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Teaching resources: A case study investigating year 9 pupils' opinions and that of their teacher with regard to teaching resources in art

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Abstract

This research study explores the use of different teaching resources in an Art classroom, investigating which resources are found the most beneficial by pupils across a series of lessons. A qualitative research methodology was implemented for this study and included students and a teacher. The key findings indicate pupils prefer more visually engaging and interactive presentations during a lesson and those pupils still find an in-class demonstration or teacher exemplar the most helpful form of teaching resource. Pupils find books the least helpful form of teaching resource. It was identified that pupils want more tablet based learning and downloadable presentations for their tablets before, during and after lesson.

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Introduction

Teaching resources are the backbone to any lessons. Without them the lesson can be very difficult to teach and the rate of students learning what is being taught can be quite low. These various teaching resources can be the difference in a pupil being in a lesson and a pupil being present and learning in a lesson. These teaching resources can vary greatly from; books, printed hand-outs, examples of artist work, presentations on a board, physical examples such as sculptures or images, demonstrations from the teacher or even videos. The nature and purpose of this study is to identify the opinions from students on teaching resources, which resources they find most helpful, what are the teachers' opinions on teaching resources and is there a need for new, more exciting, engaging teaching resources? This study is important because education is changing. We live in a digital age with children becoming more and more familiar with interfacing through digital media. We can either ignore this change or accept and embrace it in and out of the classroom. As I am starting out on my teaching career I want to be informed as to what are the best resources to utilise in a classroom. I also want to be aware of how to help a student sustain their education outside of a classroom and promote independent autonomous learning. A 21st Century teacher is almost expected to have a presence in and out of the classroom now and must always be accessible by a student. If this is the case then how to have this presence is something I feel as being important to study. This study has the potential for further investigation into areas highlighted in this study. For this study a qualitative methodology has been adopted for the data collection process.

This paper is divided into different sections. The first section presents the literature review and background research. The following section presents the research questions and methodology utilised for the execution of the study. The next section introduces the findings followed by a discussion on the findings. Finally, this is finalised with a conclusion, implications of the study and potential areas for further investigation.

Review of Research Literature

Due to ever developing technology and multimedia platforms the educational sector is rapidly changing and altering their practices to keep up with and incorporate this technology into their educational practice. The diverse range of teaching resources (presentation software, video, audio, electronic media, hardcopy media, physical demonstrations and many more) have contributed hugely to the diverse range of learning and teaching across numerous subjects and age ranges (Tsekleves, Aggoun & Cosmas, 2013; Santos & Ali, 2011; Zhao & Kemp, 2012; Clarke & Zagarell, 2012; Jouneau-Sion & Sanchez, 2012; Brawner & Allen, 2006; Pimmer, Linxen & Grohbiel, 2012). The newly available and expanding technology has allowed for greater understanding of complex issues in the educational world by enabling these issues to become represented in numerous mediums. This lends to the maximising of every learner understanding the issue as the new technology tailors for a wide range of learner styles.

The use of 'teaching resources' is commonplace in the classroom environment but the term is often too general to grasp a greater meaning of. What do these 'teaching resources' consist of and do pupils prefer a specific form or type of 'teaching resource'? Research on the topic of using and analysing different teaching resources in a classroom environment is scarce but the age of web 2.0 technologies (Zhao & Kemp, 2012; Jouneau-Sion & Sanchez, 2012) being rapidly integrated into the classroom environment has brought to light the difficulties teachers face learning and using new teaching resources as well as those who 'may be intimidated by the technology and, thus, are reluctant to use it in their classrooms' (Clarke & Zagarell, 2012, p. 138). These new developments in the educational environment have fuelled the need for greater research into the application and analysis of diverse teaching resources and their effectiveness.

Santos & Ali (2011) conducted a study on the uses of mobile phones to support informal learning. Although not directly related to my research topic this study still holds validity and merit as mobile phones are almost totally commonplace in the classroom. The study was conducted on Female University Students in the United Arabs Emirates (UAE) and all of their second language was English. The process of informal learning is quite relevant for my study. We try to promote the autonomous learner so discovering what teaching resource can support and enable this is a benefit. Santos & Ali's (2011) methodology was well researched against existing models of data capture (Clough, 2005 cited in Santos & Ali, 2011; Patten, 2006 cited in Santos & Ali, 2011; Churchill &

Churchill, 2008 cited in Santos & Ali, 2011; Cheung & Hew, 2009 cited in Santos & Ali, 2011) and each method was analysed and reviewed for its strengths and limitations. Limitations to their sample size was that it was quite small, consisting of only 15 females, and the study was carried out over one week of a fifteen week long digital literacy course (Santos & Ali, 2011, p. 192). As the study was cross-sectional they only gathered a 'snapshot' (Cohen, Manion & Morrison, 2011; Jupp, 2006, p. 53) of information to represent the usage of mobile phones for informal learning. Because the study sample were currently undergoing a digital literacy course a longitudinal study, collecting data from the start of the course, monitored throughout and again collected at the end of the course, would provide better data to analyse as the pupils would be more literate with digital media and a clear, if any, stage of development regarding use of mobile phones to support informal learning could be identified. As there is little data on their area of study their analytical cross-sectional study is appropriate because it allows for 'statistical models' (Jupp, 2006, p. 53) to be applied to 'a wide range of variables' (Jupp, 2006, p. 53). Also, their decision for a cross-sectional study has allowed them the potential to expand their research into a prospective inquiry (Cohen et al., 2011) and has minimised the potential for control effects taking place and affecting the results (Cohen et al., 2011). Santos & Ali's study proved effective in triangulating their data as they used both quantitative and qualitative data sources (Cohen et al., 2011; Wilson, 2012; Jupp, 2006). Their forms of data capture were: A Questionnaire; The completion of a student diary and five students being randomly selected for one-to-one interviews. The closed questions in the questionnaire provide for good quantitative data capture and the entire sample size completed the questionnaire providing reliable data. The anonymous student diary involved them completing one detailed diary entry on their mobile phone usage for informal learning and this was aided with a template to guide their entries. This form of data capture is open to control effects which resulted in only eight out of the fifteen completing the diary entry. Also the analysis and categorisation of the diary entries proved to yield results that were quite obvious and expected.

A similar study to that of Santos & Ali (2011) is the study conducted by Pimmer et al. (2012). They conducted a study on the engagement of Social Networking Sites (SNS) and mobile phone usage. They collected their primary data through focus groups consisting of both female and male participants, in groups of three to eight and at various stages of training (n=43). Strengths to this approach are that through focus group interviewing the discussion occurs primarily between the participants so their views and opinions emerge more openly. Albeit the environment upon which focus groups take place is unnatural the participants are very focused and engaged in the discussion,

as they are more comfortable, which can lead to insights and the emergence of multiple new issues that might have otherwise been overlooked (Cohen et al., 2011; Wilson, 2012; Jupp, 2006). Through the focus groups 'the use of SNSs and mobiles for learning' (Pimmer et al., 2012, p.729) was identified and decided to be addressed. Their observation and analysis of their study samples use of SNS was vague because they 'were not able to track the exact behaviour of the interviewees' (Pimmer et al., 2012, p.729) so this would lead to unreliable and qualitative data capture open to opinion and becoming biased. However, 'the analysis allowed for a much broader exploration of learning and teaching practices of a large number of medical students and doctors' (Pimmer et al., 2012, p.729) so they were able to gather a wider range of data. This data is qualitative though so using this data to compare with their existing qualitative data, captured from the focus groups, poses concerns for relevance and the triangulation of information as triangulation requires 'making use of both quantitative and qualitative data' (Cohen et al., 2011, p.112).

Utilising SNSs as a teaching resource was difficult to gain research on but a research article by Zhao & Kemp (2012) on integrating web 2.0-based informal learning with workplace training proved very informative and relevant to my study. Again the concept of informal learning is apparent and again I reinforce its validity for my study as it is a holistic concept and that we are always aiming to promote the autonomous leaner. Informal learning can be categorised as a teaching resource and one that can be utilised inside and outside the classroom and this paper draws on the 'knowledge gap' (Zhao & Kemp, 2012, p. 232) currently hindering this resources potential beneficial contributions to the workplace but the implications for a classroom environment are easily transferable. 'Web 2.0 is defined as the second generation of Web technologies which allows users to connect and interact with one another' (Zhao & Kemp, 2012, p.232). Web 2.0 is relatively new so this definition is open to scrutiny.

The paper proposes a learning and training model for formal Web 2.0 learning. This is useful as the methodology and proposed model will inform the developmental purpose to my study by informing me of workplace scenarios and what 'resources' they use which will in turn inform the pedagogical purpose of my study. This paper serves as a potential prospective inquiry and potential trend study (Cohen et al., 2011) into the pedagogical implications this study may bring to light. The paper utilised existing, although scarce, research on web 2.0 based learning and training. Their primary research question is about integrating 'web 2.0 based informal learning with workplace training for organisational learning and development' (Zhao & Kemp, 2012, p. 232). Informal learning has been

defined 'as intentional, where goals and processes of learning are explicitly defined in advance by the individual or unintentional where goals and the learning processes develop as a learning opportunity arise' (Vavoula, 2004 cited in Santos & Ali, 2011; Riu, 2009 cited in Santos & Ali, 2011, p.188). Zhao & Kemp (2012) have expanded on the definition of informal learning in great detail making it difficult to find limitations in their proposal. However, they propose to integrate informal learning into workplace training and formal workplace learning. Integrating informal learning as a method of formal learning in a formal environment ultimately makes it formal learning does it not? The proposed model by Zhao & Kemp (2012) provides a very good argument otherwise as they draw upon the social theory of learning called 'Communities of Practice' [CoP] by Wenger, McDermott and Snyder (2002, cited in Zhao & Kemp, 2012). CoP strengthens the viewpoint on informal learning and its place in the workplace but CoP limits its usefulness only to the workplace. If a CoP is only useful inside a confined space then its usefulness in the greater sense of schemes like day to day living renders it only partially useful as a teaching resource. This model and the entire paper is purely propositional and qualitative in origin so it is open to scrutiny but the relevance of the proposed model and training can be used to influence informal training and learning in the educational sector in a pedagogical, intellectual and developmental sense.

A study carried out by Brawner & Allen (2006) looked at the environment student teachers in North Carolina 'taught and the activities they undertook with respect to using technology (Brawner & Allen, 2006, p.33). This paper is relevant to my study as the opinions of student teachers are being taken into account. As I am myself a student teacher the results from this study will be used to identify what other student teacher might consider 'teaching resources'. The obvious problem with using this paper, however, is the date of publication. Despite the study being carried out between 2002 and 2003 the results are valuable and relevant to my study as they will provide a retrospective analysis of 'teaching resources'. The method of data capture was a cohort study occurring three times over the academic year. Surveys were the method of data capture consisting of checklists and open-ended questions. This would provide for both quantitative and qualitative data thus resulting in triangulation of data according to Cohen et al. (2011). However, the amount of surveys collected only 'represented 44% of the undergraduate student teacher population in the state' (Brawner & Allen, 2006, p. 35). This gives for potentially inaccurate, misleading or nonrepresentational results as less than half of the total student teacher populace are accounted for in this study. The key question asked was retrospective and open-ended requiring the student teacher to recall a potentially vast amount of accounts relating to the question.

When all 1,287 answers were collected the researchers decided to drop any answer that focused on the personal use of technology or for simply presenting so part of the question was rendered pointless. The part of the results they decided to analyse further provided for much richer and interesting analysis, despite being less than half of the previous total, but if they carefully considered the type of data they wanted to gather prior this could have resulted in a better question being asked and a much larger sample being obtained. The categorisation of their findings was particularly strong as they separated them into type I and type II. This provided for clear differentiation of technology use in the classroom. This method is highly effective in categorising your findings into clear, presentable categories and has been taken into consideration for my study.

A study into the 'use and effectiveness of diverse types of materials in the delivery and support of lab sessions for multimedia subjects and students' by Tsekleves et al. (2013) was carried out and produced some very relevant and useful findings in relation to my study. Despite the focus of the study being on supporting lab sessions the methodology and results are very transferable as the study is on a course that teaches Multimedia Design and Technology (MMDT). This means the content and disciplines in the course would be diverse and thus 'its outcomes would reflect well on either technology and/or design based course' (Tsekleves et al., 2013, p.860). Tsekleves and colleagues' (2013) methodology was particularly strong and the triangulation of data again strong. Tsekleves and colleague's data collection consisted of a student questionnaire, a tutor questionnaire and tracking students' activity on the University electronic learning facility.

The student questionnaire implemented the semantic differential scale and used a five point scale. This is 'very adaptable and easy to administer' (Jupp, 2006, p.277) as well as being effective in collecting quantifiable data and allowing for flexibility by granting 'the researcher the freedom to fuse measurement with opinion, quantity and quality' and the identification of 'frequencies, correlations and other forms of quantifiable analysis' (Cohen et al., 2011, p.253). An immediate limitation to the use of a semantic differential scale is the risk of response sets which is the 'tendency to respond in a particular way irrespective of the context of the question' (Jupp, 2006, p.277). Another limitation to using a five point scale is that the researcher leaves the participant to give an indifferent answer by having a mid-point in the scale. Participants who have no great opinion on the matter being asked can easily choose the mid-point scale resulting in the skewing of data or the production of nonrepresentational data. Participants can also fall victim to

'acquiescence' and 'social desirability' (Jupp, 2006, p.161) again increasing the risk of nonrepresentational data.

A way to counter this would be to implement an even numbered scale. For example a six point scale 'might require a decision on rating to be indicated' (Cohen et al., 2011, p.254). Another potential limitation to a rating scale is the amount of options you give the participant. For example, one option may be very strongly disagree and the next option strongly disagree. If the scale is divided into those who disagree and those who agree this risks omitting those who have selected strongly disagree. 'The extremity of the voting has been lost in a crude aggregation' (Cohen et al., 2011, p.254). This could lead to completely missing a potentially important problem in the study or an area in need of further study. Despite this Tsekleves and colleagues' (2013) use of a rating scale in their study is 'to capture feelings, judgements, opinions and perceptions' of respondents (Judd, 2006, p.272; Cohen et al.,2011, p.255).

From the articles reviewed, it is clear there is evidence between the forms of learning, formal and informal and the outcomes produced from utilising the various forms teaching resources made available to them. The articles suggest a relationship between the use of electronic, digital and existing technologies being utilised alongside currently implemented teaching resources but no current way of evaluating their effectiveness in learning. For the reasons stated above, it is clear for a need of more research into my chosen area of study. In order to shed light on a currently under researched area, I will explore and investigate the effectiveness of currently implemented teaching resources, new technologies and applications by using the opinions of students and teacher then deciding whether or not there is a need to integrate more engaging, more beneficial, contemporary forms of teaching resources .

Research Questions

The main areas of enquiry from this piece of research can be summarised into the questions seen in table 1. It should be noted that in the context of this paper, the term 'teaching resource/s' denotes the material used in lessons by teachers and utilised by pupils in the delivery of a lesson. These resources vary from physical resources such as, demonstrations, books (personal books such as my sketchbook and relevant reference books) and print outs, digital resources such as, presentation software (there are two different forms of presentation software in this study: Prezi and PowerPoint), Edmodo and the uploading of presentation files for the pupils to download.

Research Question:	Data Type:	Data Source 1:	Data Source 2:
1. What 'teaching resources' do pupils find most helpful for the delivery of and understanding of a lesson?	Mixed	Online Survey with the pupils in the classroom	Semi-structured focus group with a group of voluntary pupils
2. Which 'teaching resources' do teachers find most helpful when delivering a lesson and do they need to utilise more engaging presentation applications?	Qualitative	Interview	
3. What are pupils' opinions on 'teaching resources'?	Qualitative	Online survey with the pupils in the classroom	Semi-structured focus group with a group of voluntary pupils

Table 1. Research questions and methods of data capture

Research Methodology

I decided to conduct a case study for my chosen area of study. The reason I chose to do a case study is that there is little research in my chosen area so to conduct an action research project would be the incorrect approach to data capture. A case study 'is a traditional, systematic approach to looking at events, collecting data, analysing information and reporting results, with the end goal of describing the case under investigation as fully and accurately as possible (Wilson, 2011, p. 204). I want to investigate a phenomenon that is occurring in real time and a case study will allow me to do that. Also given the lack of research in my chosen area of investigation, an action research project would be an incorrect approach as I am not attempting to make an impact but rather understand my area in depth. I will gain an in depth knowledge on the opinions and effectiveness of the teaching resources used in my lessons and apply my findings to impact my teaching practice.

For my research questions I used a mixture of qualitative and quantitative data capture methods. The class were informed at the very start of a new scheme of work (SOW) about the study they will be a part of. I informed them of the term teaching resources but did not define the term. I just made them aware of the resources I have made available to them during a lesson and the different forms of teaching resources they will encounter throughout the SOW. My main method of collecting data was the use of an online survey (Appendix 1). As the school gives their pupils tablets and Wi-Fi access throughout the school grounds it seemed very efficient and time saving to use an online

survey. The survey consisted of both closed and open-ended questions allowing for quantifiable and qualitative data collection. The closed questions was made up of six four-point Likert scale questions aiming to eliminate any participants choosing an indifferent or mid-way answer, skewing my results and four open-ended questions that would allow pupils to express their opinions and allow for rich qualitative results. The scale consisted of 1 representing "Not very Helpful", 2 "Sort of Helpful", 3 "Helpful" and 4 "Very Helpful". In my pilot study I employed the same style of Likert Scale but with only three values. The problem I found with having an odd numbered scale was the amount of midpoint answers from participants. By altering my scale to be an even numbered scale this forces the participant to make a conscious answer.

Name of Category	Code	Description
Demonstrations	D	A pupil's comment on a form of demonstration
Prezi	P	When a pupil comments on the use of a Prezi presentation
PowerPoint	PP	When a pupil comments on the use of a PowerPoint presentation
Tutorial	T	When a pupil comments on any tutorial given by the teacher
Video	V	When a pupil comments on using video as a teaching resource
interactive	I	When a pupil mentions a teaching resource being interactive
Hand-out	H	When a pupil mentions a hand-out as a teaching resource

Table 2: Coding framework for analysing survey questions

My sample size can be recognised as being small (23) thus no generalisations can be made from my results. Originally the plan to study two Year Nine classes and their opinions and interactions with teaching resources was intended but time constraints, timetabling problems and workload commitments meant I had to focus on only one year nine class. This year nine class are familiar with trainee teachers and participating in research studies so I was confident I would be able to obtain rich information from the class.

To gain further information from my research class I decided a focus group (For a brief transcription of the focus group see Appendix 2) would help me better understand the impact, interactions and understanding between pupils and teaching resources. As my sample size is already

quite small, conducting a focus group seemed a good method to capture data as focus groups consist of a 'discussion among six to eight participants' (Jupp, 2006, p. 121). The focus group sample size is small but in relation to my class sample size (23) data obtained from the focus group can be used to represent the majority of the classroom. I did consider conducting individual interviews with pupils but focus groups 'emphasise learning about the thoughts and experiences of others' (Judd, 2006, p. 121) and 'focus groups can provide an insight into multiple and different views' (Wilson, 2012, p. 92). A focus group was the correct and most beneficial method of data capture for my research.

Type of Demonstration	Code	Description
Sketchbook	S	When a pupil mentions the use of my sketchbook as a form of teaching resource
Sculpture	Sc	When a pupil mentions the use of a sculptures as a form of teaching resource
In-class demonstration	ICD	When a pupil mentions the use of an in-class demonstration as a teaching resource

Table 3: Coding framework for 'Demonstration' sub-category in survey answers

To account for pupils not turning up (Cohen et al., 2011) I asked ten pupils to be present for the focus group. I kept in contact with these pupils via the Edmodo class group. However, only six pupils turned up but this still allowed for rich information to be obtained in a short space of time and make any findings still hold validity. For the focus group I had prepared questions in order to start the discussion in the correct area but these questions were there to fall back on if the amount of discussion was little or needed more influence from myself. The aim of the focus group was for the discussion to be primarily between the pupils in the hope of free-flowing outcomes, comparisons and insights. Where the flow of discussion and comparison is quite fluent and strong with minimal input from me I utilised open-ended prompts rather than questions to allow 'participants to take over discussion almost always result in richer and more complex conversations that often result in significant learning' (Kamberelis, 2013, p. 70). I was very careful to not lead the discussion but rather provide necessary inputs when required to keep the discussion fluent and relevant. A focus

group will 'not only provide data on what the participants' think but also explicit insights into why they think the way they do' (Jupp, 2006, p. 121).

Name of Code	Description
PREZI	When a pupil mentions Prezi during the focus group
TEXTBOOKS	When a pupil mentions textbooks during the focus group
SUBJECTSPECIF	When a pupil makes a comment that is subject specific
PRESENTATION	When a pupil makes a comment about a presentation
POWERPOINT	When a pupil mentions a PowerPoint during the focus group
TEACHERTALK	When a pupil talks about a teacher talking during a lesson
BULLET	When a pupil mentions having summarised information as being more helpful
PICTURES	When a pupil mentions anything to do about visual aspects of a presentation
TABLETS	When a pupil mentions using a tablet
LEARNINGINTENTIONS	When a pupil mentions anything about Learning Intentions
TEACHEREG	When a pupil refers to an example created by the teacher
EDMODO	When a pupil makes reference to Edmodo
OTHER	This refers to other comments made by pupils' that were too infrequent to be considered a trend

Table 4: Coding framework for analysing Focus Group results

To achieve triangulation regarding my data capture methods I concluded that another method of data capture should be implemented. As my study is into teaching resources in the classroom and how pupils interact, utilise and evaluate them I thought it would be beneficial for my study to obtain data from a teacher. A teachers' viewpoint and opinions will be beneficial as a teacher can provide insight into their classroom experience of pupils' interactions with teaching resources as well insight into how teaching resources have changed if applicable. The teacher I chose to obtain information from is my mentor. I chose my mentor because we are in direct contact quite frequently, already have great rapport and they have a successful long teaching career meaning their opinions will be rich in reliable, valuable information. The best way to obtain the information I want from my mentor is through the use of an interview. The interview consists of a set of

questions that I asked my mentor (Appendix 3). I aimed to encourage more natural discussion throughout the interview with the intention of obtaining more natural, fluent information. Patton outlines four types of interview and the two that, I believe, my interview method would be categorised into would be the 'informal conversational interview' and the 'Interview Guide Approach' (Patton, 1980 cited in Cohen et al., 2011, pp. 270-271). These methods of interviewing generate a more qualitative outcome which will 'provide rich data that paint a broad picture' (Wilson, 2012, p. 92). Lincoln & Guba 'suggest that the structured interview is useful when the researcher is aware of what she does not know and therefore is in a position to frame questions that will supply the knowledge required' (1985 cited in Cohen et al., 2011, p. 270).

'Other' Category	Total
TEACHUS	2
USEFUL	2
INTERNET	1
APPS	2

Table 5: Coding framework for 'Other' sub-category in Focus Group

I would say I am not completely unaware of my research topic so a mixture between a semi-structured, informal conversational interview will yield the best data. Also by conducting an interview in this manner I have become aware of issues I had not considered (Wilson, 2012) which may lead to further areas of study. I am aware of the potential limitations to conducting an interview such as 'miscommunication and misinterpretation' (Wilson, 2012, p. 92) and 'Important and salient topics may be inadvertently omitted' (Cohen et al., 2011, p. 271). I aimed to be vigilant while conducting the interview and ensure no miscommunication occurs and I was confident this did not occur as my mentor and I have an excellent rapport.

To analyse the focus group, interview and open-ended questions from my survey I analysed each transcript and identified certain trends or themes (Wilson, 2012). I then created a coding framework for these patterns in the transcripts. This can be seen in Table 2 for analysing the survey results. For the 'demonstrations' category it has been split into a sub-category due to the various nature of demonstrations utilised as teaching resources and mentioned in the survey transcript (Table 3).

Name of Category	Code	Description
Demonstrations	D	Mentors comment on a form of demonstration
Prezi	P	Mentors comment on the use of a Prezi presentation
PowerPoint	PP	Mentors comment on the use of a PowerPoint presentation
Interactive	I	Mentor mentions a teaching resource being interactive
Hand-out	H	Mentor mentions a hand-out as a teaching resource

Table 6: Coding framework for analysing interview questions

Type of Demonstration	Code	Description
Sketchbook	S	When my mentor mentions the use of my sketchbook as a form of teaching resource
Sculpture	Sc	When my mentor mentions the use of a sculpture/s as a form of teaching resource
In-class demonstration	ICD	When my mentor mentions the use of an in-class demonstration as a teaching resource
Artist Artwork	AA	When my mentor mentions the use of an artist's artwork in a lesson

Table 7: Coding framework for 'Demonstration' sub-category in Interview answers

The coding framework for the focus group can be seen in table 4. Again I created a sub category for the category 'OTHER' which can be seen in Table 5. The coding framework for the Interview with my mentor is similar to the coding framework as Table 2 but with the exclusion of the 'Video' category and the 'Tutorial' category. The description has changed to describing a theme mentioned by my mentor rather than a pupil (Table 6). I used the same sub category coding framework for 'demonstrations' but added a category for the mention of using artist artwork [AA] during a lesson (Table 7). I created another sub category coding framework for 'Interactive' as my mentor made diverse mentions of interactive materials during the interview (Table 8). I also make direct reference to the survey, focus group and interview answers throughout this study to either argue or enforce a point.

For ethical considerations each pupil received a consent form to be a part of the study. Each pupil received this consent form with ample time to opt out of the study if they desire. The British Educational Research Association's [BERA] Ethical Guidelines for Educational Research (2011) as

well as ethical guideline frameworks by Wilson (2012) and Cohen et al. (2011) were followed to ensure all ethical considerations were considered for this test. All measures were taken to ensure that no pupils' education was affected as well as their general wellbeing during this study. For the focus group the pupils volunteered to be a part of the study.

Form of interactive material	Code	Description
Tablet	Ta	When my mentor mentions the use of a tablet
Internet	In	When my mentor mentions the use the internet

Table 8: Coding framework for 'Interactive' sub-category in Interview Answers

Findings

What 'Teaching Resources' do pupils find most helpful for the delivery of and understanding of a lesson?

The analysis of the data gathered indicates that pupils find interactive, engaging teaching resources as the most helpful in a lesson. Thirteen out of Twenty three pupils (57%) rated 'Demonstrations from the teacher' as being 'Very Helpful' (see Figure 1), nine out of twenty three (39%) pupils rated demonstrations from the teacher as 'Helpful' and only one pupil (4%) rated demonstrations from a teacher as 'Sort of Helpful'. Pupils '(12 out of 23 (52%))' voted the Prezi presentation as being 'Very Helpful' as a teaching resource (see Figure 2), eight out of twenty three (35%) voted the Prezi presentation as 'Helpful', two out of 23 (9%) voted the Prezi presentation as being 'Sort of Helpful' and only one pupil (4%) voted the Prezi presentation as being 'Not Very Helpful'.

The class '(2 out of 23 (9%))' found the PowerPoint presentation as being 'Very Helpful' (see Figure 3), sixteen out of twenty three (69%) found the PowerPoint presentation as being 'Helpful', three pupils (13%) found the PowerPoint presentation as being 'Sort of Helpful' and two pupils (9%) found the PowerPoint presentation as 'Not Very Helpful'.

The class '(7 out of 23 (30%))' found the printed hand-outs (see Figure 4) as a teaching resource to be 'Very helpful', ten pupils (43%) found the printed hand-outs to be 'Helpful' and six pupils (27%) found the printed hand-outs 'sort of helpful'.

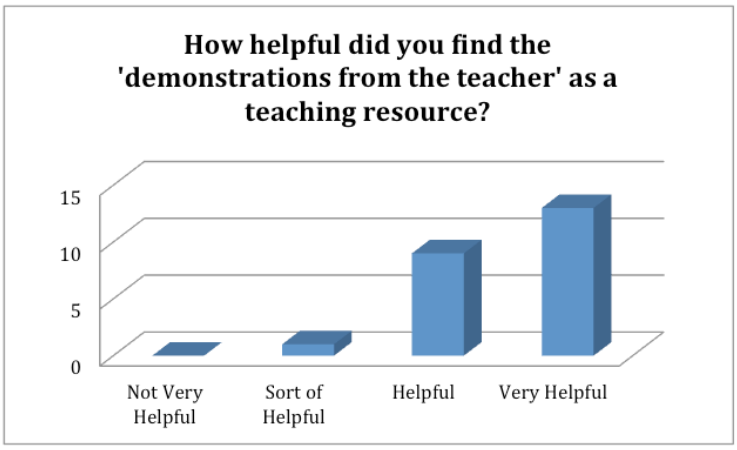

Figure 1: Pupils' responses on how helpful they found demonstrations from the teacher

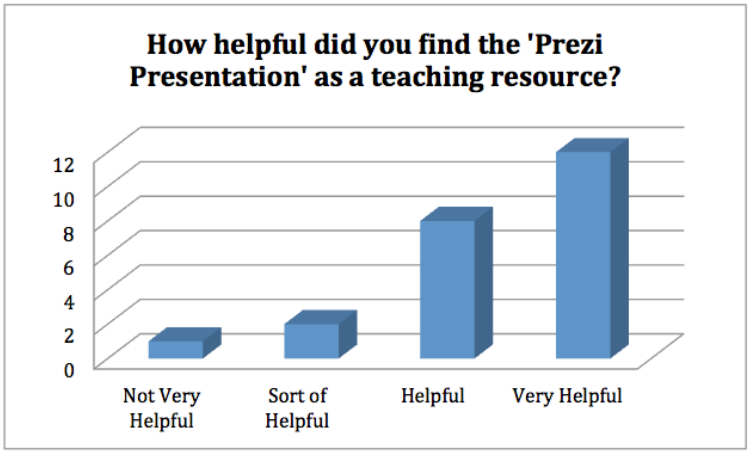

Figure 2: Pupils' responses on how helpful they found the Prezi Presentation

Only one pupil (4%) found Edmodo 'Very Helpful' (see Figure 5) as a teaching resource, nine pupils (39%) found Edmodo as being 'Helpful', seven pupils (30%) found Edmodo as being 'Sort of Helpful' and six pupils (26%) found Edmodo as being 'Not Very Helpful'. Only one pupil (4%) found books as a teaching resource to be 'Very Helpful' (see Figure 6), no pupil voted for books as being 'Helpful', twelve pupils (52%) found books as being 'Sort of Helpful' and ten pupils (44%) found books as being 'Not Very Helpful'.

From the results it appears the pupils prefer teaching resources they can engage and interact with such as presentations and demonstrations. From the results the class rated the Prezi presentation as being 'Very Helpful' compared to the PowerPoint presentation's majority vote of 'Helpful'. However, it would appear that the most popular teaching resource is 'Demonstrations form the Teacher' when compared to all the other teaching resources. This general consensus is also enforced by the answers provided in the open-ended answers of the survey (see Figures 7a & 7b).A

reoccurring theme of 'Demonstrations' was mentioned collectively 25 (38%) times in the answers collected from the survey. In the breakdown of the demonstration category (see Figure 7b) the majority '(17 out of 25 (68%))' mentioned 'In-Class Demonstrations' as their preferred teaching resource.

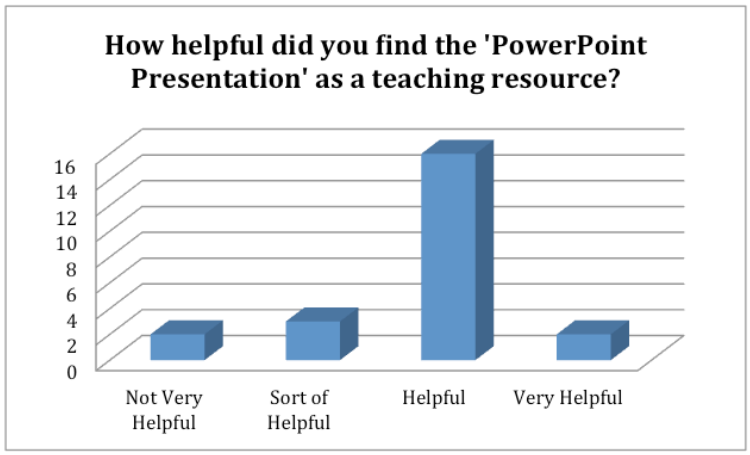

Figure 3: Pupils' responses on how helpful they found the PowerPoint Presentation

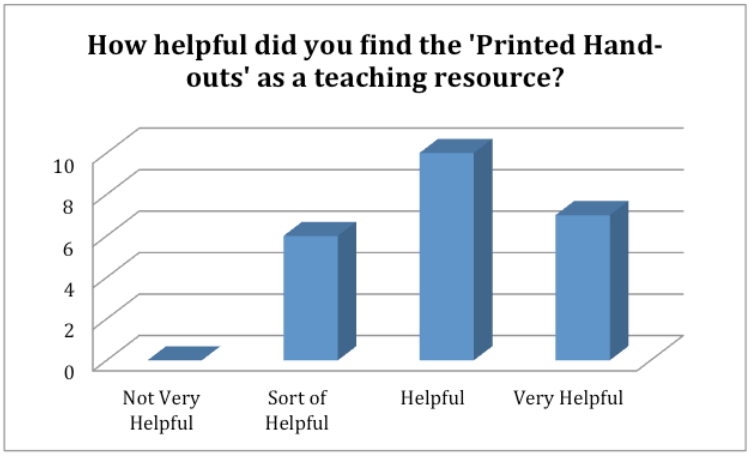

Figure 4: Pupils' responses on how helpful they found printed Hand-outs as a teaching resource

Presentations as a favoured teaching resource are proven in both the closed and open-ended questions in the survey with Prezi being the more favoured of the two. Video was mentioned as a teaching resource '(seven times (11%))' the pupils would like to see implemented in lessons more. A pupil stated "maybe videos of bits of lessons to watch at home" (Appendix 1) as a way to use videos as a teaching resource. Videos as teaching resources would complement the findings that pupils prefer engaging, interactive, visual teaching resources.

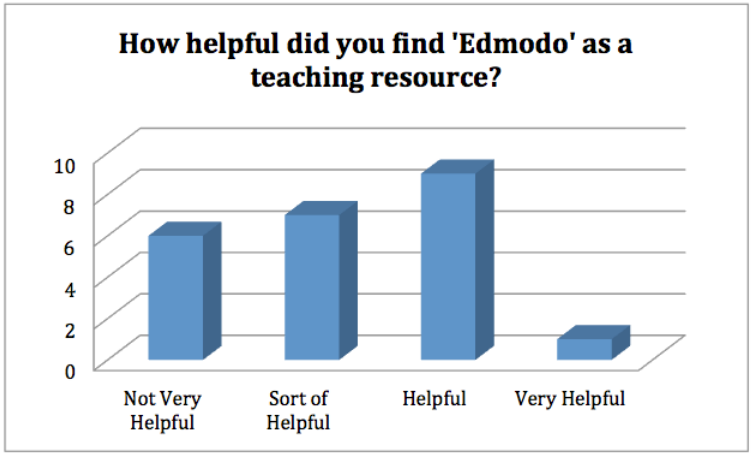

Figure 5: Pupils' responses on how helpful they found Edmodo

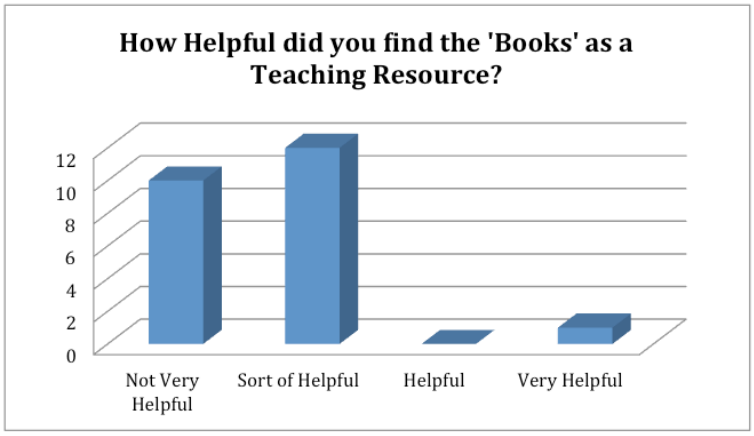

Figure 6: Pupils' responses on how helpful they found Books

What are pupils' opinions on 'Teaching Resources'?

From the analysis of the focus group it is still clear that pupils prefer more interactive, engaging, visual forms of teaching resources. These results would reinforce the findings from the survey answers. Descriptions of the category can be found in Table 4. The nature of a focus group is very conversational in order to obtain rich qualitative data so the results will be quite diverse because of the method of data collection. From the focus group it is clear that there are a lot different opinions regarding teaching resources. Again pupils have favoured Prezi or PowerPoint as a form of presentation with one pupil stated during the focus group "I suppose it's the same as PowerPoint but I just find it a lot easier and interesting" (Appendix 2). 'Teacher talk' was a reoccurring theme throughout the focus group and proved to be a concept pupils liked to see present in a lesson.Hand-outs as a teaching resource prove be popular with the pupils (see Figures 4 & 7a) with no pupils voting them 'Not Very Helpful'

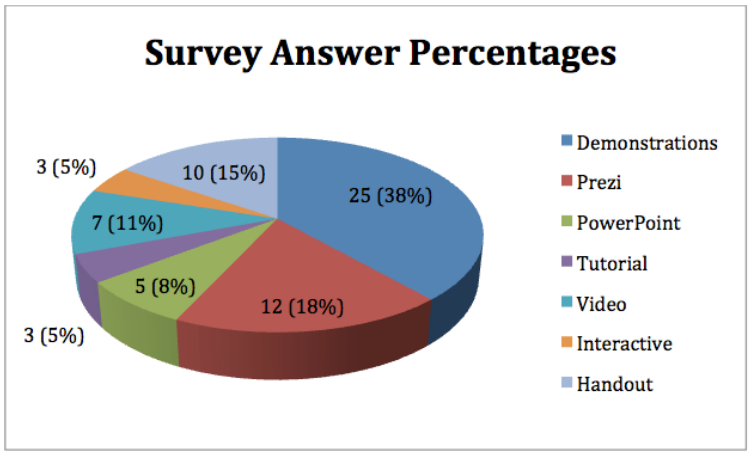

Figure 7a: Pupils' responses from open-ended survey questions

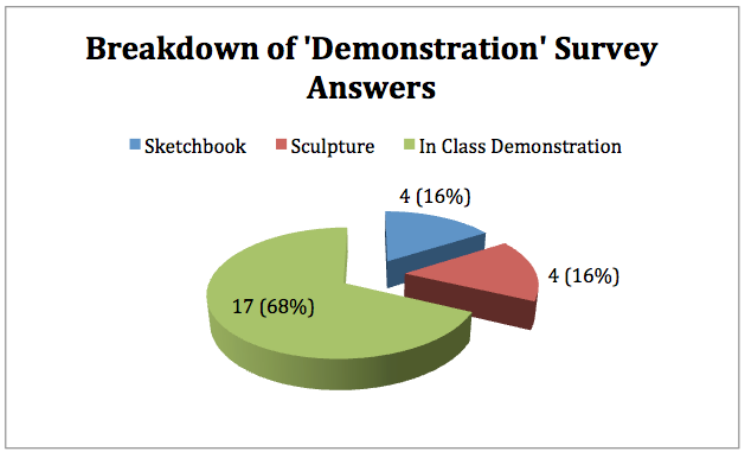

Figure 7b: Breakdown of 'Demonstrations'

Hand-outs were mentioned ten times (15%) in the open-ended questions of the survey and a pupil said "I would prefer more hand-outs" (Appendix 1). There was an almost complete omission of the mention of books as a teaching resource except for two pupils stating "No books thanks" and "nobody reads the books" (Appendix 1).

This opinion is reinforced by the results from the closed ended questions (see Figure 6). Books as a teaching resource are voted as only being only 'Sort of Helpful'. Edmodo received mixed opinions about its usefulness (see Figure 5). Edmodo was mentioned only once in the survey "Examples uploaded onto Edmodo, so that you can use them while working" (Appendix 1). Edmodo was mentioned more often in the focus group discussion however (six times (7%)) (see Figure 8a).

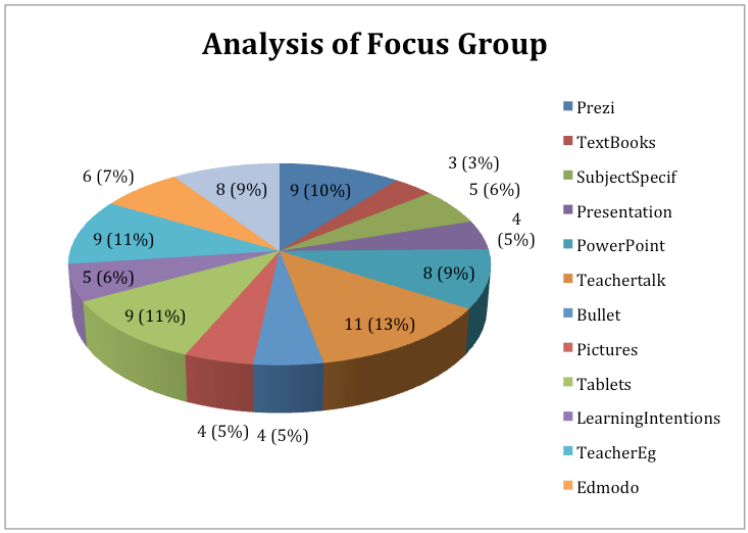

Figure 8a: Pupils' responses from Focus Group

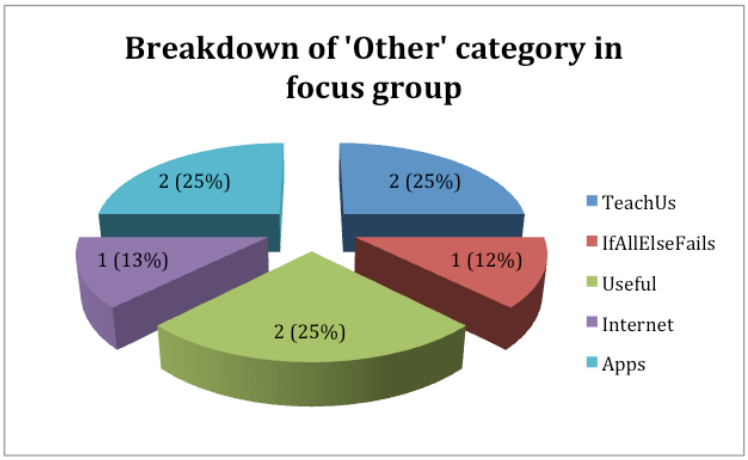

Figure 8b: Breakdown of 'Other' category

This theme was linked to the theme of 'Bullet' meaning bullet points as stated by a pupil during the focus group "If it's only in bullet points on the board then you kind of engage more because you have to really listen to what the teacher is saying" (Appendix 2). A link between 'Bullet' and 'Teachertalk' was apparent from the focus group but there were negative connotations regarding 'Teachertalk' such as, "I find that some lessons they take up too much time!" (Appendix 2). This comment was in reference to a teacher spending too much time on learning Intentions. From the amount of mentions of Learning Intentions and bullet points, during the focus group, 'teachertalk' has both negative and positive mentions during the focus group. Pictures were mentioned as something pupils like to have in lessons as a form of a teaching resource which was linked to the 'teachereg' meaning teacher examples. 'Teachereg' was a popular theme throughout the focus group. This theme reinforces the findings from the survey as 'Demonstrations from the Teacher'

had the highest amount of votes for being 'Very Helpful' (see Figure 1). The focus group found teachers being able to create examples as a very helpful teaching resource in a lesson. One pupil stated that knowing the teacher is able to make the work they have to makes them "have faith in our teacher" (Appendix 2). The focus group discussed the use of tablets in the lesson a lot.

Tablets were mentioned in the open-ended questions of the survey with pupils stating "I think that more use of iPads would be useful" (Appendix 1). Tablets were linked to a lot of the other reoccurring themes during the focus group. Pupils voiced how they would like to use them more in lessons " now the teachers are more comfortable with them" (Appendix 2) and the pupils were aware of their potential in lessons now that "the novelty has worn off" (Appendix 2). Pupils made it clear they would like to have digital versions of the presentation and the printed hand-outs to personalise during a lesson as well as refer to after a lesson (Appendix 2). The 'other' category in the coding framework for the focus group was split into a sub category with its own coding framework (see Figure 8b). These were themes that occurred during the focus group but were too infrequent to be considered to have value.

Descriptions for these sub categories can be found in Table 5. 'TeachUs' was the reference made when a pupil made a generic term to a teaching resource that is used to teach them. 'IfAllElseFails' was a comment made by a pupil saying "it's good to know they're there. If all else fails I'd get a book" (Appendix 2) about using books as a teaching resource again reinforcing the findings that books are not favoured as a teaching resource in a lesson. The focus group mentioned the use of the internet and apps during the discussion. No mentions of these terms were made in the survey. However, mention to apps and the use of the internet as a teaching resource was mentioned in the interview with my mentor.

Which Teaching Resources do teachers find most helpful when delivering a lesson and do they need to utilise more engaging presentation applications?

A pattern of teaching resources was mentioned throughout every stage of method of data collection. The emerging pattern is that pupils prefer a physical demonstration from the teacher with the knowledge that the teacher is capable of doing what is expected of them and that pupils prefer engaging, interactive, visual teaching resources. From analysing the interview with my mentor (Appendix 3) the results add to the apparent pattern (see Figure 9a). Descriptions of the categories can be seen in Table 6. My mentor mentioned demonstrations as the most useful and helpful form

of teaching resource in a lesson. Demonstrations were split into a sub category with their own coding framework to differentiate the different forms of demonstrations (see Figure 9b).

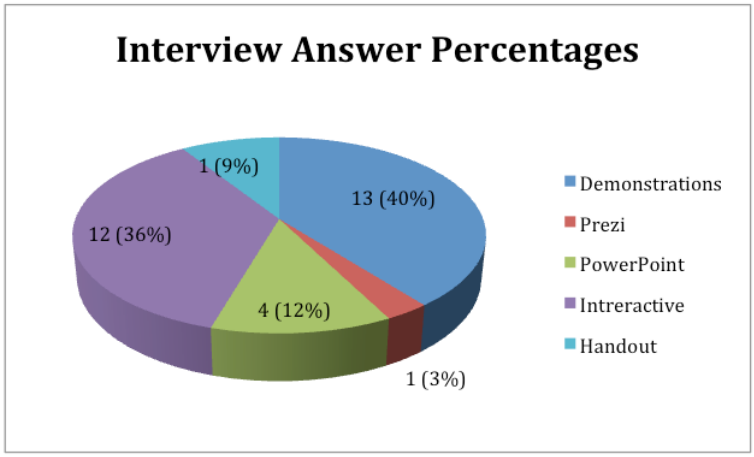

Figure 9a: Teacher's responses from interview

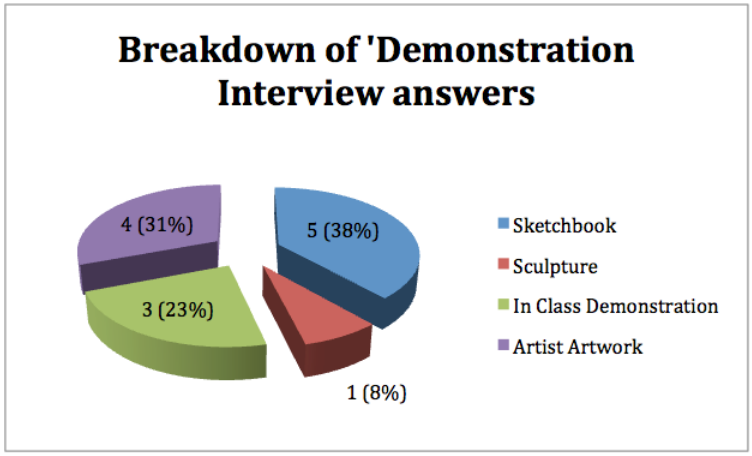

Figure 9b: Breakdown of 'Demonstrations' category

All sub categories, except 'Sculpture' proved the most mentioned form of demonstration in a lesson. These results would again complement to the findings from both the survey and the focus group that pupils find demonstrations, be it in class, in a sketchbook or a sculpture, to be the most helpful. From the interview my mentor mentioned the use of artist artwork as a teaching resource in her lessons. Artist artwork is not directly referred to in the survey questions or answers, nor is it directly referenced in the focus group but the assumption was made that each pupil understood the purpose of a printed hand-out was that it had examples of artist artwork on them. Artist artwork

would link to pupils' comments on wanting 'pictures' and visual teaching resources as well as the results on how helpful pupils found printed hand-outs as a teaching resource (see Figure 4).

My mentor mentions they "rely on PowerPoint's a great deal to focus my planning of learning outcomes, success criteria and lesson task" (Appendix 3). This comment would suggest from the focus group discussion, when a pupil mentioned learning intentions and bullet points, that if the information on a presentation isn't "Just writing" then the class won't "get lost" (Appendix 2). Another theme mentioned throughout the interview was the theme of 'Interactive'. Interactive was divided into sub categories (see Figure 9c) as the term included other terms that did not have the term interactive directly in them but were suggesting an interactive concept.

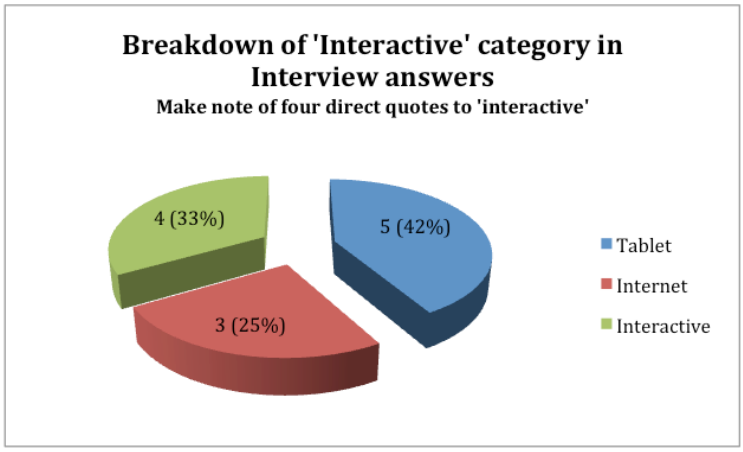

Figure 9c: Breakdown of 'Interactive' category

My mentor mentions tablets as a very useful teaching resource stating "having student tablets at the school has made a great difference in the wealth of choice in use of a range of teaching resources" (Appendix 3). This comment would suggest an emerging desire for tablets to become a more common teaching resource in the classroom as it is mentioned throughout every data collection point. My mentor makes reference to the internet as an interactive teaching resource allowing pupils "access to the internet to research artists and find images of artwork" as well as a method to "encourage independent learning" (Appendix 3). Again, this comment suggests the potential for tablets that both teachers and pupils are both aware of (Appendixes 1, 2 &3).

demonstrations from the teacher, engaging, interactive visual teaching resources and the potential for the increased use of tablets in and out of a lesson.

Discussion

In the following section I will discuss how helpful the teaching resources implemented during my lessons have been to the pupils and discuss the results from their answers to the survey and focus group. I will also discuss the findings from the interview with my mentor. I will discuss these findings using relevant theoretical and conceptual articles and methods lastly, concluding with some practical considerations, limitations to my study and potential areas for further study.

From the results I would conclude that pupils do in fact prefer a mixture of engaging, interactive, visual teaching resources such as, Prezi and PowerPoint presentations, visual hand-outs and the tablet based resources. The pupils also find demonstrations from the teacher as a very helpful teaching resource during a lesson. What has come to light through this study is that there is a desire for video based teaching resources to become more utilised in and out of the classroom. Tsekleves and colleagues' (2013) research found that 'students indicate that video and electronic material have a higher effect on students' independent learning' (p. 863). Based on the findings from the focus group (see Figures 8a & b) it was clear that pupils value the ability to find information for themselves a lot more than having it handed to them. With the introduction of video as a teaching resource independent and informal learning may increase. Also through utilising Edmodo to its full potential and by incorporating video resources with Edmodo the percentage of pupils who find it useful will increase as well as how often they use Edmodo. Tsekleves et al. (2013) found that 'the introduction of video lab-based material did have a considerable effect in increasing the number of student visits to the university's online learning facility' (p. 866). Through the proper utilisation of Edmodo pupils will become more autonomous, responsible learners. Pimmer and colleagues' (2012) study in the potential for using Facebook as a learning tool found that the social networking site (SNS) 'centred on the unsystematic presentation of topics than on the development of individual users' (Pimmer et al., p. 734). Pimmer et al. also stated that the SNS did 'enable spontaneous forms of announcement, discussion and negotiation' (Pimmer et al., p. 734). The concept of using Edmodo as a method of asking questions and getting answers argues against Pimmer and colleagues' (2012) first claim as Edmodo is a purely educational based e-learning platform so its purpose is on the development of the group and the individual. Combining Edmodo with video teaching resources will be a 'familiar way of conducting research and facilitating independent learning' (Tsekleves et al., 2013, p.863). The Prezi presentations are favoured by the majority of pupils and find them the most helpful compared against PowerPoint presentations. From the results it is clear that the class want more interactive presentations and presentations that they

can have a digital copy of to refer to during the lesson or at a later time. 'Students feel very comfortable with static electronic (PDF and HTML) and especially interactive electronic materials' (Tsekleves et al., 2013, p. 863) so a push towards allowing pupils to download the lesson material, be it a presentation, worksheet or image, is a push in the right direction. This idea was suggested by the focus group and would result in the better utilisation of tablets in the lesson. It is clear the pupils in my study are aware of how they prefer learn and want to see these resources, such as, downloadable versions of lesson material and more integration of tablet based learning in lessons.

From the study it is clear that there is no substitute for the teacher being able to create physical examples and demonstrations. Teacher demonstrations had the most 'Very Helpful' votes compared to the other teaching resources being reviewed (see Figure 1). So it is clear pupils still very much like to see their teacher create an example for them and know and believe in the teachers ability (see Figures 7a, 7b, 8a & 9a). The interview with my mentor (Appendix 3) would suggest that they are accepting and integrating new forms of technology in their lessons but demonstrations and teacher examples are still essential for teaching a class. If teachers were to create videos of their lessons, an idea that was mentioned during the focus group (Appendix 2), and upload them to Edmodo this could potentially combine the teaching resources found as being most helpful with teaching resources, such as tablets, that pupils want to see utilised more in lessons. This method would allow for pupils to be independent in and out of the lessons and have access to demonstrations not just via a tablet but mobile phones and other devices with internet access and video playback capabilities. The potential for 'self-directed learning that takes place outside the classroom' (Zhao & Kemp, 2012, p. 234) would increase drastically.

Unfortunately, books are seen as something as a last resort in the classroom (Appendix 2). This could be due to the advancements in technology and the utilisation of tablets with internet access or any number of reasons, that are worthy of study, but regardless books are seen as the least helpful teaching resource.

Conclusions and Recommendations

The main area of this research project was to investigate how helpful pupils found a range of teaching resources for the delivery and support of a series of lessons. A qualitative methodology was implemented for this investigation and included both students and a teacher.

Although my study focused on a specific class, the findings are applicable to a wider range of classes such as, areas within design, information communication technology, digital media, graphics, computer animation and many others. The reason for this is that the subject of Art and Design is made up of a lot of diverse areas of which students are educated about. Also, Art and Design has enormous potential for cross curricular activities.

My key findings indicate: that pupils prefer a more visually engaging, interactive presentation with the possibility of downloading the presentation prior and after the lesson; there is still a great desire for in-class demonstrations and teacher exemplars; books are unfortunately the least helpful teaching resource and there is a desire for more video based teaching resources to be used as a teaching resource in conjunction with Edmodo. The teacher still prefers demonstrations and exemplars but acknowledges the potential of internet and tablet based learning and utilises them to the best of their ability. However, there is still a need for more training on the potential teaching applications with internet and tablet based learning.

Overall, this study has practical applications, especially at a time when educational institutions are incorporating more online learning resources, the acceptance and utilisation of digital devices and the desire to promote and nurture students becoming more autonomous learners. The study indicates a desire from students for a greater incorporation of online learning resources such as electronic (PDF and HTML) and video formats for the delivery and support of a subject in and out of the classroom.

I feel that I have just touched the surface of a topic that at present does not have a lot of research behind it. If I were to conduct the study again I would change the data collection methods and how much data I would collect. I would expand my sample size much greater as my sample size for this study was quite small. Depending on availability of time, I would like to study every class that uses tablets in an Art classroom. This would yield me data across different age ranges as well as provide a much grander scale of qualitative data. The study would become a cohort study so I could potentially identify stages of development throughout the academic year. As my sample size would be a lot larger I could allow for potential control factors occurring throughout the study. I would conduct focus groups with different year groups and potentially mix year groups together. The four-point scale I used would change as the difference between ‘Helpful’ and ‘Sort of Helpful’ is very vague.

Areas of potential further study would be integrating video based teaching resources through Edmodo and monitoring the impact it had on pupils' opinions as well as the amount of access to the school Edmodo site. The negative view on books as a helpful teaching resource could also be another area of potential investigation.

This study has been extremely interesting and beneficial to my teaching practice. Through this study, I feel more prepared to deliver and support all types of topics I will teach. This study has prepared me to better enable and facilitate students in becoming more independent and autonomous learners.

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Appendices

Appendix 1: Transcript of Survey Answers

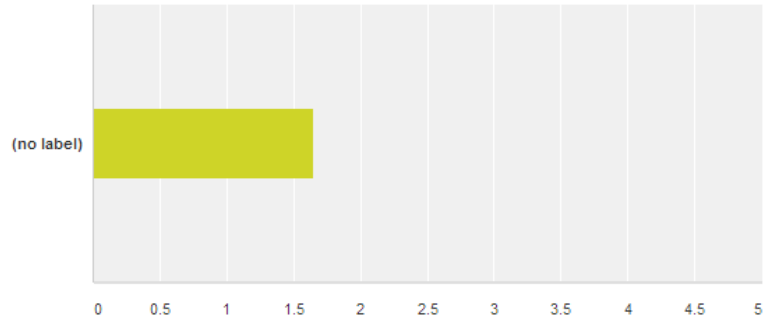
Closed question answers are screenshots from survey.

PAGE 1

Q1 Customize Export

How helpful did you find the 'Books' as a Teaching Resource?

Answered: 23 Skipped: 0

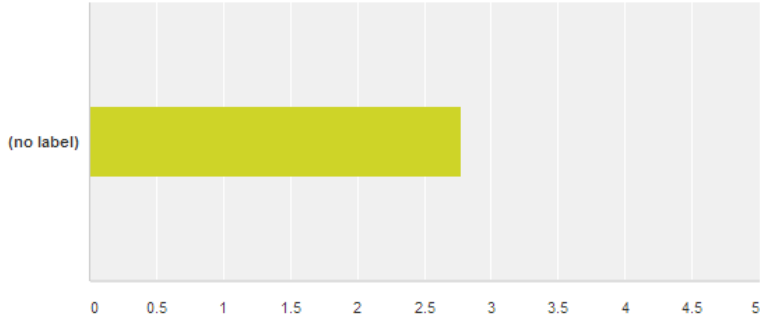


	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	43.48% 10	52.17% 12	0.00% 0	4.35% 1	23	1.65

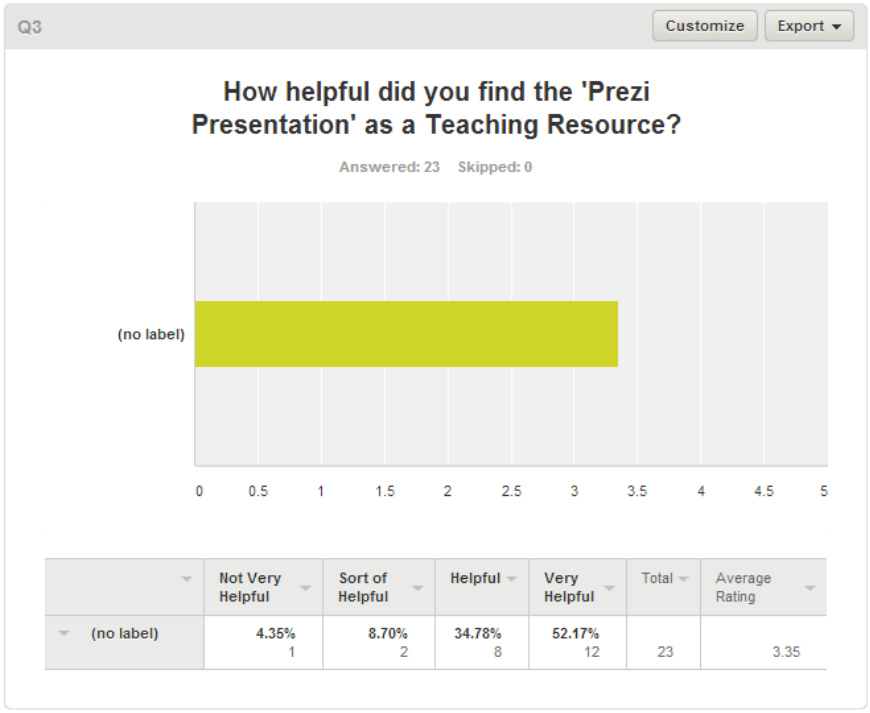
Q2 Customize Export

How helpful did you find the 'PowerPoint Presentation' as a Teaching Resource?

Answered: 23 Skipped: 0

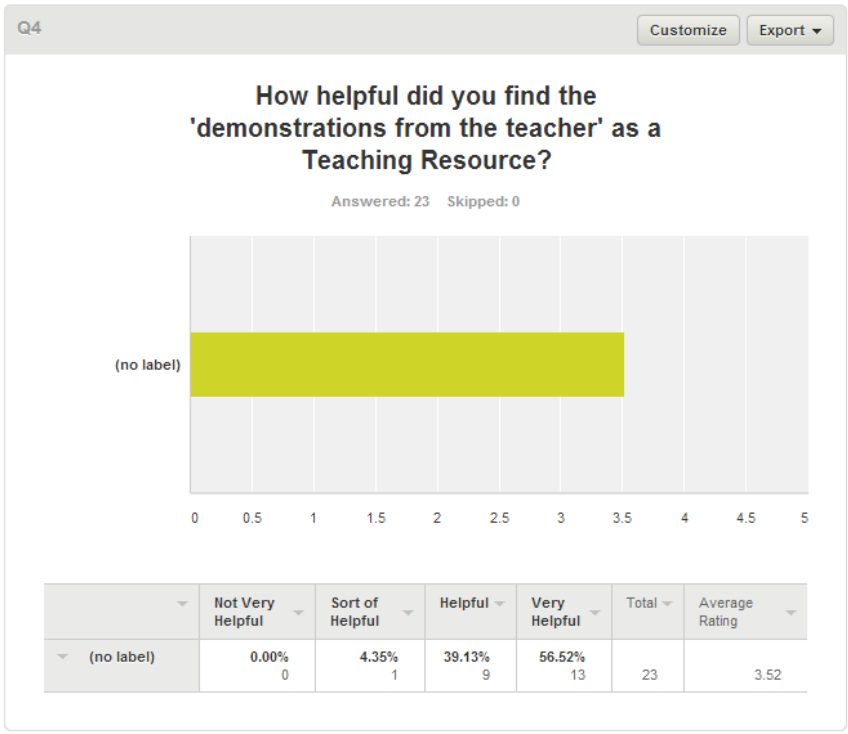


	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	8.70% 2	13.04% 3	69.57% 16	8.70% 2	23	2.78



	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	4.35% 1	8.70% 2	34.78% 8	52.17% 12	23	3.35

PAGE 2

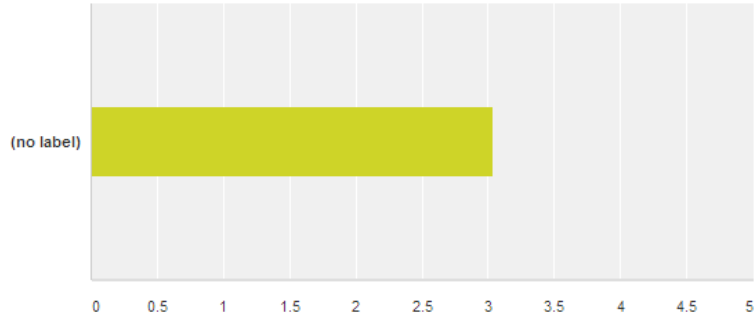


	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	0.00% 0	4.35% 1	39.13% 9	56.52% 13	23	3.52

Q5 Customize Export

How helpful did you find the 'printed handouts' as a teaching resource?

Answered: 23 Skipped: 0

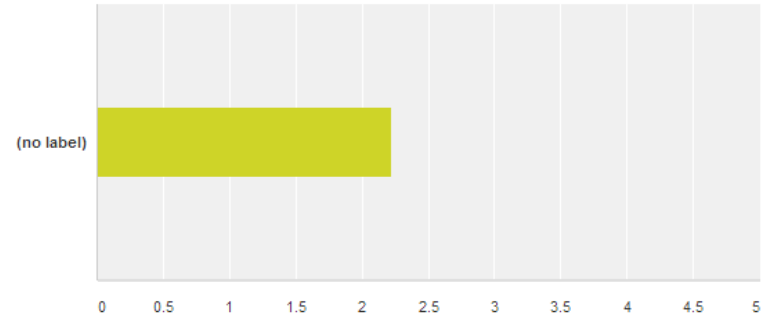


	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	0.00% 0	26.09% 6	43.48% 10	30.43% 7	23	3.04

Q6 Customize Export

How helpful do you find 'Edmodo' as a Teaching Resource?

Answered: 23 Skipped: 0



	Not Very Helpful	Sort of Helpful	Helpful	Very Helpful	Total	Average Rating
(no label)	26.09% 6	30.43% 7	39.13% 9	4.35% 1	23	2.22

Q7. Do you have a preferred 'Teaching Resource' that you find particularly helpful? Please explain why you prefer this 'Teaching Resource'.

- demonstrating task in front of class- very clear
- The one to one because I like it :)
- You are a great teacher and I have learnt a lot from the methods
- I like the Prezi presentation because it has lots of information in an interesting and clear way. I also like the examples, as you can see what exactly you want us to do, and you have faith in the teacher being able to help with advert thing, as they have done it before.
- You are a great teacher.
- Prezi. Because you can revise it at home. Also sketchbook and sculptures as they are very visual. P.s. You are a great teacher!
- /lds/lc/dsn
- I prefer to see the topic were covering on a piece of paper in front of me it helps me learn and I get what to do a lot easier this is what the teacher dis for me which helped me. Thanks
- I like Prezi because it's a more interactive PowerPoint
- I prefer the demonstrations because you can see how to do it and know the steps to do on the drawing
- I like the sheets as they are a copy of things on the board which you can keep and examine more closely.
- NO
- I prefer an actual demonstration from a teacher, so I know what to do a bit more.
- Playing countdown because it' gets everyone involved.
- Demonstration because we get to see how you did it easier, but the papers were useful for inspiration.
- Demonstration, because it actually showed us what we are doing
- I prefer the teacher going around independently to see what you can improve on and etc, as well as the Prezi presentations, hand-outs, and the teacher's previous work shown.
- I prefer the teacher independently going round telling me how I can improve and what I've been doing well.
- All the Preziand presentations
- Prezi, because it's quite interactive

- Countdown
- Prezi presentation

Q.8 What 'Teaching Resources' would you prefer to be taught with more often? I.e. more presentation, more demonstrations, more books available, more printed hand-outs etc. Please explain why.

- I think teaching resources are used enough- if they were used even more, we wouldn't ever finish our projects.
- More demonstrations because it's easier to see and explain more what to do so you know that you're doing it right and you can look carefully at each steps
- Books with a specific page to go to
- Prezi and hand outs
- I think they are all in perfect quantities
- More objects like sculptures or sirs sketchbook :)
- More visual demonstrations but also a mix of Prezi presentations:)
- Printed hand-outs and more demonstrations
- I would prefer more printed hand-outs, and the presentations to be available for the iPads during the lesson too.
- I prefer demonstrations to hand-outs.
- I have no idea
- hf,f,hgfh
- More presentations because they show a lot
- More Prezi presentations as they are appealing, interesting and not boring
- I'd prefer more demonstrations and more printed hand-outs to be taught with.
- More hand-outs. I found them really helpful! It would be better if there were more!
- Demonstrations so we can get an idea of what to do
- More demonstrations so you can see how to do something
- Demonstrations.
- More demonstration because it is very helpful
- Tone and shading
- I don't know

- More demonstrations

Q.9. Can you think of a 'Teaching Resource' you would like to see being used in a lesson that is currently not being used in your lessons?

- No...
- No
- Not books thanks :)
- Videos
- ???
???
???
- Maybe videos of bits of lessons to watch at home and remind us of the stuff we learnt in lessons
- Examples uploaded onto Edmodo, so that you can use them while working.
- Videos
- More videos
- Videos maybe??
- I think that more use of iPads would be very useful.
- More videos
- nf/djvjhfkvhj
- No
- Nothing a at the moment
- Fresh demonstrations doing it in front of us drawing so we can see
- Video demonstrations
- No
- Draw it for us.
- Nope I cannnnot
- No, I am thinking like izzy
- Countdown
- Video demonstrations possibly?

Q.10. Do you feel the 'Teaching Resources' used in your lessons were successful in helping you learn everything you need to know about the topic? If not, please explain.

- Yes-however in Y8, we spent so much time learning about Oaxacan art that we never got round to creating anything.
- Yes
- Prezzie .....
- Yes they did
- Everything was used a good amount and it p was easy to explain but it's Moore (more) not Moore (mooooooore)
- Yes! :) you are a great teacher!
- Yes
- Yes, they were all very helpful.
- Yes because i had everything that helped me learn
- Yes
- Yes
- Yes I do
- Yes, I do!
- Yes as they gave us examples of what things are
- Yes
- Yes
- Yes, I think the teaching resources were helpful during the topic
- Yes
- Some of them, but nobody read the books.
- Yes I think so
- Yeaahhhboii
- I think so

Appendix 2: Transcript of Focus Group

- ME: When I use the term 'teaching resource' what do you think that meant?
- Books, things that you use to teach us with to put across what we need to know
- Things that you learn to teach us with
- ME: So it's not an unknown term?
- Everyone: (Nods in agreement)

- ME: From my lesson have you become more aware of teaching resources made available to you in the class? Do you think there is more than you originally thought?
- Sort of. Like the Prezi Presentation
- Yeah the Prezi presentation
- ME: What about the books I had?
- It's good to know that they're there. Like if I needed one I'd get it. If all else fails I'd get a book
- ME: Do you agree with that?
- Everyone: Yeah
- ME: What is your opinion on available teaching resources available in all of your subjects? Do you like the resources in each lesson or do they need revamped?
- I like them
- There's only textbooks really
- ME: Is that useful?
- Yes (General Consensus)
- It's subject specific really
- ME: Okay, so is there a generic teaching resource in every subject?
- Yeah a presentation, Like a PowerPoint
- ME: What do you think of a PowerPoint?
- Sometimes the teacher just goes through it and sometimes you have to talk about it and it's on the board so the teacher doesn't just tell you what to do it's on the board.
- At times they ignore the PowerPoint even though it's on the board
- ME: So some use it some don't. There's a divide would you agree?
- Everyone: Yes
- If it's only bullet points on the board then you kind of engage more because you have to really listen to what the teacher is saying rather than they just read out the whole text on the board.
- ME: So to summarise that, would you say you work better with short pieces of information?
- Everyone: Yeah
- ME: So were my presentations what you like/prefer?
- Everyone: Yes
- Because you set it out into small chunks like I like the way you use Prezi because it had the big thing then sort of focused on different bits
- So you had one bit entirely on abstract art

- The pictures were helpful too
- Yeah the pictures helped
- ME: So is visual images something that's very helpful?
- Everyone: Yeah
- ME: So rather than just as a presentation is it useful as a printed copy as well?
- Everyone: Yeah
- ME: So I saw that people wanted to see the presentations on their tablets. When you have it on your tablets can you customise it and make it your own?
- I guess it's good seeing the whole presentation first but say you needed to look at one little bit again it would be quite useful to have it on your tablets then
- Or if we wanted to look at it again at home
- So rather than the teacher having it and changing it or someone else changing it
- You don't know what everyone's doing on their tablets though
- Yeah you don't know if they're actually looking at it
- ME: So there is a danger people could be playing games but let's look at positive side of it. So everyone has the presentation that would be a beneficial thing?
- Everyone: Yeah
- ME: So you would like to have a digital copy as well as a physical copy?
- Everyone: Yeah
- ME: So that could be another teaching resource, the digital copy of the PowerPoint?
- Everyone: Yeah
- ME: I have tried to do that. I did upload PDF versions of my Prezi presentations
- Yeah but that was after the lesson
- ME: True, but I did with the next presentation
- Yeah that was really useful in the lesson
- Yeah we can go through the presentation on our tablets in the lesson while you go through the presentation on the board
- Yeah it is really useful
- ME: Are you happy with the current teaching resources across all subjects?
- Yes
- Yes

- Yes
- I think if we're lacking in anything we can use the tablets to supplement anything we already have
- ME: Is that you taking that upon yourself to do that?
- Yeah sometimes
- ME: Or are you prompted by the teacher?
- In science we get told to research things and we have a textbook and we have our tablet and we look at our textbook and the teacher says if that's not enough or if you want to understand something better then look at your tablet.
- I guess sometimes textbooks are easier because it's the information you are looking for is right there. Were as on the internet, when you research something it's got loads of different things.
- Yeah sometimes the textbooks are easier
- Yeah but sometimes the internet is easier too
- ME: So you have to filter through something to get what. So there are both positives and downsides to having exactly what you want and then what you got to research. But in the long run what do you think is going to be more beneficial to you? Being able to find it for yourself or having it handed right to you? Be honest.
- Finding it yourself
- Yeah finding it yourself
- ME: So say you being able to research your won answers is better or do you like it the way it is now?
- I think being able to research but being told at the end vaguely what you are meant to have found
- Yeah like a recap at the end
- If everyone's doing individually then we could come back together and find out what everyone else has found out so everyone understands
- **ME:** So you find your own answers then at the end you come together to find out what's right and what's wrong?
- I guess that is why I kind of like learning intentions because you can go back at the end of the lesson and see whether you actually like done those
- ME: so that is something that's quite interesting. Are learning intentions something you really like in a lesson?

- I find that some lessons they take up too much time
- Yeah
- Yeah
- Because you're not learning anything by learning about what you're going to learn
- Yeah because sometimes they write loads of learning intentions so it's kind of a bit confusing
- ME: so essentially a learning intention is another form of a Teaching Resource which tells you what you are going to learn in that lesson so would you like to see more simplified learning intentions? As you said in Bullet Points.
- Everyone: Yeah
- Like more general learning intentions
- Me: What has been the most helpful teaching resource you have used in your class, your subjects?
- ME: So books, handouts, presentations, tablets, videos, demonstrations from the teachers
- Demonstrations are very good because they show you exactly what you're meant to be doing
- But that is very specific to art
- Yeah
- Yeah
- But I guess in science when you do a practical they show you a practical, a demonstration not a practical
- ME: Does anyone want to expand on that? Has anyone personally found anything that we find really helpful for them that they kind of need in a lesson?
- Specifically in art I think how you gave your own book of what you have done already and like to show we could do in each step.
- ME: So a teaching resource of the teachers own work?
- Everyone: Yeah
- ME: And why do you find that helpful?
- It sort of shows you each step of the way and how you've been able to do it so you can use it as your own ideas too
- ME: So you can see the teachers work as well. Are there any other reasons why it's useful rather than seeing how it can unfold? I might be influencing you here but is it nice to know your teacher can do it

- Everyone: Yeah (with laughter)
- We have faith in our teacher
- ME: Because you are a tablet school, which is very unique, have you found them as beneficial as you originally thought they would be?
- At first when we got them I thought that everyone was just going to play games and I didn't know how much we would use them in lessons because there are apps which we quite often uses which I didn't know about before so I thought people were going to play games but we actually do use them.
- Well there are people who do play games but we all know it's for our learning
- The novelty has worn off
- Yeah the novelty's worn off
- And now the teachers are more comfortable with them so we use them a lot more in lessons
- Yeah I agree
- ME: So in terms of Art there tends to be a big divided between technology and art. Do you agree?
- Everyone: Yeah
- ME: So would that be something you'd like to see more, technology integrated into the classes?
- I think you can often get very side-tracked if you're using your tablet. So it's best to do it on paper because you're focused on that instead of all the apps you could just click on
- I think, like doing portraits on tablets, it is much harder. It's more easier to do it on paper as on the tablet it's a bit fiddly
- We would like to use technology and some wouldn't really
- Yeah because some people prefer a drawing and some prefer it on a tablet
- It's a hard one
- ME: Does anyone have any other ideas of technology they would like to see in the art classroom or more of?
- *The group didn't have much to say about this so I suggested 'EDMODO'*
- ME: So edmodo is new for me so what is so useful about it?
- It has a calendar and when teacher post your homework it comes up on your calendar so if you're doing your homework on the weekend you can just look at that week and it will come up with the homework you have to do in that week

- And if you're not in that lesson then you can look on edmodo and see what work the class is doing and what homework we have to do
- ME: So edmodo involves you outside of the classroom as well.
- Everyone: Yeah
- ME: Do you like that?
- Everyone: Yeah
- You can ask the questions and people from your group can answer
- ME: So you use edmodo like a discussion group?
- Everyone: Yeah
- It's really beneficial
- ME: These are great answers. So what you are describing is a concept called informal learning. Informal learning is when you are not directly in the classroom but you are still learning. So what edmodo is as a teaching resource that allows you constantly learn even when you are not aware of it.
- I think that with edmodo if someone asks a question you sometimes don't think you know the answer but then you do and if a student answers or a teacher answers it's better than everyone emailing the teacher
- Yeah so we have a group to help one another out
- I think edmodos good when the teacher posts resources on edmodo because we can have that
- So edmodo means we can have whatever answer or resource we need when we need it
- ME: You guys mentioned Prezi. A lot of people liked the Prezi. So Prezi versus presentation. What do you think?
- Prezi
- Yeah Prezi probably
- You can have it on one big thing so you can have it all there then you can click on one section and zoom into it. I suppose it's the same as PowerPoint but I just find it a lot easier and interesting
- It's new
- PowerPoint is very linear because you have to go through it but Prezi 'Oh I want to learn a bit more about that' and you can go back to that bit really easily

- ME: So you mentioned PowerPoint as being linear and Prezi being more fluid. Do you find that makes the presentation more engaging and interesting?
- Yeah PowerPoint is quite boring
- If the teacher doesn't put in as much effort then they don't engage us as much
- Sometimes we have PowerPoint's with loads of information on each slide the it's a bit too much
- Yeah it's just writing
- Yeah we get lost
- Yeah Prezi is just really nice and interesting
- It's the visual side of the presentation I think
- It's nice to look at
- Yeah it's nice
- Me: What would you like to see me do more as a teacher?
- I think you got the balance right
- When we ask you to do a demonstration you'll do a demonstration and you'll show us your sketchbook for ideas and the countdown game was really good. It was almost like our warm up. In other lessons we did a little on Abstract in other years so we never completely done it so I thought having 30 seconds to do it sort of made it a bit... yeah sort of free.

Appendix 3: Transcript of Interview with mentor

Q1. When I say to you teaching resources what do you think the term means?

I think of anything that I can provide that helps students learn and make progress in their knowledge and understanding. Things like images of artwork, PowerPoints, my own examples, worksheets etc

Q2. In your lessons what is the most used teaching resource that you use?

I probably use laminated images of artwork, PowerPoint presentations and my own examples most often. My own example might be created during a demo or already made exemplars of the expected outcome. I might also use previous student examples to show a range of possible outcomes.

Q3. From your experience what has been the most helpful teaching resource?

I guess the things I have already mentioned because I use them a lot! Exemplars and demonstrations really help students to visualise and see what they are planning, designing, making etc. I also rely

on power points a great deal to focus my planning of learning outcomes, success criteria and lesson tasks.

Q4. From your experience how has teaching resources changed?

Since I trained 13 years ago things have changed a great deal. When I trained all images had to be photocopied from books and most class rooms did not have projectors let alone interactive white boards! My first classroom only had a chalk board!

Now most teachers rely a great deal on the Internet to source resources, this is now where I will find images of Artwork to show students. I also know many teachers use online communities to source and share resources. I don't personally use these but I understand there is quite a big teacher twitter community.

Having student iPads at this school has made a great difference in the wealth of choice in use of a range of teaching resources. For me access to the Internet to research artists and find images of artwork is an amazing change from having to source and photocopy images from books and provide all the information myself. I also find all students having access to their own camera very helpful for recording their work or for speeding up elements of a project that would previously take much longer.

The iPads also offer many interactive apps to allow teachers to encourage independent learning and control the learning and progress in a whole range of new ways. Again I haven't fully explored and discovered many of these yet myself.

Q5. Do you think there is a need for more interactive teaching resources in the classroom?

I think these kind of resources do help to inspire and motivate many students however in the Art class room there is always going to be the need to actually experience hands on tactile resources such as paint and clay and the process of making still need to be practical and hands on.

Q6. How would you rate Edmodo as a teaching resource and do you think it has had a positive impact to the classroom?

I think it is a great way to communicate with students, for students to be able to check or ask questions and for parents to keep track of homework. Many teachers use it more for sharing

resources and for communicating/discussing during lessons. As this is still the first year the school has been using edmodo perhaps its full potential hasn't been fully realised and I still feel some students are not checking it regularly and that I myself feel I don't fully understand how students use it and see the information that is posted. E.g. I think an assignment is shown in notifications but a note isn't?!?

Q7. From observing my lessons what do you believe has been the most beneficial teaching resource/s during my SOW?

I think you have embraced the use of iPads in the classroom for research purposes and your PowerPoints and Prezi presentations have been visually inspiring. Your own examples in your sketchbook and 3d exemplars have helped students to understand your expectations. You have carefully designed worksheets for example your cubism research sheet to ensure students find the information they need to make progress in their understanding. This helped to focus their ipad research, without this their research would probably have been unfocused and unhelpful.

Q8. Would you suggest alternative forms of teaching resources that you have used in your lessons that I have not?

It would be great while you are at the school to explore more interactive iPads resources such as 'nearpod'. This is not something I have done but we could explore this together with the support of the IT team who are very keen to work with teachers to ensure that we become confident with the technology.