below is a table of their qualifications and years' experience in the education sector.

Table 1.1, Participant's profile.

Participant	Gender	Qualification	Years of Experience
Participant 1	Female	BA Art & Textile's	17 years
Participant 2	Female	MA Art & Design	16 years
Participant 3	Male	BA Craft & Design	18 years
Participant 4	Female	BA Art & Design	26 years
Participant 5	Female	BA Art & Religion	20 years
Participant 6	Female	MA Art & Design	6 years

4.3 Theme 1: Teacher Adaption to online teaching.

All the teachers interviewed gave similar accounts of what having to adapt to an online environment meant to them. 5 out of 6 participants found it quite challenging to adjust or adapt.

"It was exceedingly difficult to get any kind of structure around what we were trying to do and looking at lesson plans and then saying how do we deliver that in an online sphere. It did not work, bottom line." (*Participant 3).*

Participant 4 and 6 echoed these sentiments with participant 3 with the struggle to adapt to an online sphere.

"With regards to using technology because of my age I wouldn't have (much knowledge about technology), when I was doing my teacher training, even right up to my teacher training we would not have used any technology at all in my teacher training.... I'm a two finger typer, very slow, technology doesn't come naturally to me even like I'm not very provisioned on my phone." (Participant 4).

"When you're working online you always question yourself if it is going to work because this is so much different than what we were used to doing" (Participant 6).

In contrast to this, participant 5 did not struggle to adapt to online teaching as she had already been engaging in it for some time.

"Technology for me really wasn't a big problem when the pandemic happened because I'd been using Google Classroom anyway." She explained how she had been using google classroom to prepare classes and upload content to students and assign homework. Students used google classroom to share projects and had access to all class lessons at any time. *(Participant 5).*

The use of interviews with art teachers teaching art online during the global pandemic gave me an insight into their thoughts of the use of enhanced technology in a practical subject in comparison to the literature examined above in Ch2, 2.6.1. It was noticeably clear that all participants involved had the same or very similar views with the adaption of online learning and teaching. The predominant problem when it comes to integrating ICT and visual arts teaching that has been identified by teachers in the Irish context is the lack of available digital resources (NCCA, 2005). With the sudden closure of schools, teachers found they had no choice but adapt very quickly and to learn as they went. Participants found the shift very difficult moving from a practical classroom with a hands-on setting to an online platform. Participants expressed how they sometimes found themselves in situations where they felt they didn't know if the students were even understanding the online content being delivered and often questioned their ability to teach in such a different environment. In contrast, only one of the six participants adapted quite well to the online teaching platform due to her school becoming an iPad school in 2018, and was already using google classroom to deliver content to students.

4.3.1 Student Engagement and Motivation

All teachers interviewed gave similar feedback on the challenges they faced while trying to keep students motivated and engaged during online learning. Participant 4 summarised this finding.

"Students didn't want to switch on their visualizers… I had a very mixed response, so some students were great some students were very poor, and some students weren't engaged at all… We did provide them with a

little art pack to go home with, so they had a basic kit. The idea was that they would use that, but I found that they didn't. I found it very difficult to engage students." (Participant 4.)

Participant 2 and participant 3 had similar accounts.

"It was hard yeah. It was torture… Second and third years never heard from never heard from them. The second years are suffering big time now because they missed so much in the first-year last year and then this year and it's so slow trying to get through things it's bad. But in chatting to others in the school, the second years are the same across the board, they're suffering in all their subjects." (Participant 2.)

"Yet when it came to sharing the work that they had done that's when things fell apart because I got excuses." (Participant 3).

All teachers reported that individual tutorials were the best means of engaging students and motivating them.

"I think the individual tutorials for us have worked a dream because it keeps them engaged." (Participant 1).

The findings show that students rely heavily on their teachers to maintain their motivation and engagement. By maintaining this relationship with the students and nurturing this connection through one-to-one tutorials all participants reported improved engagement. Bruner (1976), Steinberg (1990) and Wentzel (1998) maintain that there must be a constructive relationship between both students, teachers, and parents. As this relationship between the teacher and student had been interrupted due to the pandemic, participants reported the one-to-one tutorials' success as the best method of preserving it.

Amanda Spilman (2012) as quoted

"While remote education will help to mitigate the learning lost when children are out of the classroom, it's clear that pupils' motivation and engagement remains an issue. This, along with the pressure remote learning places on teachers and parents, is proving a real barrier to children's learning and development".

The students lack of engagement was reported by participants across the board as they didn't want to engage in an online platform. The participants felt that although it was important for the teachers to become inventive in how they engaged and motivated students, students still failed to respond. It is reported from the interview process from all participating parties that students were reluctant to share with each other. One participant linked the ability to discuss and share work with the ability to see the faces of their peers as this helped it seem more like a real class environment however, this wasn't always possible. "*Some of the teachers had said they tried it and it work for them was to get all the kids to turn their cameras on. When it came to a discussion, because the kids could see each other they were able to discuss.*" (Participant 3).

Teachers play a key role in providing a quality education, we cannot underestimate the vital contribution that teachers can make towards helping young people acquire the knowledge, skills and values they need to engage fully and effectively in life, society and the workplace (DEIS, 2011, p. 27).

The idea of the four L's (love and caring, laughter, limits and linkages) includes a set of skills that students occupy in place to establish roles within their lives (Elias and Rutgers, 2003). Limits and linkages allow the student to link aspects of their life to education as well as setting goals. Research studies have linked positive relationships and attitudes in teachers as a motivational outcome in student's (Wentzel, 1997). The link between teachers' attitudes and motivational teaching practices has given increased levels of motivated learning behaviours in student's (Guilloteaux and Dörnyei, 2008). This evidence suggests that teachers' attitudes towards student motivation and learning can have a positive effect on their learning experiences within education. These findings show that the disconnect between the student, their teacher and their peers had a large role to play in student engagement and motivation.

4.4 Theme 2: Challenges of Technology in Art Education

Participants identified a range of challenges based on using technology to teach art. However, they all agreed that it must only be used as a tool to enhance learning and not be overly relied on over a hands-on teaching approach.

"We must remember that technology is like anything else, it is a teaching tool but that is all it is. if we want to teach kids the very basics of the principles of the art elements or anything like that they must engage with paper and paint, pencils, and all the basic art media. the technology can come as an add-on to what they have done but they must have done the work." (Participant 3).

Participant 2 expresses her concern with the overuse of technology to enhance students drawing abilities. She has had awkward conversations with two fifth-year students who do not have a sketchbook but rely entirely on their iPad for drawing. One girl, she explains, cannot draw from a primary source and although her drawings are amazing on her iPad, she states:

"Her technical ability when it comes to doing an A2 page of a booklet is going to be a very different thing. And she knows this herself, she would say if I could do this as a nice drawing but if I could do this on my tablet it would be a good drawing. The skills (from the iPad) are not transferable, yeah, it's great, it's a great thing she's using the skill she has but they're just not transferable." (Participant 2).

She also states that the student's standard is

"Probably average second year where when using her tablet, she is probably H1 higher level drawing." (Participant 2).

Participants in this research reported their concern with using technology in Art Education and the overall theme of not relying too heavily on it came up numerous times. The participants warned that although technology is an excellent addition to the classroom, its presence runs the risk of losing the manual skill of art and substituting it for digital means. It was reported several times that skills learned on the iPad for example, are not transferrable to paper or any other non-digital mediums. The findings from this research showed that participants thought it was necessary to engage their students in manual skill and apply it to the digital format to enhance learning and not to use technology to prop up learning. The participants' explanation of how to apply these values and teach these skills were universal in that they all chose to start all projects on paper and then bring them to the digital sphere if they were to take on a digital project.

We learned from the participants that iPad drawing skills for example acted as a false sense of security

to students' ability in the sense that it is much easier to produce a high standard of work on an iPad than it would be on paper. One participant even noted that certain students who had relied entirely on their devices for their artwork were of an exceptionally low manual standard when it came to engaging with the physical medium of pencil and paper. These findings tell us that drawing skill is not developed digitally but instead manually and therefore it is important that we consult these mediums and only use the digital medium to further enhance the artwork.

4.4.1 Benefits of Technology in Art Education

Common themes of benefits arose from the participants of using technology in the classroom. These are time efficiency, always having access to a mode of research when it comes to imagery and art history for example, virtual tours of art galleries.

"They want to maybe try different compositions you know then it allows them to try to create lots of different compositions using the same elements without spending too much time on like redrawing things over and over, so it is more efficient." (Participant 6).

Another participant has seen in the last year the benefit of using the iPad in conjunction with the Apple TV to share students work with the class and give examples of work because of COVID restrictions, students cannot gather around a table for discussion or viewing.

"You can't take them up where that everybody comes around so very easy take the photographs on my own iPods flick it up onto the big screen and now suddenly, we all can look at it" (Participant 2).

Both Participant 2 and 6 discussed having access to virtual tours of art galleries online. Participant 2 explains the benefits of having access at your fingertips

"Another thing like we were able to do was a virtual tour to France one morning in the classroom, yeah so that was easy." (Participant 2). She noted that students felt a lack of connection with the pieces in the galleries as they felt it lacked a lived experience. However, she found it beneficial as it was a change for group discussion and all students were included and could revisit in their own time. Whereas participant 6 disagreed slightly:

"We can't go to a gallery there are galleries online, how can you experience the gallery when you are looking at it online, you're not going to have the same feelings just by looking at the screen" (Participant 6). Current literature agrees that as quoted by Tipton (2020)

"if virtual viewing really was even better than the real thing, the advent of the internet would have closed galleries down years ago. No, visiting a museum is a physical as well as an intellectual pursuit".

Overall, we found all participants had different opinions when it came to the challenges and benefits of using technology to teach art as participant 2 states

"The iPad really is at the end of the day, it's a big phone, it does have its pros and cons." (Participant 2).

One of the main objectives of the study was to ascertain what the opportunities of having enhanced technologies introduced more in art education means. I was interested to explore the participants' opinions on the benefits of using enhanced technology in art. Some of the opinions expressed were that technology was beneficial as it can save time when it came to doing certain things such as print development. It was expressed by participants throughout that using technology such as an iPad to gather images and do research was like a database of their work and was available to them at any time. Participants involved liked the idea of using the iPad to photograph students work and share on a digital platform to discuss in class time. Findings showed that using technology can pose great opportunities and benefits in art but it can be debatable when looking at the view of virtual tours of art galleries, yes, some participants were in favour but I must agree with participant six as she expresses concern of getting the full experience of the pieces just by looking at a screen.

4.5 Theme 3: Teacher Sensitivity Towards Student Well-Being

There was a huge focus on student well-being during the interview process with all participating teachers acknowledging the importance of being aware of students' circumstances and the little we know about them. Although this was not of particular focus to me, it became an important theme through the research.

"During COVID times, there was lots of kind of connection there between the art and well-being which always was in some ways connected with art but now I feel like it's even more you know because the teachers were trying in some ways art teachers were trying to use art to enhance student well-being or to let them express their feelings sometimes those feelings would really clearly come through their work you know they were struggling with something or you would see that they would go for even though in terms of choices of the themes that they've chosen you know you see that they would go for a theme that is very strongly connected with something that they're going through at the moment" (Participant 6).

Participant 6 also talks about the disconnection between the teacher and the student because of the screen stating:

"You don't know what's happening in their lives and there's also different things happening in the background and there could be really busy family in the background that you don't know what's happening" (Participant 6).

She highlights the importance of making sure not to overwhelm your students although you may have high expectations and are expecting a certain standard of work, the reality is different as you don't know what's going on at home or if they even have the materials required to produce the work.

"They might be feeling horrible because something happened, they might have the older equipment than you think they have or maybe they don't have a printer" (Participant 6).

Participant 1 also had a keen focus on student well-being.

"I think a lot of the students have struggled in regarding to mental health issues and not being in the studio with their peers as being a huge thing. I think regarding to how their coping and just the resilience. You know mechanisms aren't there. It's been tough. It's been really tough for them, but I think that daily interaction where they're seeing our faces on teams, and I just think is a little bit of encouragement and it gives that bit of support." (Participant 1).

She also explains while having conversations with her colleagues, that mental health was one of the

main challenges across the board.

"I think the main kind of challenges that you know people have seen is definitely mental health issues. That's been a huge thing. People isolated at home working from home. Different scenarios at home have been very difficult, like even access to just laptops." (Participant 1).

Participant 5 was conscious of students' home circumstances and kept this in mind while teaching online.

"There were things going on at home like child-minding. That's one thing we have learned from all this, is that we have to go easy on them." (Participant 5).

I found that teachers cared about their students above everything while teaching, including the curriculum. With one suggesting trying to have more time for well-being in general going forward.

"I think maybe having lessons that will be mainly student-driven." (Participant 6).

As stated above I did not consider student well-being as a theme for questioning when conducting interviews but participants gave multiple accounts of ways in which they needed to take on a responsibility and consideration for their students' well-being in relation to online learning. This has risen as a high priority objective in this research as a result. Each participant engaged me in conversation about their concerns surrounding their students' well-being. Online teaching according to participants, pushed teachers to engage a higher level of sensitivity towards their students' well-being. Participants reported considering this through lesson planning, assigning work, asking students to engage in the online atmosphere with their cameras on for example, and to consistently check in with students to ensure they aren't struggling with the assigned work or their well-being.

This finding shows us that not only was adapting to the new technologies for lessons an additional responsibility for teachers to take on, but they also had to take on a supportive role for their students. We learned from these findings that the way lessons and school is carried out, there is little to no time for student well-being to be considered or addressed. These findings showed a need for schools to allocate time for the students' well-being and participants demonstrated that even though art has always been central as a means

of expressing oneself it has become especially important in schools with most participants stating they would engage student in well-being centred art projects.

4.6 Theme 4: Further Changes Needed in Art Education around technology

While gathering data it has emerged that all six participants feel that there is change needed in how the leaving cert art curriculum is laid out. Findings have shown how art students are at a disadvantage when pursuing to progress in art education.

Although there is a new syllabus to be introduced which gives more scope with the use of digital media, teachers don't feel they have the skills equipped to deliver this content in the way it should be due to lack of training.

"The courses are broadening out to use and more digital media, but I don't feel still there's the supports there for us to really push it forward." (Participant 4).

Participants 3 and 6 also talk about how the introduction of more digital projects in leaving cert would encourage students to engage with technology while using traditional drawing and design skills and developing them further with enhanced technology.

"there's enormous potential for it is the whole idea of stop motion animation but to work with stop motion they would have to create the characters first, they must create the scene first, they must create all of that. to do that they have to know how to paint, how to draw, how to design, how to take a concept from page to stage, all those processes that must be done." (Participant 3).

With another participant expressing the same desire.

"There must be more scope there for digital projects in leaving cert…maybe animation or something else that is purely digital." (Participant 6).

Most participants said the curriculum doesn't work and expressed dissatisfaction with it.

"Sometimes I feel like the people who developed the curriculum don't actually see what's happening in the classes" (Participant 4).

It is exceptionally clear from the data collected, that all participants agree that change is needed in the leaving cert art curriculum, this is also evident in reviewed literature by Jordan & O'Donoghue (2018) as quoted "Restrictive and old-fashioned, it has served neither purpose, as a conduit for third-level art education or as a suitable curriculum for second-level art and design in a digital age". With the introduction of enhanced technologies in schools and the ever-changing technology available to teachers and students, participants feel that an element of digital drawing or some digital project such as an animation project should be developed and included, but without further training in these technologies participants feel they are not skilled enough to produce such digital works. This is to ensure students are advancing with the technology rather than against it while also protecting the traditional art skill set which as we have discussed, can only be enhanced with digital technologies, and lost with the over-use or reliance on them.

4.7 Theme 5: Teacher Training in Technology

Teacher training is one of the main themes that has come up in the interview process, participants have expressed deep concern for the lack of training provided and the supports available surrounding technology. Teacher training in technology is long overdue with some teachers expressing concern saying some students know more than the teacher, teaching it.

"You can say that sometimes the students they actually know more than their teachers." (Participant 6).

"I am very interested in technology and upskilling, and I see huge benefits for The Art Room but what I find is that when you're teaching in a very busy school with very large numbers all my classes are over 20 very mixed ability the time to actually invest in your own training is limited so you're learning always on the hoof." (Participant 4).

Participants noted that technologies are being introduced to the schools without adequate training and are then going to loss because teachers don't know how to use them.

"We have a laser cutter… we have a 3D printer… it's just getting, I suppose the training, for us to get the CPD in training for that" (Participant 1).

It was expressed by one participant that when they became an iPad school, the only way they got training was through another colleague in the school who was IT proficient who would teach IT skills to staff during lunchtime and free classes.

"Started training people at lunchtime and whenever people were available free classes that he would bring everybody up to speed and he's still doing it… That's how we got around the element of training. It is huge it's huge to try and get training and everything otherwise like I said you've just got a big phone in your bag.*" (Participant 2).*

As stated above, by all participants, the lack of training in post-primary schools with the use of enhanced technology is of great need for both teachers and students. We found that participants found the lack of teacher training in technology to be of great disadvantage to both parties. This means that students oftentimes had more advanced knowledge of their devices than teachers could constructively add to because of the lack of the education on it. The findings show that teachers struggle to engage students in lessons as well as carry them out was due to the lack of knowledge meaning that we found a strain being put on individuals who had proved themselves to be proficient in the field. We found that in most schools where funds were being allocated for technology there was no allowance there to ensure that teachers would be making use of it, meaning money was being invested in equipment that wasn't being used because they didn't know how.

The findings from this research shows a great disparity between investment in equipment and investment in training which all participants thought needed to be addressed. Findings suggest that without the correct skillset and training participants wouldn't feel able to deliver lessons projected by the proposed new syllabus for leaving cert to sufficiently to reach the learning and teaching of subjects.

Overall, the chosen themes that emerged during the coding process have addressed the overall objective and research questions in this research study. I was interested to find out the experiences of post-primary art teachers in using technology to teach art during the Covid Pandemic. It is clear from the data provided that all participating teachers have encountered ways in which art pedagogy has evolved during this

period. Participants although found the adaption to online learning and teaching quite challenging, they have all developed an array of skills that can be retained and refined in a post-covid art classroom, such as the one drive app as quoted by participant one,

"We will definitely continue to use the one drive app; I think it has been just brilliant in regard to them documenting their work and it's stored in the cloud so they don't lose it"

Participant Five suggested that the use of google classroom was something that would be developed further and integrated more in her school as discussed with work colleagues, as it can be a great way for students to look at content delivered in class and a good source for revision. Overall, I am confident that the data collected is of benefit in developing art pedagogies going forward.

When we consider the profiles of some of the participants involved in this study, it is clear how enhanced technology has impacted them all so differently. Data collected show that not only the older generation of participants in practice for 26years like participant 4, found the transition to online learning and teaching challenging, but participant 6 a much younger teacher of 6years with more up to date knowledge in technology also found the transition very different from what she was used to. In contrast participant 5 with a teaching experience of 20years found the transition ok due to her using enhanced technology to teach before the pandemic happened. All participants no matter their age or teaching experience expressed great concern around the need for training in the use of enhanced technologies.

All participants involved showed great empathy towards the welbeing of students during online learning and teaching with is stated clearly in the data findings above.

4.8 Conclusion

This chapter has discussed the findings from the data gathered through semi-structured interviews in which I was trying to identify a multitude of themes around enhanced technologies and online learning in art education which have been listed above and discussed. It has identified the main themes and subthemes expressed by participants through the data collection process. Themes that I hadn't necessarily considered important to their research arose and became significant in the research process. It had been evident in the

literature and interviews that there are gaps in the implementation of art education through technology and its posture as a multidimensional practice.

These gaps have resulted in both students and teachers facing unnecessary and harsh barriers in achieving their goals in an education and/or career in art.

This chapter outlined the gap in teaching and learning when it comes to using technology in the classroom and remotely. We demonstrated that this meant schools, teachers and students were missing out, whether that was through wasted money on technology that

staff didn't know how to use or when implementing learning while teaching using said technologies.

This chapter identified a need for additional teacher training in technology and further planning the application of digital technologies in the leaving cert art curriculum while preserving the traditional skill going forward.

The following chapter provides some recommendations and conclusion to the research.

Chapter 5 Conclusion

5.1 Conclusion and Recommendation

The aim of the research was to explore art teacher educator views on their relationship concerning enhanced technologies and the use of technologies in art education during remote learning and teaching and how art pedagogy evolved during the pandemic. The research in this study looked at issues in relation to attitudinal data in terms of educational engagement and the subsequent outcomes for post-primary students. I examined motivation with a keen focus on ways teachers kept students motivated in the online environment and their roles in encouraging them.

I focused on teachers' individual responsibility to determine the relationship between enhanced technology and student engagement and progression. I investigated and examined the ways in which enhanced technology can be incorporated to enhance student learning in art education and how they can improve their IT skills to keep up with the advancing use of technology. The overall rationale of the research study was to explore creative pedagogies and technology enhance strategies in post-primary art education during a global pandemic and how they can be continually developed.

I placed an interest in the evolution of art throughout a pandemic in relation to the transferable nature of art education to student development. I focused on exploring current challenges art educators face in relation to art education and enhanced technologies and examined how such challenges may be overcome and how to maintain the benefits associated with these technologies.

The method of data collection that I used was qualitative using semi-structured interviews with the research participants. The interviews were a time-consuming because of restrictions in relation to the ongoing COVID-19 pandemic yet beneficial method of data collection as themes I had not considered arose. They provided me with the perspective and opinions of teachers working in art education.

On completion of this study I have identified some of the barriers and opportunities of the use of enhanced technologies in art education. The findings I have illustrated in the previous chapters allow me to form conclusions and support previous research that argues that enhanced technology in art education can

pose both challenges and benefits to the teaching and learning of post-primary students.

Recommendations

Some recommendations that I would make would be to choose a wider group of participants to strengthen and broaden the research findings. Although the information obtained was relevant and sufficient, I felt that a wider group of participants would offer a deeper insight into the challenges and benefits with the use of enhanced technologies within art education. By selecting and recruiting teachers to participate in the study the findings would have been from the opinions and experiences of those who have experience in art education with enhanced technologies. Due to ethical limitations such as GDPR and child protection laws, I was unable to obtain data from the students' which limited research as we are examining a biased point of view as we are only able to obtain an understanding of the teaching element alone in the process of teaching and learning outcomes. I found that participants were speculating the students' opinions on the outcome of learning. Going forward, I would consider how to ethically include students in the research.

I found that teachers found adapting to an online environment "exceedingly difficult" (see chapter 4, 4.3). Throughout the interview process I became increasingly and definitively sure that participants struggled with this adaptation and found that the main problem in including ICT into visual arts teaching was the lack of digital resources. I discovered that participants were often unsure if the students understood their content and frequently questioned whether they were achieving the learning outcomes as they had not had adequate time to prepare for the online environment given the state of the public health emergency. I want to note that online teaching and learning worked at optimum levels when teachers were given adequate time to prepare their online content. I would suggest that, moving forward more supports and resources be put in place for teachers to adapt more comfortably to the online environment to avoid the uncertainty of whether or not they were delivering key content in an understandable manner.

The department of educational skills recommends that Schools should plan for progression and development in the acquisition of digital competencies. Teachers' practice, at each class level, and across all disciplines, should build on learners' knowledge, skills and understanding in areas related to digital learning

An exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

(2020).

Motivation and engagement

I discovered that student engagement and motivation had been greatly impacted with the move to online learning and teaching. Teachers should be aware of the role they have in motivating student's and how they can encourage them in and outside the classroom. I understand from participants that there was a multitude of reasons behind this from mental health to a heavy reliance on the presence of their teachers and the need for one-to-one interaction and tuition. I found that when participants focused on maintaining the connection between student and teacher, students were more motivated and willing to engage with online teaching. I learned that one-to-one tutorials or 'check-ins' with students were the most motivating tool in terms of student engagement. I would suggest that including more interactive activities such as Kahoot quizzes may encourage a heightened engagement from students.

Exploring the influence of an individual student's interests may be of interest in order to motivate and encourage them within the school and online learning environment. I would further suggest that schools incorporate one-to-one tutorials in the timetabling process when using an online teaching and learning approach whether that be with individual subject teachers or assigning students a teacher mentor.

Using technology in art education

Using technology in art education presented multiple challenges for teaching and learning. The participants in this researched outlined a wide range of such challenges. I was conclusive in my findings that the main danger of using technology was over-reliance on the device and found participants were in full agreement that it must be used solely as a tool to enhance learning and not to replace teaching or learning. I identified a key risk in student development in artistic skills where the digital skills were not transferable to paper meaning participants' students were not advancing their artistic skill to the level they should have been. I would suggest to prevent students from losing their manual skill when using digital technologies that students should be encouraged to use traditional methods to draw their work and to then bring it onto their device to

further enhance their drawing. In doing this, both traditional and technological skills are developed.

Benefits

A range of key benefits were identified by I, the researcher in the research study. I found that time efficiency was praised continually by participants in terms of reproducing drawings to try them in different mediums, to deliver teaching content to students saving time writing and trying to find notes or research, all notes and research is available to students at the click of a button in online folders at any time allowing students to move at their own pace. Teachers noted access to online galleries as a benefit throughout the pandemic as students were still able to access the content, considering this, in normal circumstances it increases accessibility as students often cannot afford field trips to these galleries. I would suggest from her research that the increased use of technologies to complete class demonstrations or to have open access to them would greatly benefit students as it allows students to watch them multiple times whereas in the classroom, they only have the opportunity to view the demonstration once, allowing for different learning rates in the student population.

Teacher sensitivity

The theme of teacher sensitivity arose naturally in the interview process with all participants and became a key focus for me in the delivery of art education using enhanced technologies throughout online learning in a global pandemic. I found that there was an increased responsibility placed on teachers in relation to student well-being and mental health in relation to expectations they were placing on their students for teaching and learning. I found that teachers were becoming increasingly aware of the divide the screen puts between them and their students and teachers were unaware of what is happening at home for their students, one participant notes, "There were things going on at home like child-minding. That's one thing we have learned from all this, is that we have to go easy on them." (See Chapter 4), some students were acting as childminders to younger siblings while their parents worked from home and childcare facilities were shut down. This consideration from participants of their students' mental health and well-being fostered growth for sensitivity among teachers. I would suggest from participants that it would be valuable to allocate more

time for student well-being to be considered and addressed outside of the academic curriculum after finding that art became a heightened form of self-expression for students across the subject board among teaching staff.

Teacher training

Teacher training was identified as a key weakness in the interviewing process by me. I found there was a concerning lack of technological training delivered to teachers to succeed in online learning as well as to enhance learning when in the classroom. As Kelleghan (2020) notes "In order to integrate ICT into the teaching and learning processes of visual arts, educators must be provided with the opportunity to upskill and develop their understanding of how digital technologies can improve pedagogical methods and enhance pupil participation and performance (UNESCO, 2005)".

The participants expressed a desire for further training to be provided and I found that the lack of support negatively impacted upon the teaching and learning process of students and teachers. Training that teachers receive was found to be dated and had not progressed with the transition into online learning and the use of enhanced technologies seeing expensive equipment go to waste as a result of a lack CPD. As noted in chapter 4, "We have a laser cutter… we have a 3D printer… it's just getting, I suppose the training, for us to get the CPD in training for that" (Participant 1). I would suggest to overcome this challenge that training progresses at the rate at which the introduction of new equipment to the school progresses. Schools should make greater use of Department of Education and Skills' funded resources such as www.scoilnet.ie and www.webwise.ie as they embed digital technologies. They should also avail of the CPD opportunities, including customised CPD available from the PDST to address the learning needs of teachers and the school's identified priority actions (Department of Education and Skills, 2020).

It is essential that the Department of Education, National Council for Curriculum and Assessment (NCCA) and State Examination Commission (SEC) work together with art teachers, parent and student groups and relevant stakeholders in culture and industry to implement the new Leaving Cert curriculum and hope it will provide Art students with the necessary needed skills to include enhanced technology.

5.2 Limitations

There were several limitations identified throughout the process of this research project. The sample size was limited due to the time and approval of this study and keeping in measure with COVID-19 health guidelines limited access to art teachers. There was only a total of six art teachers involved in the research study, however it is a reasonable number for a qualitative study. The research was also conducted during a limited time frame so therefore I had time restrictions. If I had, had a longer period of time, I could have researched more work and could have gathered more primary data. The semi-structured interviews took place using an online platform which done anyway with face-to-face interviews in line with public health restrictions due to the global pandemic. I also had to ensure that I limited bias from the study (Roulston and Shelton, 2015). Every effort was completed to ensure that I was objective, however I acknowledge that bias exists. I was also aware that the participants partaking in the study were only from ETB post-primary schools and therefore the experience of other teachers in different educational areas may have different opinions on the questions.

5.3 Final note

This research study has allowed me to develop new skills and to gain a better understanding of the use and potential use of enhanced technology in art education. It has given me an insight as to how the use of enhanced technologies can heighten the delivery of lessons if the correct training is put in place for teachers. It is important to acknowledge the importance of this study for future reference for art teachers as it points out the gaps yet to be filled in the art curriculum and the integration of enhanced technologies in art education to cater for the digital times, we see ourselves in. It is evident from the literature and the findings that the use and integration of enhanced technology in art education for post-primary students can be beneficial. However, the challenges that are faced by teachers in delivering such content are great and adequate delivery cannot be achieved if the proper training is not put in place.

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List of Appendices

Appendix A: Letter outlining study

Informed Consent Form

Purpose of the Study. I am Emma Curtis, a Masters student, at the Centre for Education and Lifelong Learning at National College of Ireland.

As part of the requirements for The Masters in Educational Practice, I am undertaking a research study` under the supervision of Dr Michael Goldrick.

The study is concerned with an exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

What will the study involve? The study will involve participation in an interview. It is envisaged that the interview will take approximately 1-1.5 hours. During the interview you will be invited to reflect on the journey of online learning, what are the experiences of post-primary art teachers in using technology to teach during the Covid Pandemic? How do you view yourself as a professional in that role? You will be invited to talk openly about your experience. You may also be invited to participate in follow up discussions.

Who has approved this study? This study has been reviewed and received ethical approval from National College of Ireland Research Ethics committee. You may have a copy of this approval if you request it.

Why have you been asked to take part? You have been invited to participate as you are currently working or have previously worked as a practitioner in post-primary for a minimum period of two years.

Do you have to take part?
- No, you are under no obligation whatsoever to take part in this research.
- If you decide to do so, you will be asked to sign a consent form and given a copy and the information sheet for your own records.
- You should read the information sheet carefully and may ask the researcher any questions which you have relating to the study.
- If you decide to take part, you are still free to withdraw at any time without giving a reason and/or to withdraw your information up until such time as the research findings are anonymised in approximately 3 months.
- A decision to withdraw at any time, or a decision not to take part, will not affect your relationships with the college.
- Having read all the information, if you are happy to partake in the study, you should sign and date two copies of the consent form. You will retain one copy of the form and the researcher will store the other copy securely.
- You have the option of withdrawing before the study commences (even after having signed the consent form) and you may withdraw at any time during the study. Should you wish to withdraw at any stage, any data which you have shared to that point will be destroyed.

An exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

What information will be collected?
A digital recording of your views and perceptions on the given question/questions on MP3 format and your signed Consent form will be collected.

Will your participation in the study be kept confidential?
All information that is collected about you, during the course of the research will be kept confidential. No names will be identified at any time. All hard copy information will be held in a locked cabinet at the researchers' home office, electronic information will be encrypted and held securely on the researcher's laptop or servers and will be accessed only by Emma Curtis and Dr Michael Goldrick. If you so wish, the data that you provide can also be made available to you at your own discretion.

What will happen to the results?
The research will be written up and presented as part of a master's dissertation. They will be seen by the supervisor, second assessor and the external examiner(s) for the programme.
A copy of the research findings will be made available to you upon request.

What are the possible disadvantages of taking part?
- I do not envisage any negative consequences for you in taking part or It is possible that talking about your experience may cause some distress.
- To protect anonymity, it will be necessary to record the semi-structured interviews off campus to ensure no identifiable links can be made between the researcher and the research participant.
- When I am writing, I will change characteristics that would identify you as the individual.

What if there is a problem?
At the end of the semi-structured interview, I will discuss with you how you found the experience and how you are feeling. If you experience any distress following the semi-structured interview you may contact Spectrum.Life the provider of Employee Assistance Service (EAS) for teachers and other school staff via email at info@into.ie or by telephone on 1800411057.
You may contact my supervisor Dr Michael Goldrick via email michael.goldrick@ncirl.ie if you feel the research has not been carried out as described above.
Any further queries? If you need any further information, you can contact me: Emma Curtis by email x19101937@student.ncirl.ie or by telephone on 0877407295

Thank you for taking the time to read this.

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Appendix B: Consent form.

Consent form for research Participant

……………………………………….agree to participate in Emma Curtis's research study

'An exploration into the continued development of creative pedagogies and technology enhanced strategies in art

education during a global pandemic"

Please tick each statement below.

The purpose and nature of the study has been explained to me verbally & in writing. I've been able to ask questions, which were answered satisfactorily.   ☐

I am participating voluntarily.   ☐

I give permission for my semi-structured interview with Emma Curtis to be audio recorded.   ☐

I understand that I can withdraw from the study, without repercussions, at any time, whether that is before it starts or while I am participating.   ☐

I understand that I can withdraw permission to use the data right up to anonymization.   ☐

It has been explained to me how my data will be managed and that I may access it on request. ☐

I understand the limits of confidentiality as described in the information sheet   ☐

I understand that my data, in an anonymous format, may be used in further research projects and any subsequent publications if I give permission below: ☐

I agree to quotation/publication of extracts from my interview   ☐

I agree for my data to be used for further research projects   ☐

I agree for my data, once anonymized, to be retained indefinitely in the IQDA archive   ☐

Signed………………………………….   Date……………….

Participant Name in block capitals …………………………………………...

I the undersigned have taken the time to fully explain to the above participant the nature and purpose of this study

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n a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have

nvited them to ask questions on any aspect of the study that concerned them.

Signed…………………………………….			Date……………….

Researcher Name in block capitals ………………………………………………...

An exploration into the continued development of creative pedagogies and technology enhanced strategies in art education during a global pandemic.

Appendix C: Interview schedule of questions.

1. What is your teaching background and experience in Art education?

2. What experience did you have using technology before the pandemic?

3. Do you use technologies within the art classroom for teaching?

4. If so, what technologies have you used to enhance your practice?

5. Are there any technologies you have considered, but did not use?

6. How does student engagement now compare to traditional methods?

7. How have you transformed the ways you connect and communicate with your students during the covid period of remote teaching?

8. How did you keep students motivated to while teaching online?

9. Have you discussed your success and challenges with colleagues?

10. What have been some of the common challenges?

11. Are there ways of connecting and communicating that you will take forward into your everyday practice as students return to the school environment?

12. Do you think technology should be used more in art education in post-primary?

13. How do you think it can impact both the learning and teaching of students?

14. Do you think that your subject has any possible connections or benefits to the learning of other subjects in your school?

15. What further changes do you think need to be made within the art curriculum to promote opportunities as students' progress in learning?