

The perception and portrayal of the design studio teacher in the digital classroom.

I haven't really touched on my research after making promises to take you guys along on my journey, apologies. However, I am willing to admit that I really hadn't realised how difficult it would be for me to "change hats" along the way to be able to take things out of situational context in order to share through the various mediums I work with. What I absolutely have noticed though, that much as I have a tendency to keep things in nice neat boxes, I can't fight Baader-Meinhof phenomenon any more than I can the tide. Identity is one of those untidy, leaky things so let's chat.

I've spent a lot of time over the last few months trying to unpick identity and the complexities around it and through that, I've had to do some soul searching of my own and acknowledge the various influences which are helping and hindering me in the creation and re-creation of my own identity.

I've been reading a lot over the last few weeks on how identity is formed. The journey that we all take and how the stops along the way influence us. For my research, this was very focused on the teacher in an art college and how identity affects them and their work. But just that act of looking at how others form their identity means I have to unpick my own, after all, as the researcher I need to be aware of how my thoughts and experiences will play out with my interpretation of data. The positives to come out of this have been many. So who am I?

You know what, I still don't really know, and to make things more complicated, there has been nearly two years since I undertook this research project and the moment I am sharing. There has also been a pandemic which shifted this research project to a reality of hybrid teaching as standard practice. I have many thoughts and opinions which have come from this, but I am not in a place to share these yet so for now...

The following is my dissertation project, finished **Dec 2019**

Wherever I lay my hat, that's my studio

The perception and portrayal of the design studio teacher in the digital classroom.

1. Introduction

Regardless of a steady increase in students participating in online learning in higher education over the last 30 years, art and design maintains its core as a hands-on studio-based discipline (Belluigi, 2016; Fleischmann, 2018; Rodriguez et al., 2018). Although online design courses are beginning to emerge, there is still uncertainty on the part of the teachers as to how successful virtual design studio models can be (Bradford et al., 1994), primarily in the replication of traditional studio teaching in an online environment (Kvan, 2001a). However, with current changes in the higher education landscape including student numbers (Blanden and Machin,

2004), expectations (Longden, 2006) and the widening participation strategy (Shaw et al., 2007), as well as changes to the design field itself (Fleischmann, 2015), we are seeing higher education institutions push towards incorporating online technologies into teaching (McClellan et al., 2013).

The inspiration for this study is due to my professional interest as a learning technologist working in the art education sector and in my personal interest in the concept of studio teaching. This study has been carried out as the first part of a larger project which questions the perception that the advent of online technologies impact negatively on the teaching of art and design. Specifically due to the erosion of the traditional teaching styles of one to one coaching, reflective learning and the social culture of the studio (Fleischmann, 2018) which come together to teach the habits of doing, thinking and being, associated with the signature pedagogy of these disciplines (Boling and Smith, 2014).

In order to do this, this study has been designed and carried out to collect experiences of teachers currently teaching in an existing design programme with the purpose of gathering information on the design studio teacher, how they create presence and how various factors including technology have influenced this. The subject of this study is a postgraduate design programme on offer in a Scottish art college which runs face-to-face and online courses using the same lessons, teachers, and tools. This has created a unique opportunity to collect information from teaching staff on their experience of teaching a design programme with both face-to-face students and those online.

During this study, I will use the term studio to specifically refer to the pedagogy relating to the design studio rather than the physical space. When referring to the physical studio, this will be made apparent by discussing action "in the studio". I felt that this would allow for a more structured investigation into how studio, as a concept,

influenced the identity of the teacher and in turn how this influenced teaching decisions, rather than a simple comparison of technologies, say drawing table over digital drawing tablet.

The collection and analysis of data for this research was carried out using qualitative methods to better illustrate the experiences of the participants and to collect and shape insights (Kvale, 2007; Radclyffe-Thomas, 2011). I have used semi-structured interviews and teaching observations to gather data and chose to perform this study inductively, allowing theory to develop from the data rather than data being collected to test a theory. The analysis of data was then undertaken using a thematic coding framework which exposed interesting and pertinent themes providing a richer context.

This study focused on three areas, starting with an examination of the creation of identity, or teacher-self and asking if current research is correct in stating that design teachers hold a separate teacher-practitioner identity, different to that of other teachers. After assessing the factors which influence the creation of teacher-self, the study examined how the design studio teacher portrays their teacher-self in order to create a sense of presence or teaching-self to their students. Lastly looking at studio and the factors which influence studio, to ask if online technology is negatively influencing studio or if there are other factors at play.

2. Literature review

2.1 Introduction

The concept of teacher identity and presence is a widely researched field with active input from many areas. Although this wealth of information offers a wide spectrum of thoughts,

this literature review will consider areas which have emerged from interviews and observations I have carried out. These themes are as follows: the teacher in the studio and the influences on the teacher and her portrayal of self, the studio in the current technological climate and the external influences on studio teaching.

2.2 Studio

Architecture & design is unusual in adopting the design studio as its foremost learning pedagogy, the fundamental method of education across the teaching of design regardless of institution (Salama and Wilkinson, 2007). However, the advantages and failings associated with studio are not exclusive to design. These widely used forms of teaching, associated with particular professions, were studied by Shulman (2005) and are referred to as signature pedagogies. Shulman's idea of signature pedagogies has influenced the majority of existing research, taken from work exploring the education of doctoral students from a range of disciplines (Golde, 2007; Gurung et al., 2009; Shulman, 2005), showing that some pedagogical enactments were typical across individual or groups of disciplines. Examples include the field trip in geography, studio "crit" in art or even vocal warm-up in theatre. This pattern of activities, assessment and interactions are discussed as signatures not just of the arts but of all educational disciplines having a purpose greater than the instillation of knowledge. They are designed deliberately, to teach habits, ways of thinking, doing and being, as an induction into a profession, the teaching of how to be an artist, an architect, or an actor (Belluigi, 2016; Budge, 2016; Chick et al., 2012; Gurung et al., 2009; Thomson et al., 2012).

However, with particular reference to the arts, Thomson & O'Connor (2007; 2012) define this further to consider the physicality of arts knowledge transfer through the continuing

community of the studio, and the tacit knowledge of generations being shared by the teacher as principal artist. The original theory expanded for the purpose of teaching in higher education. This expansion incorporates teaching in particular disciplines in order to explain similarities across a wide spectrum that also have specific ways of practising, which are essential within their community, (Benmayor, 2008; Golde, 2007; Gurung et al., 2009). This reinforces the case being brought by some that teaching can never be completely understood when taken out of disciplinary context. However, in contrast, recent research has focused on identifying burgeoning pedagogies (Chick et al., 2012; Golde, 2007; Gurung et al., 2009), which perhaps due to Shulman's statement that "professions are more likely than the other academic disciplines to develop distinctively different [pedagogies]" (Shulman, 2005, p. 53), move towards defining pedagogies which emerge particular to institutions. This is in direct contrast to Shulman's theory that an identifier of signatures is that they exist across institutions, cutting across institutional borders (Shulman, 2005).

In today's digital age, with the traditional studio concept being reimagined virtually, could the virtual design studio (VDS), and the opportunities it has brought for reimagining teaching, be an influencer that assists in the creation of a burgeoning signature pedagogy? Or is the pressure to engage with and incorporate new technologies in a traditional setting impacting on the teacher's perception of self and its portrayal to the student body?

2.3 Identity: the teacher-self

Being a teacher is a question of identity, but identity is not simple and there are multiple possible layers which make up that identity (Shreeve, 2011). Literature has shown a shared opinion that our beliefs as teachers are at the core of how we understand circumstances, make sense of the world around us,

account for variables and are at the core of many of the decisions made about teaching practice (Calderhead, 1996). However, as the world changes, so does identity responding to factors such as beliefs about what we believe a teacher's role to be, the subject matter and the student's learning, the environment (physical, virtual, personal) and external influences such as career, finance and day to day experiences (Adams, 2007; Anderson, 1981; Beauchamp and Thomas, 2009; Beijaard et al., 2004; Rodgers and Scott, 2008; Trowler and Cooper, 2002). For teachers in the studio, identity is also closely associated with the world of practice outwith the academic structure, where students learn to practice and teachers often continue their practice while working in academia (Adams, 2007; Anderson, 1981; Shreeve, 2011).

Although our response to influences can be personal, not all influences are within the control of the teacher, indeed work by Sheridan and Kelly (2016) and Richardson and Alsop (2015) raise the impact autonomy or lack of it has when teachers have had no input in curriculum design such as junior staff who have no design say on the course on which they teach. Finding that when teachers who have no control over the courses they teach, are in fact reduced to the identity of instructor rather than teacher and that teachers interviewed expressed that the lack of autonomy over their teaching directly affected their perception of themselves as teachers and of how they presented to the students. Being physically seen as a teacher was a common theme in literature. Studies working with online teachers highlighted concerns about feeling disconnected from asynchronous students and asking if this impact on the teacher has a detrimental effect on how they are able to portray themselves to online students (Hawkins et al., 2011; 2015; Richardson et al., 2012; Richardson, J.C., Koehler, A., Besser, E., Caskurlu, S. Lim, J., & Mueller, C. (2015)., 2015; Watson, S. Watson, W. Richardson, J. and Loizzo, J., 2016).

More recent research looks at the increasing pressures for change from a wide variety of sources, from finance and facilities to societal change (Koch et al., 2002; McClean et al., 2013; Vowles et al., 2012), which are placing a strain on the environments and cultures of the studio teacher. The widening participation plan is not new in higher education, originating in the report of the Robbins Committee (1963), but subsequent development of the agenda from successive governments have focused on various aspects, just one of which is the low participation of students from poorer socio-economic groups (Dearing, 2012; Greenbank, 2006; The Future of Higher Education. DfES, 2003) which is now a priority for higher education institutions. Consequently, this drive to increase diversity in the student body has increased the diversity of prior educational experience and cultural widening of student bodies (Shaw et al., 2007; Swann, 2002) as well as in the expectations of teachers in the role they perform (Chen and Pitts, 2006; McClean and Hourigan, 2013). These positive endeavours which impact classroom practice, may unfortunately result in teachers feeling anxious and uncomfortable about their role (Gray, 2007; Richardson et al., 2012; Swann, 2002) as they struggle to portray what they believe is their teacher-selves while embracing the changing variables of who that teacher is to an unfamiliar classroom experience.

2.4 Presence: portraying the teacher

Presence or teaching presence can be said to be awareness, receptivity and connectedness. A sense of being there and being receptive to the cognitive and physical needs of the students in the classroom (Rodgers and Raider-Roth, 2006; Scott, 2016). Research has shown that relationships between teacher and students are the foundation in supporting student achievement, with the teacher as the navigator or helmsman directing and guiding but also nurturing and caring (Waterson, 2011). Nodding (2003) chose the word presence to describe the

caring relationship of a teacher towards a student in order to differentiate it from more personal relationships. Instead, highlighting it as the need to be totally present to each student as they address her. However, according to Rodgers and Raider-Roth (2006), the pedagogy of the teacher is the most visible characteristic of presence. Likening this presence to a tree, they described the interactions between teacher and student, amongst the students, and between the students and subject matter as the leaves and branches. Stating that by paying close attention to the students at work and analysing and responding to what they see, the teacher is attending to learning itself, which has been referred to as reflective practice by Schon (1987). Rodgers and Raider-Roth (2006) propose that if the teacher's connection in any of these areas is weak, then their ability to present to the student is compromised.

In discussing the presence of the teacher when relating to online teaching, it is often the connectedness and receptivity that is sought-after, and perhaps unsurprisingly, most often research in this area has come from those looking to create this sense of connection. In partial contradiction to Rodgers and Raider-Roth (2006) who claimed that presence could not be reduced to a list of behaviours, Garrison et al. (2000) aimed to provide an instructional framework to assist with this giving specific areas of focus for the online teacher to assist in mapping presence. The framework states that three elements overlap (cognitive presence, social presence and teaching presence) and it is the overlap between all three which create the best experience for online students. The framework provides a manner for teachers to focus on how these elements could be designed into courses to provide direction, facilitation, instruction and discourse. But much like face to face teaching, it has proven difficult to specify exactly what the teacher does to create presence. This has been the focus of much research since, seeking to clarify the concept and define the physical actions of teaching presence (Richardson

et al., 2012; 2015; Shea, P. Hayes, S. and Vickers, J., 2010).

Complicating this further, Richardson et al. (2012) found a separate identity of instructor presence rather than teacher, with instructor presence being the physical, observable actions in the “live” aspects of the course, whereas teacher presence was to be found during course design. Also addressing this distinction, Sheridan and Kelly (2016) specifically sought to clarify the role and its impact through the perceptions of the instructors themselves, finding that the lack of autonomy around designing the course was restrictive and frustrating, but overall did not restrict teaching or prove detrimental to the ability to create presence. Although carried out with online teaching in mind, findings in all studies did offer crossover opportunities between online and face to face teaching with two primary aspects found to be essential, the physical and the social aspects of teaching presence (Ijsselsteijn et al., 2000). Albeit physical referring to the need to be physically located somewhere and social being the need to be connected with someone, it should be noted that research showed that the physical could refer to a digital medium or physical location or a hybrid of the two.

Most importantly, it was established that pedagogic modes are possible through a variety of modalities including speech, language and action acting together semiotically (Ivinson, 2012). Analysis of student feedback by Rogers and Lea (2005), acknowledged, however, that not all modalities were equal and that face to face did rank highest in terms of presence with a decrease for televisual, a further decrease for audio-only and then a relatively low ranking for computer discussion forums. However, relevant to this, studies exploring online teaching showed that the perception of presence in these modalities was more complicated. Wang et al. (2019) state that presence was not simply associated with the visual presence of the teacher

in video mediums, rather, teacher presence in a video lecture could be both increased and decreased due to facial expression and animation of movement. This insinuates that the environment is not the greatest factor but that the teacher's physical interaction and so perceived connection may be more significant in creating connections and therefore we should question the perception that physical environment, such as the studio, is implicit in the teaching of certain subjects.

2.5 Teaching in the studio

The seminal work of Schon in theorising professional education (1983, 1985, 1987) has since been the dominant theory of practice for design studio education, but recent work by educators such as Belluigi (2016), Harwood (2007) and Webster (2005), have built on this to demonstrate the importance of the teaching relationship between student and teacher, and the dynamics created. This is especially prevalent in the one-to-one reflective feedback (desk crit), which is the backbone to the studio model. The relationships built between teacher and student is foundational, but the role of the teacher in this relationship can take many forms. Research concentrating on the teachers' understanding of their role found that the majority of teachers expressed a connection to the traditional atelier model of the expert as coach (Belluigi, 2016; Webster, 2004). Within this model, teaching is placed in a relaxed, one-on-one setting, but within the open studio where conversations are free to be heard and interacted upon by all. A close personal relationship was seen as an expected dynamic in order for the teacher as coach (Harwood, 2007; Webster, 2004) who acts as support, guidance and counsel and for the trusting relationship needed for the student in this environment.

However there have always been critics of this method, most recently, Swann (2002) calling for the end of this behaviour, which he called "sitting by Nellie." Swan maintains that it is

not sustainable in the current diverse classroom setting with its pressures and requirements, finding that teachers felt they could only enact the coaching model for those students who were already of a high level and fully acculturated (Brockbank and McGill, 1998; Stevens, 2002; Webster, 2005). Similarly, students reported feeling that tutors showed annoyance when they were not quick to understand and enact feedback (Webster, 2004) implying that Swann's perception of the sustainability of this model may be accurate and it may be difficult to action in the larger and more diverse higher education classroom which is becoming more common.

The introduction of technology into the classroom in higher education is seen as a method to reduce the burden on teachers (Chen et al., 1994; Diane M. Bender and Jon D. Vredevoogd, 2006; Koch et al., 2002) caused by the larger, more diverse classroom allowing size and diversity to be overcome by the use of online communication and resource sharing methods such as the virtual learning environment (VLE) to effectively transform any face to face setting into a blended or hybrid environment (Hart and Zamenopoulos, 2011). These online communication tools also seek to overcome distance, allowing students to be present in the studio without the need to travel or indeed relocate in order to study. However, in contrast to the positivity of online technologies as an aid to teaching and tool of widening participation, they also bring with them anxieties around their use, best practice and impact on the tradition of studio itself.

2.6 The virtual studio

Virtual learning environments (VLEs) are fundamentally changing the nature of education across disciplines and many studio taught courses are experimenting with technology and collaborative tools (Crowther, 2013; Diane M. Bender and Jon D. Vredevoogd, 2006; Hart and Zamenopoulos, 2011; Kvan, 2001a). Design studio pedagogy itself is focused around the

setting of a design problem and the students' exploration of and solution to this, referred to by Schon as demonstrating reflect-in-action (1985, 1987). In all cases, learning is directed by continual interactions between student and teacher (as the desk crit) providing an opportunity for iterative, formative feedback, before the student presents their solution to the design jury. In a traditional studio setting, this is open for all to participate and observe, but it is this socialisation and interaction of feedback that the virtual design studio (VDS) has so far struggled to replicate (Bradford et al., 1994). Kvan (2001a) highlighted these difficulties using the term 'bandwidth' to refer to the ease or lack of, when trying to recreate the open and participatory nature of the face to face studio and multiple synchronous participants. With studies recognised the impact where in a synchronous online environment, attempting to replicate the interaction and wide participation arrangements of the daily desk crit creates a necessity for the teacher in the virtual studio to prepare, plan and acknowledge the communication needs in advance (Bradford et al., 1994; Broadfoot and Bennett, 2003; Kvan, 2001a). This issue is amplified by that of the design jury at the end of each project, where the student is expected to present their work for discussion by a much larger audience. Although these problems can be addressed using asynchronous methods, these too have not been without problems for the participatory nature of the studio (Bradford et al., 1994; Crowther, 2013). The social and cultural interactive elements of the studio culture have proven a challenge where crit participants can review materials online and leave comments if they wish to participate (Bradford et al., 1994; Crowther, 2013; Hart and Zamenopoulos, 2011). Although this does reduce Kvan's (2001a) bandwidth issues in terms of ease, it also raises social learning issues where students choose to lurk rather than participate in conversation and where student interaction and feedback often lack the volume and length of a synchronous in-studio review (Bradford et al., 1994; Chen et al., 1994). Crowther (2013)

argues that the degree of self-motivation and autonomy required does not suit all students for all activities, however widening student abilities, cultures and expectations make this a difficult student interaction for teachers to manage. This lack of social-learning opportunities and ability to provide reliable, authentic learning experiences as integral feedback makes the VDS a difficult environment in which to replicate traditional teaching (Crowther, 2013) and therefore may not be suitable for all forms of studio teaching.

2.7 Changing culture of industry and possibilities for technology inclusion

In contrast to the expectations of VDS to replicate traditional teaching, some researchers are choosing to look instead at the opportunities technology offers for design education, socialisation and community interaction, which rather than attempting mimicry of traditional teaching, can more readily prepare students for life in the current and changing design industry (Crowther, 2013; Fleischmann, 2013, 2015; Rodriguez et al., 2018; Saghaf et al., 2012).

Technology has changed the way designers work, how they produce material and how they engage with other designers, the public and customers. Traditional designer roles, if not disappearing, are certainly changing (Fleischmann, 2015; Shaughnessy, 2013) and design education needs to be rethought in terms of how we prepare students. Highlighting what Fleischmann (p. 2015, p. 2) calls the 'democratisation of design' where more people have edged into what was once the creative domain of designers due to crowdsourcing platforms such as 99designs.com and fiverr.com which are changing how design is practised, taught and learned (Lupton and Bost, 2006). There is a global rise in the number of design and creation spaces or 'maker spaces' uniting people with a common interest in creation and design and Fleischmann (2013, 2015),

Lutpon and Bost (Lupton and Bost, 2006) and Shaughnessy (2013) argue that as the expectations of these changes, we must also acknowledge that learning too is changing. We are now seeing design theory courses offered for free on Massive Open Online Courses (MOOCs), although hands-on-design classes are rare to find on MOOCs it can be predicted that they will develop before long. However, Fleischmann (2013, 2015) suggest that formal design education too needs to respond to keep up. Current methods of one-to-one reflective practice and community of practice developed within the studio need to be assessed and opportunities expanded to match the current climate.

The oncoming of the MOOC may not have been quite the educational disruptor forecast by Harden (2012), but it has raised interest in how learning can be attained and what students expect from learning. For more industries such as design, access to convenient, on-demand and industry-relevant knowledge may see questions raised about why teaching in our higher education setting where the traditional higher education ethos of a set time, a set place and a physical person still dominate, after all, practitioners in the workplace are now becoming more mobile, displaced and virtual (Brown, J. S. & Adler, R. P., January/February 2008). The concept of teaching presence, or the teacher's role for learning, should now think outside traditional bricks and mortar classrooms where teaching is now venturing into the virtual. Bayne (2010) has asked that we now question our perceptions of place, body and time, maybe it is also time to apply these questions to the studio pedagogy in regard to teaching disciplinary habits (Gurung et al., 2009) and do we replicate or reinvigorate?

2.8 Summary

The studio as the pedagogy of art and design has the purpose of teaching the habits of thinking, doing and being a

practitioner, but what those are to the modern practitioner are changing. The literature has shown that expectations of the designer are influenced by the cultural changes technology has brought, but that the current educational setting for the designer still focuses heavily on traditions. For the teacher in the studio, uncertainty comes from trying to balance the expectations of the traditional pedagogy, implementation of changing educational cultures and their personal perspectives of who they are as a teacher and the role they fill.

3. Research design and method

3.1 Introduction

As previously discussed, the technological advancements of the last thirty years have allowed online education to become more feasible technologically, financially and operationally (Fleischmann, 2018), with incentives for institutions to offer online programmes, including a reduced strain on physical infrastructure and an increased opportunity to encourage participation from non-traditional students. However, universities offering art and design programmes are slow in offering online design education (Kvan, 2001b). Research exploring online design studio dwells on the potential dissipation of explicit interactions between teacher and students, and the tacit nature of knowledge associated with design studio teaching. This suggests the difficulties of asynchronous interaction within the highly social bounds of the studio make it difficult to truly replicate design education online.

This study therefore aims to evaluate the perceptions of the teacher in the design studio, focusing on their experiences, identity creation, and influences on teaching through the hybrid and online environments.

Over the course of this study I developed three areas of research questions to assist in framing my investigation:

- who is the design studio teacher;
- how do they create presence in a multi-dimensional studio setting; and
- how have various factors, including technology, influenced this?

3.2 Research setting and participants

Data collection was from an established on-campus post graduate programme running in a Scottish art school. Originally an on-campus programme, it opened up to online students in 2016 but chose to teach both groups as one programme, rather than as two separates. It should be noted that, for the purpose of study, all interactions for online students take place in the same courses through the same Virtual Learning Environment (VLE) as the on-campus students accessing the same teaching materials, recorded lectures and class interactions. However, although essentially, they are taught as one cohort, staff do acknowledge the need for asynchronicity for online students, and offer the option of online meetings, workshops and feedback to accommodate this on top of the teaching materials available within the VLE.

The participants themselves were recruited from the teaching team on this programme from across a range of professional roles, experience and responsibilities, and from those with experience of both online and face-to-face teaching in the studio model. From this pool of eight, five participants took part. The participants' seniority, experience and age ranges varied as did their backgrounds and academic interests making for a wide range of experiences within the programme.

Due to the small number of participants, all interview and

observation data has been anonymised prior to analysis. Gender and nationality-neutral names have been assigned, and all identifying labels or names related to courses have been removed.

3.3 Methods

This study aimed to build an understanding from the participants' perspectives and observation of teaching to explore the portrayal of presence in the design studio. I used qualitative methods to explore these perspectives, as the research aimed to illustrate the experiences of the participants and to collect and shape insights for future use (Kvale, 2007; Radclyffe-Thomas, 2011). The study was carried out using inductive methods (in order to allow theory to develop from the data rather than data being collected to test a theory), using semi-structured interviews and teaching observations.

Semi-structured interview data provided contextual, real-world insights into the beliefs and perceptions of the participants and teaching observations provided in situ access to behaviours and actions which the researcher could witness and record textually. Qualitative research is interpretive, meaning data from semi-structured interviews and observations may produce results which are unable to be generalised beyond the small participant group involved. However, interviews allow a more in-depth comprehension of the participant perceptions, motivations and emotions (Kvale 2007). Then along with teaching observations, allowed me to observe classroom actions and events in order to develop a more holistic understanding of the teaching being studied in a manner which is as accurate and objective as possible within limitations (DeWalt and DeWalt, 2002).

3.3.1 Data Collection and analysis

i. Semi-structured interviews with teachers

An interview is a directed conversation (Gillham, 2000; Ritchie and Lewis, 2003), the success of which is dependent on the ability of the interviewer to create clearly structured questions (Cohen et al., 2017), build rapport with participants (Opie, 2004), and to listen, probe and prompt (Ritchie and Lewis, 2003). The personal interaction of an interview is also appropriate when depth of meaning is sought, for example in gaining insight and understanding from a participant's personal experience (Gillham, 2000; Ritchie and Lewis, 2003). I chose semi-structured interviews in order to assist in generating rich data about participants' perceptions. In order to provide data in a form which could be analysed, the interviews were audio recorded, and transcriptions of these audio recordings were created to provide textual data for analytical purposes.

The semi-structured interview was designed around a group of key questions which were grouped thematically. However, although the groupings were adhered to, the questions themselves were used in a more spontaneous manner in relation to the participants' natural flow of discussion. Throughout the interview process, I was conscious of the need to refrain from allowing leading questions or for my preconceived ideas to influence the discussion (Kvale, 2007). When using a structured strategy for interviews, a degree of comparison can be made utilising the grouping and structure to provide comparable data. This is a decision which the interviewer will have to weigh against the desire for an interview where the discussion can carry on freely without interruption, pause or inhibition. It is also important to acknowledge that there are other possible weaknesses to this method: for example, the age, gender, professional profile and relation to the interviewer can affect how much people are willing to disclose, or their honesty in what they divulge. Denscombe (2007, p. 184) labels this as 'the interviewer effect'. For

this reason, it is important to state the purpose of the interview and topics to be discussed, at the start of the interview, to set expectations of roles.

iii.Observations of teaching

Observation is a standard research method for anthropological and sociological studies but has become more common as a tool for educational research collecting qualitative data, this involved observing classes and recording detailed field notes (DeWalt and DeWalt, 2002). Observations allowed me to observe non-verbal cues such as an expression of feelings and interaction with others and to assess items in interviews and observe from my own perspective, which may be different from that of the participants themselves. (Marshall and Rossman, 2006).

The observations were guided by the interviews, allowing me to make guided decisions on what should be observed. I observed teacher interactions with students in both live classes and asynchronously through the VLE for all courses taught by participants in the time period, however communication outside of regular teaching was not included (such as personal emails and interactions) as these were deemed to be private communication with students. Because this study is focused on the teacher, observing these more personal communications with individual students was deemed unnecessary.

Observations were carried out throughout the academic year, making use of both recorded teaching materials and in situ observations on campus allowing a familiarisation with the courses and programme generally as well as with the participating teaching staff. Initially, my presence in the classroom as unnatural, caused an uncomfortable few moments as the teacher settled into their normal routine. However, the repetition of my presence allowed over time, for this interaction to become normalised reducing the possible incidence of 'reactivity' to the presence of being observed.

My continuing presence over the course of the year allowed what De Munk and Sobo call (1998, p. 43) 'backstage culture' allowing for richly detailed interpretation and the access to 'unscheduled events'. This was especially beneficial in seeing unexpected interaction between teacher and student at the end of class.

Throughout the observation period, I kept field notes (Appendix 3) capturing details I saw about the learning environment, teacher's body language, repetitive habits, teacher behaviour, and areas where an unexpected or external factor disrupted the flow of teaching. In these I included my thoughts and responses to observations, questions raised by actions which required an answer to be sought, as well as basic chronological diary-like descriptions, observations of the teacher's behaviour, manner, technology present and in use and records of direct quotes. I also kept notes on whether behaviour in the classroom had been expressed previously in interviews and notes if my interpretations of the teacher in the classroom was different to that expressed in an interview. These notes provided material for reflection after each observation and preparation before the next observation as well as data which could be included in the coding exercise in order to assist in distinguishing emerging themes during data analysis.

iii. Data analysis

There are multiple analytical approaches to qualitative research, one of which is thematic analysis which is used to recognise, evaluate and describe patterns within data (Braun and Clarke, 2006). As this study was undertaken inductively (in order to allow theory to develop from the data rather than data being collected to test a theory), the thematic approach was chosen to code categories specifically derived from the data gathered from interviews and observations. For the purpose of data analysis, interview audio recordings were transcribed to provide textual data, field notes were kept

from all observations carried out and interviews and field notes pertaining to teachers were grouped and managed as individual, small, bound cases (Creswell, 2008), bound by individual courses related to the main participant teaching on that course. In order to assist in the analysis of the data gained from interview and observation, a thematic framework was used to highlight these patterns, identifying areas of importance or interest. The purpose of this was to combine systematic analysis of the text with analysis of its meaning in context (Vaismoradi et al., 2013), rather than to 'count frequency' in occurrences of words or phrases as this can result in missing the context (Morgan, 1993). For example, frequency may signify great importance, however it may also represent simply a willingness to talk about a topic at length. The resulting themes which emerged then informed the review of research literature to expand on these themes. To carry out this approach, Braun & Clarke's six-step framework (2006) was enacted to afford robust organisation for data analysis and the ability to identify explicit (semantic) themes from specific things the participants said, and underlying (latent) themes such as ideas, assumptions and conceptualisations.

3.3.2 Six steps of analysis

As previously mentioned, the initial categorising was inductive in nature, meaning that it wasn't reliant on an existing theoretical framework, rather its purpose was to promote exploration and discovery (Morse and Niehaus, 2009).

Familiarisation with the data

The first step in the analysis was for me to read and re-read through transcripts and field notes in their entirety in order to build familiarity with the data as a whole and then begin highlighting initial impressions, possible codes and any small detail that may be worth investigating further.

The example below from my field notes shows the basic nature of this step. I have made a note of a behaviour I saw which I thought may be relevant at a later time.

Impact of technology or prompt for persona?

Microphone. 3rd time chosen the handheld over the lapel even when there were issues and it caused a delay. – comforter/prop ?

At this stage it is a note to act as a prompt similar actions maybe observed, or should it relate to content in an interview. Equally, it may not show in any of the themes to emerge and therefore be 'cut' from the final data to be used.

Create initial codes

Once I felt I had a better understanding of the circumstances of the interview transcripts and field notes, I began a more thorough read-through of each, line by line to highlight words or phrases that I felt were important or interesting. At this stage I didn't have any pre-set codes, instead the codes developed and modified throughout the exercise. In order to assist in the management of the data, I used a piece of software designed specifically for this kind of analytical work, dedoose. This allowed me to add and modify codes or assign categories.

Search for themes

As I mentioned earlier, a theme is a pattern that shows something significant or interesting about the data. There are, however, no set rules about what makes a theme Braun & Clarke (2006). It is simply about its significance to my data and my research question. I found several codes which fitted together to relate to the teachers' use of technology, I collated these and labelled this set as "technology". However, on their own, this set of codes didn't necessarily provide a pattern or significance which related to the research

question.

In opposition to this, some of these technology codes also appeared in other categories that did feed into themes which proved useful. For example, lecture recording, video, YouTube, microphones, online may be obviously technology related, but they also appeared in a category alongside other codes labelled Influences. In relation to the research question, this theme proved to be pertinent in stage five, identifying items which teachers perceived to be influencing their personal identities, which crossed areas of pedagogy, technology, culture and teaching.

Review of codes

Once I combined my codes into themes where appropriate, I asked myself some simple questions to help justify my thoughts. Do the themes I have found make sense or is there anything which appears to not fit?

Define themes

I now began to refine the themes further to create my final set. The purpose of this was to identify what that theme was truly about and to assess if any other themes were related to this.

For example, with more analysis I was able to relate the use of video as a technology with burgeoning identity as an online teacher through the use of YouTube and television and then how it had made the teacher address issues of engagement.

Literature review and writing up

There were multiple compelling themes that came from the data, but the limitations of both the word count and time factors meant that this report could not possibly contain all of them. Therefore, the final stage of this process was to conclude analysis by selecting the themes which were most relevant and

to enable me to find and review existing research and other literature. This helped to broaden my understanding of the findings of my study, accepting those which would not be in use at this stage, but which may be relevant to future research.

The final themes were:

- Practitioner identity one facet of many
- Identity was fluid forming and reforming
- Online teaching identity varied, along with participants career journey
- Presence was about acknowledging the student
- Relationships and connecting
- Reacting to students
- Make technology work for you
- Technology changing student behaviours
- Students change even if traditions don't
- Class size impacts teaching
- Workload is increasing
- Studio itself has changed in the industry

3.4 Researcher context

I conducted this data collection and analysis as an active interviewer, observer and interpretivist. Researching from a constructivist perspective, I must acknowledge the influence my presence may have had on participants during both interviews and observations and of course the influence my professional role as a learning technologist for the programme in question may have had on the analysis of data. The context and relationships involved can also play a part in the success of this form of data collection, such as the ability to build rapport. To this end it is important also to acknowledge my prior relationship with the participants of this study as academic colleagues for whom I provide a digital support role and therefore I have a particular interest in digital learning and my own professional practice will be informed by this

study. However any potentially biased assumptions about online learning and or teaching on this programme have been deliberately tested through the use of grouping and structure to the questions and responses to provide comparable data and throughout data collection I was aware of the need to refrain from allowing leading questions or for my preconceived ideas to influence the discussion (Kvale 2007).

3.5 Ethics

In carrying out this study, I have sought to observe guidelines set out by BERA (2011) and with legal expectations set out by the General Data Protections Regulations (frequently referred to as GDPR) (2018). In doing this, the email request for participation (See appendix 1) made clear that any participation was voluntary and that participants could choose to answer or some of the questions and could direct which classes were observed, and that accepting and returning my email to acknowledge participation, they were consenting for their data to be used for the purpose of this study. Only those who voluntarily gave informed consent, were interviewed or observed. The email sent to participants gave details about the study and its intended use and asked participants to acknowledge that they had understood, and a consent form was attached to the email. This made it clear that as well as the choice to answer or not answer questions, participants could also withdraw at any time resulting in the withdrawal of their data. In order to comply with GDPR (2018) in regard to data storage, electronically signed consent forms, audio recordings, field notes and transcriptions are kept on an encrypted, password-protected, external drive of which I am the only person with access.

3.6 Limitations

There were four limitations acknowledge within this research. Firstly due to the nature of this study and its role as a

student assignment, time was limited due to both the demands of the academic calendar in which teaching observations could take place or for the availability of participants for interview and myself as a researcher, my available time during the academic semester and obviously in conducting and writing the findings of a study within a deadline set by a third party. This shortened timeline may not have allowed time for adequate data collection to conclude enough depth to insights. Secondly, I must recognise the limitations of this study due to the small size of the participant group itself and the impact of this. As I have only focused on one programme within one higher education school, I am unable to determine the likelihood that this research can be replicated at other institutions. Third, due to the small number of participants, only individual portraits can be created which may in fact prove unique to this programme or the school in question rather than be representative of the studio teaching population at large and so may not be considered generalisable. Lastly, I must acknowledge my own researcher bias acts also as a limitation and assumptions I make are created through my own lens and cannot be entirely subjective.

3.7 Summary

This study focused on the teacher teaching design in a hybrid classroom environment in order to highlight potentially interesting themes to arise from their experiences. The next section will discuss the findings within these themes in relation to existing research.

4. Findings and discussion

4.1 Introduction

Much of the existing research talked about the unique, separate and at times troublesome identity of the studio

teacher, and its impact on how that teacher connected with and portrayed themselves to their students. The strength of this identity of tradition, in turn, was discussed in the literature as a barrier to the acceptance of new methods and technologies being introduced in order to meet the demands of the current educational landscape.

The data from the interviews and observations presented a varied and complex picture of the design studio teacher which, when analysed along with existing research, provided rich context with which to discuss design studio teaching, however, in response to limitations on this study, the findings presented here are limited to the presiding themes which have emerged and will be presented here in relation to the three research questions.

4.2 Who is the design studio teacher?

4.2.1 Practitioner who teaches

Existing research demonstrated that affiliation with design practice and communities influenced the identity perception of the design-school teacher, at times causing a struggle to align this with current teaching practice (Adams, 2007; Anderson, 1981; Shreeve, 2011). These identity beliefs related to practising a design craft were present with the majority of the participants, however, participants demonstrated this by placing practitioner identity within their teaching practice.

... before I taught, I practised. [...] I've been teaching since my 30s (Robin)

Before coming to teaching I had spent the last 10 years building websites at a very high level (Reed)

Participants set the expectation early, with definite descriptions of themselves in relation to their practitioner connection, a sign of importance. Reed elaborated on why they felt their practitioner background was important.

Our teaching practices, kind of pedagogical practices are discipline specific. (Reed)

I think there's a difference between trying to teach people history compared even to the onset of digital humanities, compared to teaching a design practice. (Reed)

The mention that their pedagogic practice is 'discipline-specific' does verbally show a distinct identity aside from non-design subject teachers. Not someone who also teaches, but of someone who is comfortable discussing teaching at a detailed level. Where the participants did show distinction to their identity was in regard to being subject matter experts external to academia.

**I've never received any formal training in being an educator.
(Reed)**

**You kind of learn as you go, as long as you know your subject,
you can develop the rest. (Charlie)**

The desire to specify identity as having a practitioner background aligns with existing research (Ball, 1990; Beauchamp and Thomas, 2009; Belluigi, 2016; Shreeve, 2011) which found that practitioners teaching in higher education do identify firstly as practitioners due to association with the community where they have practised but there was no evidence from this group to show discomfort in aligning these identities as found by Shreeve (2011). What is shown is that the definition of self was more complicated than a singular strand.

Although practitioner backgrounds were offered, they were always within a statement about their current teaching role proving a wider identity belief. For example, Reed chose to specifically mention their personal perspective that there is a distinction between teaching their subject versus non-design-related subjects. The mention that their pedagogic practices are 'discipline-specific' does verbally show a distinct identity aside from non-design subject teachers, but this is very much the identity of a teacher. Of someone who is comfortable discussing teaching at a detailed level.

The statements regarding learning to teach from both Reed and Charlie show an awareness of themselves as teachers and of gaps in personal knowledge in this area. This awareness of strengths as a subject matter expert in one area but not another, aligns with research carried out by Beijaard, Verloop, and Vermunt (2000) who found that there was a correlation between levels of expertise with subject matter experts showing discomfort around identity with pedagogical selves due to the requirement to accept that they are no longer the expert.

The fact that participants placed their practitioner identity as part of the larger *teacher whole* supports that identity is not as simple as a practitioner or teacher. Rather that identity may change, that rather than static, identity is dynamic and as expressed by Adams (2007) and Anderson (1981), a journey on which the teacher-self is influenced by personal and contextual factors continuously throughout their career.

4.2.2 The dynamics of identity

As shown, the sense of changing or evolving identity (Adams, 2007; Anderson, 1981) was visible in interviews with examples from both Charlie and Reed demonstrating their acknowledgement of their teacher-selves. Looking further at this, the choice of language used by participants offered more insight into how the participant identities are formed.

In discussing the design of a new course, Charlie stated,

I've brought in much more from the [excluded for anonymity purposes] point of view because that was my background before... (Charlie)

And in the same way, Alex spoke specifically about their background as a digital artist and how it influenced teaching.

I was a designer; I know how important these skills are. (Alex)

Alex and Charlie both displayed past tense language, perhaps signifying that there is hesitation in accepting a new identity role. Conscious or otherwise, Wenger (1998) argues that this use of past tense could represent the resigning of a previous identity to make way for a new one. The particular phrasing used is interesting. Charlie chose to point out "because that was my background before". They could have simply expressed that their practitioner knowledge allows them to refine the course objectives to the student learning needs, but instead chose the words, "my background" and "before". A deliberate insertion of chronological identities, life before teaching, acknowledging a change from before to now.

Similarly, from Alex, a reference to their experience as a professional, "I was a designer. I know how important these skills are." Again, past tense is used to show a previous connection to a design profession as well as an assumption that this implies knowledge in the field. The use of past tense, in these examples, is interesting and Wenger may, in fact, be correct that in some cases we do release previous identities as we move on and they become superfluous. I think more interesting though is that this may, in fact, highlight a conscious acknowledgement of change. Anderson (1981), Adams (2007), Hatfield (2006) and Trautwein (2018) found that practitioners do acknowledge the change in identity and then work to align them, rather than relinquish them.

We again see the journey of identity creation at play. With Reed, we see a stronger, more assured teacher discussing their teaching in present tense, positive terms but Charlie and Alex using less confident, past tense language.

However, in context, we are not simply looking at teachers with identical backgrounds, practitioner or otherwise. Both Alex and Charlie are recent PhD graduates and more recent to teaching, whereas Reed is at a later stage in their teaching career. It can, therefore, be assumed that Charlie and Alex are at different stages on their journey in teacher identity creation than more established team members such as Reed and are yet to gain the experience which will allow confidence in identity to develop.

This personal nature of this journey means that all teachers are continually processing influence, and identities are being built and rebuilt throughout teaching careers. Relevant to this, changes to teaching practice and the impact were discussed by all participants in relation to teaching both face-to-face and online.

4.2.3 Becoming a technology-led teacher

All participants acknowledged a need to embrace the new online element of this programme but the degree of this varied individually. Kelly and Charlie raised the impact felt when technology didn't integrate with their chosen plan for teaching in that class.

It's never really worked out terribly well. I'm not sure how to make it work with the online classroom. (Kelly)

It's never fun and it will happen usually during a busy class, but what can we do? They're new and we don't know them yet. (Charlie)

Both Kelly and Charlie were referring to a section of the class when the teaching staff attempted to connect online students live with campus students in the classroom, the microphones in the room caused feedback which the teaching staff were unable to control. This caused a delay in teaching and anxiety amongst the teaching team. Kelly again raised concerns around incidents like this in class and the perceived lack of support to manage these situations.

We have all this support to help us learn the tech and that's fine but what we're missing is support to actually use it for teaching. It's quite stressful when something doesn't work and your students are watching. (Kelly)

It was interesting to hear Kelly, an established and experienced teacher, teaching a digital design subject, articulate this as a specific concern for the use of technology in teaching. Although Kelly's fear wasn't that they didn't know how to use a particular piece of technology generally, in fact, they acknowledged that there was support to use the technology. Instead, Kelly's fear was of the potential impact when teachers don't know if that technology will work for teaching. More importantly, on how it will impact on the perception of them as teachers, "and your students are watching." A pedagogical concern rather than technological. This was a focus of the research of Kvan (2001b) who raised the unpredictability of online communications as a problem for teaching studio online and why teachers were hesitant. Kvan felt that this requires teachers to pre-plan and prepare more than a face-to-face teacher would, therefore, reducing the spontaneous nature of studio feedback and in some cases causing the teacher to adjust from

comfortable teaching practice. On the contrary, Charlie seems much more accepting of the unpredictability of technology, almost accepting this as part and parcel of online teaching, “what can we do?” Alex also discussed their interaction with online tools during class in a matter of fact way.

They can see me here live in class and chat. And they were uploading stuff on the blog and lecture recordings as well, and I was like, “Okay, well, if you want it to be this way, have all these options, that’s cool by me.” (Alex)

In Alex’s class, face-to-face students were also choosing to use online tools made available for online students. This wasn’t how the interactions for the course had been designed, but Alex showed a degree of calm and acceptance of the changes, much like Charlie’s reaction.

Technology use was observed prominently throughout the courses on this programme to support the teaching of online students both synchronously and asynchronously. Live-streamed video of classes allowed online students to participate synchronously by typing questions to the teacher or replying to discussion requests. But how this was managed varied from course to course and not all teachers showed an acceptance or comfort level similar to Charlie and Alex. In the classes where Kelly was the main teacher, this interaction with online students was carried out by Charlie, acting as a tutor on the course. Charlie worked with both students in the classroom and online students using the lecture recording software. Kelly then focussed primarily on the physical classroom students. This situation was repeated in Robin’s classes, where again Charlie interacted with both campus-based students and online

students, but Robin only interacted with campus-based students unless prompted by Charlie at which point the interruption to the flow visibly unsettled Robin momentarily.

When asked about how this structure works, Robin explained.

I sort of felt it wasn't my brief, it was always an extra thing and we'd recruited extra staff to do the online, so I wasn't particularly going to ... you know, didn't feel it was my job necessarily [...] (Robin)

In terms of technology engagement, Robin does design in a lot of technology to their class and is in no way afraid of the technology itself, however to Robin, interacting with asynchronous online students was “an extra thing”. The reluctance to incorporate interaction with online students was not about the discomfort of technology per-se, but about the infringement into their established teaching practice. Instead, choosing to “hand-off” responsibility for synchronous online teaching to another member of staff and focus on the face to face.

Contrary to Robin's reluctance to explore their online teacher identity, Reed seemed excited at the opportunity to expand the boundaries of what a teacher is.

I'm interested in performance practice also aspects of cabaret. And that particular practice informs my research, but also that part of me as a teacher, as a lecturer in

particular... (Reed)

Performance and cabaret were repeated aspects of how Robin and Reed reconciled their face-to-face teaching identities with online, acknowledging the metaphor of teaching as a performance but also recognising both the medium through which their online students engaged with the teachers and the perception of the face-to-face classroom to the online students and the creation of telepresence.

It's a bit like again on television when a late-night TV host goes around the audience. (Robin)

Although Robin expressed previously that they felt it was another tutor's role to interact directly with online students during class, the design of their course and the set-up of the classroom has very much been created with the knowledge that there are online students watching. Robin identifies with their online student as that of the tv viewer watching late-night TV and their role as that of the talk show host. They reconcile how the host connects with their audience in the studio and then talks directly to the camera as the experience of their classroom for the online students. An experience designed to look like an old-fashioned cabaret club, but very much created with the modern televisual age in mind.

Here we see a contradiction in Robin's expression of not being responsible for interacting with online students to almost relishing in their new identity as cabaret MC or TV presenter, which we will look at in more detail later.

Thinking of the fluidity of identity, and how Reed may be at a later part of their identity journey to Alex and Charlie. Robin is a senior teacher with a long career. Their identity as a teacher was already strongly in place when online teaching was introduced to the programme. Therefore it may be acceptable to say that for Alex and Charlie, new to teaching, online teaching is an acceptable norm which they are aware of, however for Robin, this is much more of a challenge to their established methods and therefore it is not unusual for him to explore this in a different way to find how it will fit as part of their teaching and indeed their identity as a teacher. Again, giving support to the theories of identity as a journey of creation which is entirely subjective to the individual (Adams, 2007; Beijaard et al., 2000; Bullough, 2002; Rodgers and Scott, 2008).

The data has shown that individual teachers may feel a strong identification with cultures and practices, but it is only a singular aspect of an identity as a teacher. It would seem that the participants of this study are continuing to experience identity creation and will continue to do so individually (Akkerman and Meijer, 2011; Alsup, 2006) as they are exposed to varied influences, as they develop their teaching practice and indeed their teaching-selves. It is, therefore, valid to assume that these influences not only affect the participants' perception of themselves as a teacher but also will then influence how the participant presents themselves to the students.

4.3 How do they project presence in a multi-dimensional studio setting?

4.3.1 Connecting with students

The teacher's presence or the students' perception of the teacher is the transaction between teacher and student which helps to eliminate barriers and build a feeling of connection (Rodgers and Raider-Roth, 2006; Scott, 2016). The participants spoke of this very much as the building of relationships between teacher and student.

I'm happy for students to approach me, I relish the chance to chat about their work. (Reed)

I try to always find a reason to take my time and hang around just a wee bit after class. Someone always wants to chat a bit. Set their mind at ease. I think it's good to let them think it's all coincidence. (Charlie)

Both these statements show the casualness and informality between student and teacher can be as important in terms of relationship-building for the teacher as much as for the student. Reed's choice of the word "relish" shows the degree to which they enjoy this aspect of teaching and Charlie's acknowledgement that the casual chat was not quite casual but that they felt it was beneficial for the students to see it that way shows an acknowledgement of how Charlie feels their relationship should sit.

Interestingly, this ability to grab a casual chat with the instructor at the end of class or in the corridor, are often seen to be shortcomings of online and is the type of

interaction we see in recommendations of how to design teaching presence into an online course (Garrison, D. R., Anderson, T., & Archer, W., 2000). However, this water cooler style chat was evident as one of the ways the teaching staff on this programme have created connections with their online students. Alex was almost shocked when I ask them to describe how they build relationships specifically with online students.

We talk, it's very casual. They know they can come to me; I listen, I make myself available. It's just chat. Like with any class. (Alex)

Alex was specifically discussing the manner in which they use the online communication tool, Collaborate, to be present to the students very much in the manner of a traditional teacher. Their need to emphasise that the discussion is “just chat” or “very casual” is in direct contrast to the findings of Kvan (2001a) who found that online communication reduced the ability to encourage casual or informal, instead, that teachers had to plan carefully to incorporate online interaction.

Alex describes this transaction with students very much like the grabbed opportunity of a student speaking to the teacher at the end of the lecture which Charlie mentioned. However, as we see, on both occasions, there is an element of planned interaction at play. For online communication, teachers using this medium do need to be available online for the students to interact synchronously, therefore some element of planning must take place. And in Charlie's end of class chats, they have deliberately hung around expecting the students to

approach.

In discussing communication with the students, Charlie also highlighted the need to be receptive. Charlie teaches in a large lecture theatre situation where it would be easier to talk to the class as a whole but felt it was important to acknowledge that it is the smaller, personal transactions that create connections between teacher and student.

When I give them feedback, in front of their classmates, I try to reassure them, I'm constantly looking for them, asking where they are in the room. Sometimes they are too far away so it's a general feeling of I'm looking at you when I speak. It's about my actions and reactions to them. A reassurance. (Charlie)

He then went on to clarify,

...of course, the same goes for the online guys too. So it's the same, I turn to the camera and talk directly to that, as the person. (Charlie)

We are so used to teachers in classrooms that we can sometimes give little or no thought to how students feel the presence of the teacher. After all, they are right there. But this was a really interesting take from Charlie on doing more than just being physically present, instead recognising not that the teacher is there, but that the student is by seeking out the opportunity to make eye contact with the student.

Reed also acknowledged the anxiety a student can feel around the sharing of feedback in the classroom. They felt that as the teacher, it was important for the students to be aware that they understood their hesitation and anxiety when they delivered feedback but that students could trust their motives, that they cared about them. Reed chose to set the scene with students, set expectations of their behaviour.

I tell them out front, the thing is, is about actually, if I'm critical of your work it is because I really care about you and there is something you and your classmates can really learn from it. (Reed)

Where Alex spoke of the creation of the bond by presenting a relaxed, calm environment, Charlie and Reed have acknowledged the need to address anxiety and vulnerability that the student may feel in order to create trust and build a relationship based on caring and understanding, much as Noddings (2003) described their relationship with students. They have recognised the need for relationship building but also the work required to create a relationship rather than assume one will exist purely because of physical presence. In all three instances, the participants spoke of teaching behaviours which are not environment-specific, but rather human actions and reactions. This is a key teaching element of this program, where video is used as a primary teaching tool for both online and on-campus students. For the participants, the use of video is a standard element of how they teach rather than one which dominates the decisions of how they teach. Instead, the participants on this course have asked themselves which elements of their teaching are important in creating relationships with their students and then asked how they

could ensure online students were able to access this also.

Physical gestures were highlighted by Wang et al. (2019) as being important to create personal bonds between teacher and student in video and this was demonstrably present in all classes observed. Participants demonstrated how these natural teaching gestures could be incorporated seamlessly into live-streamed and recorded classes beginning with the greeting at the start of each class on campus. To ensure that the greeting was for all students, the teacher leading the session made a point of turning directly to the camera recording or broadcasting the class and acknowledging the students watching online with the words, "and for those of you watching from home".

However a more powerful example of how the video medium has been embraced to connect with and include online students into the on-campus class was shown by Reed, during a workshop where they were giving general guidance to the class around a project brief, in particular, pitfalls to watch out for. As they began to talk about what not to do while walking amongst the physical students in the classroom, Reed walked to the tripod holding the camera at the side of the teaching desk and got their face up close to the lens and emphasised with their full face, voice and hands saying, "do not do this." An example of creating presence using physicality, gestures and facial expression, something taken for granted in traditional bricks and mortar classrooms but not often considered for an online environment.

This acknowledgement of the student being part of the classroom appeared frequently throughout observations with examples of teachers modelling their expected behaviours of

inclusion and community between on-campus and online students with simple gestures, eye contact and verbal acknowledgement.

4.3.2 Reacting to student needs

The demonstration previously from Charlie of acknowledging the presence of the student came through also in the reactions to the student needs when students expressed a lack of understanding or additional support requirements.

Reed coined a phrase now used throughout the programme of “viewtorial” to describe short video tutorial material participants were creating in response to student needs.

I say, right, I’m going to make you a little 20-minute video where I say these are some of the things that have come up from our clinics, so I asked people to send me their work. And now I’m going to talk about it. (Reed)

For the participants, this ability to react to students’ work and share feedback to build the studio community was an essential part in how they felt students would perceive them as coach in the studio. But it is not only the reaction in terms of feedback and crit but also in seeing how students are interacting with the course materials and being able to change and redesign teaching “live”. Alex saw this reaction to student behaviours as part of the contact with them, part of being present to the student.

It seems our students prefer to read less and listen and watch more. Naturally, they’re digital media students. So, I figured that’s okay, you aren’t reading three pages of text, I’ll make a video and the text is also there, and that’s it. And again, it’s the contact with me they feel that I’ve seen them. It’s very important, yes, that is important. (Alex)

Although again we are seeing the participants use video tools to create this material, it is the reaction to student needs which is key. Demonstrating that the teacher is aware of the student. Interestingly though, Alex's comment of "Naturally, they're digital media students" could be used to reflect their own behaviour. This quick response to create video material to support students may be seen in two contexts, firstly we could say "of course, they teach digital media" hence their desire to provide digital media content. We could also wonder about the influence of having online students as part of the cohort and that video is a medium which can benefit all student cohorts on the programme. However, this reaction to the needs of the student mimics the traditional response of providing appropriate further readings for students in a traditional-style course. The environment itself hasn't changed teaching behaviour, simply how that behaviour is delivered, but the students behaviour of not interacting with textual materials and instead preferring video may be significant in terms of the studio teaching environment and align with findings from Fleischmann (2015) who felt that changes to the design industry and expectations of design and designers within an online-technology led society required higher education to consider the traditional teaching methods of design subjects in the studio environment.

4.3.3 Teacher in the studio

As already discussed, teaching on this programme takes place on campus, with live streams of classes available for online students to watch synchronously or asynchronously, as well as recordings for all students. All teaching materials, including lecture recordings are accessed through a central VLE, available to both online and on-campus students. This hybrid, on-line/on-campus element to the programme making it slightly more unusual in higher education.

In line with literature on the studio pedagogy, the participants discussed the continuous feedback cycle or desk crit where student work to a project brief and receive feedback on their progress at various stages (Belluigi, 2016; Webster, 2004). In this programme, on-campus crit sessions are referred to as clinics, where students can come specifically to discuss work on projects. However, participants discussed unexpected outcomes to the way clinics had been arranged.

They don't come to the clinic, they work on it at home so I don't get to talk to them, check on them and so often if they'd come to me earlier it would have made a difference. (Charlie)

... and so we have these clinics we run for two hours every Thursday morning, and nobody turns up for them most of the time. (Kelly)

The intention of the programme team to use these clinics as a way for students to chat to staff about their work was clear. However, due to the physical space available to this programme, the programme are operating without a dedicated studio space of their own. What were informal discussions in the studio are now more formal, diarised clinic sessions. However, this has not proven as popular with students, and teaching staff have found that that this method requires the students to show a higher level of autonomy or self-motivation. This aligns with research by Crowther (2013) who discovered that giving students the option of a crit session rather than having it as part of normal class, didn't suit all

students, with some choosing instead to forgo this option. However, Crowther's study was on the possibility of virtual studio courses and his findings were in relation to distance and asynchronicity affecting student behaviour. In the case of this programme, the same findings are seen for campus students but who are responding similarly to having a choice.

Charlie discussed the difference between the clinics run by this programme and their personal experience of studio as a student and perceived that technological changes may in part be responsible for the low level of participation by students.

The problem now is that they don't need to be here for the equipment, they've all got a gaming laptop at home now, so they stay home and work on their own. When I was a student we were always here. (Charlie)

Discussing the open reflective feedback in the studio and how important that interaction is for the relationship between the teacher and the student, both Charlie and Kelly demonstrated how the changing dynamics of the physical classroom have affected this and now students are choosing instead to stay home and work rather than come into the studio and work collaboratively. In contrast however, Alex has found that online students are still very active in collaborative discussion and sharing.

And especially now with the live chats on Collaborate, the other day when my students were having their discussion in campus here, I was also chatting with the online students

during that time because I didn't have to be involved for 15 minutes. (Alex)

From these comments, we can see that there is an element of tradition. Staff are trying to teach in the manner expected of a traditional studio programme, which according to the literature, is where students work together in one social workspace, but this has not always been successful. However, there has been a positive uptake of studio behaviour seen in a more organic fashion. Alex noted a crossover which had occurred between the student groups where on-campus students chose to use the asynchronous blogs and forums and online student chose to join synchronous class discussion and group work.

I think it's natural, and it's better that it's not forced by us. The students have decided to widen the group, they get more feedback. I encourage that. I don't see why the need to be different if they are happy. (Alex)

Kelly has also found a cross over between cohorts with online students requesting to take part in group work with campus-based students.

They do develop their own ways of working together. Some of them are more successful than others, and sometimes they run into problems as well. Usually they seem to come up with something that works. (Kelly)

Although this is far from standard in the programme, it is encouraging to contrast the enthusiasm of students wanting a more collaborative experience with those who have decided to work alone and consider how this could be harnessed in other virtual studio courses.

4.4 How have various factors, including technology, influenced this?

So far, we have concentrated on the factors which have influenced the participants creation of teacher-self and teaching-self. For this section we will look at the themes to come through regarding factors which the participants felt influenced their teaching of studio and what studio means to them.

4.4.1 Student numbers have increased

The most common element to come through from the data was the continuing changes around the educational landscape and primarily amongst those the increasing class size for each course.

Well obviously, the class size works against us. We're can't carry out the activities or contact time or even support we did. (Reed)

It was a smaller group, about 30-35 people at that point, which meant that it was easier creating that studio environment; when you've got 60, 70, 90, that's very difficult. It feels a lot more hands off than it used to. (Charlie)

Studio ideally is about individual, feedback-driven student teacher thing, but that's only viable when teacher student ratios supports it. Unfortunately, we're victims of our own success. (Kelly)

From accounts of the participants, class sizes have grown from what they considered a manageable studio class to a size now where they feel an impact on their ability to carry out the studio regime. Charlie describes teaching as feeling “hands off” and Reed mentioned not being able to offer the same level of contact time with the students. Concerns from teaching staff regarding class size are not unique to this group or even to teaching in a studio environment. The literature surrounding teaching such as those by Bender and Vredevoogd (2006) discuss the implementation of a digital technologies as a method to streamline workload caused by class size, suggesting the use of online technologies to provide feedback can reduce the burden. However, for our participants, they are already implementing technology in the studio and are still feeling the burden of the student teacher ratio changing. For programmes designed around hands on teaching activities, relationships between staff and students and expected cycles of feedback, impact on the teacher's ability to carry out this studio teaching role has proven worrying.

General workload was a concern for the participants although not specifically relating to class size. For Charlie, the allocation of work, due to their role within the team was concerning them. Charlie was worried that although they are teaching all the time, they have no time to reflect on their teaching and make changes.

But then that also presupposes that I've time to read up, investigate and I can create material to feed into it, and that is actually part of the problem about being a teaching fellow. I am not allocated any time at all to actually design teaching. I am teaching all the time – you're just so busy. (Charlie)

There's always something taking my time. I feel like I'm letting them down, I'm always behind with feedback and replies to emails. (Charlie)

For Charlie, the feeling of not being on top of things was affecting their perception of themselves and their teaching, feeling they were letting the students down. Charlie raised not giving feedback in a timely manner, and as we saw from the earlier examples of teaching presence, providing feedback to students was one of the key things identified by this group as helping to create relationships between teachers and students. For a group who define themselves by these relationships, it is understandable that this would be a concern. The issue of being unable to take time to reflect and redesign courses was raised also by Alex, another of the teaching fellows on the team. Alex used the visual metaphor of keeping plates spinning to describe how they felt about their workload.

Keeping plates spinning that there's no time, there is very little time to go off and do your own work on redesigning courses, just to teach. (Alex)

However, it wasn't only more junior staff who raised these concerns. Reed raised rising workload as an issue affecting all staff, and one they felt students needed to be made aware of.

We're all worked to the limit, whether, whatever you're doing, whether you're in professional services, an academic. It's the thing that I don't like saying to the students. It's not okay. It's not okay, that that's how it is, that's the reality of this context. I don't like it but they need to know. (Reed)

Reed found the idea that student expectations needed to be set in regard to the workload of staff disappointing. They repeated that this was "not ok", however unlike Alex and Charlie, Reed was more pragmatic. Although expressing a dislike for the situation, Reed is realistic that the situation exists, and it does affect the student experience and therefore it is better to make the students aware of this. Reed's decision to manage the expectations of the students falls into the behaviour we saw previously when we discussed the trust and reliability that the programme team felt was a vital element of their role as teachers. In this instance that trust, and reliability has extended to alerting the students to factors which will influence the experience students have regardless of expectations.

4.4.2 Changing students

Although participants were not explicit in the various elements of workload they felt were impacting on their

teaching, the changing dynamics of the students was present in multiple areas throughout the data. This was raised as having expanded the role of the teacher in recent years. For Kelly and Charlie, this was being able to offer additional support when required. Both noted a need for them as teachers to take this into account and plan for it.

Enrolment is different, we've got some students who are not at the level of the others, so it takes more time and planning to help them catch up. (Kelly)

You've got to be aware of differences amongst the student when we do group work. You sometimes need to move things around to make sure there is an even level of skill in each group. (Charlie)

Robin also raised this change, again raising a concern about teachers being able to provide the time and support they'd like to, however, where Kelly and Charlie gave the impression of a smaller group of students. Robin painted a picture of a queue.

Sometimes it's hard to spend as much time as some of the students really need to help them understand the way I should but there's always another student in the queue waiting to clarify something else. (Robin)

The changing student make up has had an impact on how these

teachers go about their job, and indeed the impact of this was discussed by Swan (2004) when he referenced the feedback heavy teaching style of studio and desk crits as “sitting by Nellie”, describing how this method for studio was no longer sustainable given the changes to class sizes and student educational backgrounds. But although the difficulties of widening the potential academic backgrounds of students were discussed, these experiences also brought positive reactions from the participants.

Robin felt the online students, describing them as self-selecting, managed better with academic requirements.

You know the age difference, we've basically got young people and mature students, there's quite a difference. They self-select almost, so they naturally do better and that's good for the younger students to be a part of. (Robin)

Charlie also saw the benefits on the diverse backgrounds within the classes, noting that the online students sometimes brought more recent industry experience than the teaching staff, offering valuable insights.

Online students are great at offering advice to the others, quite often they're further advanced than us teaching the course because they come with recent industry experience. (Charlie)

Exploring the changing dynamics of the students coming into

the classroom offered insights into how this could affect change on teaching behaviours and even the role participants saw themselves fulfilling as teachers, but also brought benefits of recent industry experience. As a teaching mechanism to prepare students for industry, it is understandable why Charlie saw this as a positive. Reed also discussed the design industry when talking about the experiences of this programme team's teaching and their experience of studio and questioned the concept of studio.

4.4.3 What is studio?

The previous two themes covered the changing background of education affecting these teachers, with class sizes and abilities affecting the more traditional teaching roles participants saw themselves in. The third theme to emerge in regard to factors influencing this programme was the definition of studio.

The concept of studio being more than a physical space or a set of guidelines for teaching was prominent in the data with evidence of definitions based on participants' own practice and willingness to experiment.

*I take a very broad definition of the idea of 'studio'.
(Reed)*

The literature around studio teaching discussed the purpose of this pedagogy, as being to teach habits of thinking, doing and being (Budge, 2016) and defines common practices in the studio which support this outcome (Belluigi, 2016). Initially it may

seem that Reed's statement about a broad definition, implies that this team may in fact be colouring outside the lines when it comes to teaching studio. Although Fleischmann (2015) did conclude that we had to consider changing our concepts of studio in order to support this modern digital field. So, Reed may in fact be supporting this research.

A response from Alex does well to elaborate on the experience of these studio teachers in response to defining studio teaching.

We talk about studio culture as being shared, communicative, connected and supporting and then we can't understand how online students can't join a crit when they have lives, family, jobs etc. It just becomes, it just runs differently, not necessarily all in real time, but rather in times that are good for them. It doesn't mean that they aren't part of the studio. If they see a lot of works. They just pop in there when it's good for them. (Alex)

For Alex, the shared studio culture is about connecting, being part of and taking part. They acknowledge that it's not necessarily about being in a set time and place. However, what is not mentioned by Alex is the notion of students taking part without interacting such as the barrier to online studio posed by Bender and Vredevoogd (2006). For Alex, it seems studio can be asynchronous but still requires the interaction between students, teachers and the group as a whole but the time and place can vary.

As discussed earlier, courses on this programme are taught in

a variety of ways, but the majority of on-campus classes open to synchronous online students take place in a dynamic teaching environment which allows a changing layout to meet the needs of that particular lesson. For the classes I observed, at first the classroom presented as a common studio classroom, however these teachers don't refer to this class as studio, they refer to it as cabaret teaching. Named after the set up of the room with round tables seating groups of students and now present, teacher with a microphone, acting as Robin prefers to call themselves, as late night TV show host, interacting with students in the room and acknowledging those online by gestures, remarks and eye contact with the camera. Hence the cabaret title. However, it is recognisable as studio. It is the element of sharing and collaborating, receiving and giving feedback, involving the asynchronous online students which define how studio works for this team in this situation.

'Studio' includes things like slack channels, Facebook groups. These things become our desks, our walls... 'Studio' also includes Skype & Collaborate, where [...] anyone/everyone can be a presenter, rather than a one-sided dialogue. (Reed)

Fleischmann (2015), called for a rethink of higher education in order to take into account the changing design industry, where transactions were online, face to face, world-wide, in local offices and where the traditional role of master and apprentice were no longer dominant.

Reed summed up their take on studio with insights from design practice.

What is studio – we use video to bring MY STUDIO to the students – this is real life, in the design industry now, we are all staring at our own screens with a messenger window open all the time so that we could think/make/share ‘remotely’ (e.g. in the room above us, but also in Greece, where we have an office, and in Brighton and Baku, where we have some contractors. (Reed)

4.5 Summary

The experiences of these teachers confirm the findings of previous studies where multiple experiences and beliefs assist in creating a teacher-self which is dynamic, forming and reforming throughout the teachers career (Adams, 2007; Anderson, 1981; Beauchamp and Thomas, 2009; Beijaard et al., 2004; Rodgers and Scott, 2008; Trowler and Cooper, 2002). However, findings partially disagree with those stating that the practitioner teacher holds a separate identity to that of other teachers (Adams, 2007; Anderson, 1981; Shreeve, 2011). Instead the teachers in this study demonstrated that practitioner identity was part of their teacher-selves, influencing their role as teacher in the classroom and allowing the participants to experiment with technology, teaching styles and roles in order to create a studio experience for their students.

This study also found that although technology was changing how studio may be enacted in higher education, technology itself was not the cause of change, disagreeing with findings from studies concerned with negative impacts of technology in the studio (Bender and Vredevoogd, 2006; Crowther, 2013; Kvan, 2001a) but rather a reaction to the external changes impacting

on higher education and the industry students were being taught to enter (Fleischmann, 2013, 2015; Swann, 2002).

5. Conclusion

This aim of this research was to generate understanding from the perspective of teachers currently teaching a design studio programme, incorporating both face-to-face and online teaching in order to answer the question, how the design studio teacher creates a perception of presence for their students in a hybrid studio environment? For this it was important to consider how teacher identity was formed and portrayed to students and to consider if the digital tools in use influenced this or if there were other factors involved. In order to investigate this, it was essential to acknowledge the assumptions made in previous studies and in conversation with art school teaching staff, that design studio teachers held a separate identity to other teachers.

Findings have shown that this is only partially true and in fact identity as a design practitioner is only part of a larger teacher self which grows and changes due to experiences of the teacher but nevertheless, is seen as an important part of the teacher-self which assist in the perception of presence acknowledged by the teacher and portrayed to the students. Aligning with research showing that the creation of caring relationships with the students was essential in order to build trust and understanding, this study also found that in order for this to happen, the student has to feel acknowledged by the teacher, that the teacher saw them and reacted to them.

Lastly, it was also demonstrated that technology itself is not detrimental to the concept of studio itself nor is it the

cause of change to studio teaching. Rather in alignment with previous research, this study found that the larger cultural changes in the higher education landscape are impacting the expectations on teachers and the design industry alike and in alignment with recent research on the future of design education, technology can assist in this transition. In opposition to previous research saying online technology proved detrimental to studio teaching, this research found that in fact, technology itself did not require a change to studio, rather the central core of teaching our students the habits of thinking, doing and being a practitioner remained the same.

This study concludes that in a world where the workforce is required to be mobile, multiskilled, virtually present, visual communicators, our pedagogical teaching needs to create space to allow student practitioners to develop new habits of thinking, doing and being a practitioner in the post digital age and in alignment with this, the teacher in the hybrid and virtual design studios must model these behaviours in order to present their studio teacher presence to their students .

To sum up, wherever I lay my hat, that's my studio. (Reed)

References

Adams, J. (2007), 'Artists Becoming Teachers: Expressions of Identity Transformation in a Virtual Forum', International Journal of Art & Design Education, Vol. 26 No. 3.

Akkerman, S.F. and Meijer, P.C. (2011), 'A dialogical approach to conceptualizing teacher identity', Teaching and

Teacher Education, Vol. 27 No. 2.

Alsup, J. (2006), *Teacher Identity Discourses: Negotiating Personal and Professional Spaces*, Routledge.

Anderson, C.H. (1981), 'The Identity Crisis of the Art Educator: Artist? Teacher? Both?', *Art Education*, Routledge, Vol. 34 No. 4.

Ball, L. (1990), 'What Role: Artist or Teacher?', *Art Education*, Routledge, Vol. 43 No. 1.

Bayne, S. (2010), 'Academeton, automaton, phantom: uncanny digital pedagogies', *London Review of Education*, Vol. 8 No. 1.

Beauchamp, C. and Thomas, L. (2009), 'Understanding teacher identity: an overview of issues in the literature and implications for teacher education', *Cambridge Journal of Education*, Routledge, Vol. 39 No. 2.

Beijaard, D., Meijer, P. and Verloop, N. (2004), 'Reconsidering research on teachers' professional identity', *Teaching and Teacher Education*, Elsevier, Vol. 20 No. 2.

Beijaard, D., Verloop, N. and Vermunt, J.D. (2000), 'Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective', *Teaching and Teacher Education*, Vol. 16 No. 7.

Belluigi, D.Z. (2016), 'Constructions of Roles in Studio Teaching and Learning', *International Journal of Art & Design Education*, Vol. 35 No. 1.

Bender, D.M. and Vredevoogd, J.D. (2006), 'Using online education technologies to support studio instruction', *Educational Technology & Society*, JSTOR, Vol. 9 No. 4.

Benmayor, R. (2008), 'Digital Storytelling as a Signature Pedagogy for the New Humanities', *Arts and Humanities in*

Higher Education, SAGE Publications, Vol. 7 No. 2.

BERA. (2011), 'BERA Ethical Guidelines 2011', Ethical Guidelines for Educational Research, available at: <https://www.bera.ac.uk/publication/bera-ethical-guidelines-for-educational-research-2011> (accessed 22 April 2018).

Blanden, J. and Machin, S. (2004), 'Educational Inequality and the Expansion of UK Higher Education', *Scottish Journal of Political Economy*, Vol. 51 No. 2.

Boling, E. and Smith, K.M. (2014), 'Critical Issues in Studio Pedagogy: Beyond the Mystique and Down to Business', in Hokanson, B. and Gibbons, A. (Eds.), *Design in Educational Technology: Design Thinking, Design Process, and the Design Studio*, Springer International Publishing.

Bradford, J.W., Cheng, N. and Kvan, T. (1994), 'Virtual design studios', In *The Virtual Studio*, presented at the eCAADe Conference Proceedings, University of Strathclyde.

Braun, V. and Clarke, V. (2006), 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, Routledge, Vol. 3 No. 2.

Broadfoot, O. and Bennett, R. (2003), 'Design Studios: Online? Comparing traditional face-to-face Design Studio education with modern internet-based design studios', *Proceedings of the Apple University Consortium Conference*, presented at the Apple University Consortium, College of Fine Arts (COFA) The University of New South Wales.

Brockbank, A. and McGill, I. (1998), *Facilitating Reflective Learning in Higher Education*, edited by Brockbank, A. and McGill, I., SRHE and Oxford University Press.

Brown, J. S. & Adler, R. P. (January/February 2008), 'Minds on Fire: Open Education, the Long Tail, and Learning 2.0', *Educause Review*, Vol. 43 No. 1..

Budge, K. (2016), 'Teaching art and design: Communicating creative practice through embodied and tacit knowledge', Arts and Humanities in Higher Education, SAGE Publications, Vol. 15 No. 3-4..

Bullough, R.V., Jr. (2002), 'Practicing theory and theorizing practice in teacher education', Teaching about Teaching, Routledge.

Calderhead, J. (1996), 'Handbook of educational psychology', in Berliner, D.C. and Calfee, R.C. (Eds.), Handbook of Educational Psychology, Macmillan Library Reference USA Prentice Hall International, New York : London..

Chen, B. and Pitts, A. (2006), 'Architects' Propensity for Sustainability: Knowledge Transformation through Education', Compagnon, Raphael, Haefeli, Peter and Weber, Willi, PLEA, web5.arch.cuhk.edu.hk, Vol. 2006.

Chen, N., Kvan, T., Wojtowicz, J. and Van Bakergem, D. (1994), 'Place, time and the virtual design studio', papers.cumincad.org.

Chick, N.L., Haynie, A. and Gurung, R.A.R. (2012), Exploring More Signature Pedagogies: Approaches to Teaching Disciplinary Habits of Mind, Stylus Publishing, LLC.

Cohen, L., Manion, L. and Morrison, K. (2017), Research Methods in Education, edited by Cohen, L., Manion, L. and Morrison, K., Routledge, London, United Kingdom.

Creswell, J.W. (2008), Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, edited by Creswell, J.W., Thousand Oaks: SAGE.

Crowther, P. (2013), 'Understanding the signature pedagogy of the design studio and the opportunities for its technological enhancement', Journal of Learning Design, ERIC, Vol. 6 No. 3.

Dearing, R. (2012), 'The Dearing Report: National Committee

of Inquiry into Higher Education', Archive.is, 24 December, available at: <https://archive.is/20121224091502/https://bei.leeds.ac.uk/Partners/NCIHE/> (accessed 21 September 2019).

De Munck, V. and Sobo, E. (1998), *Using Methods in the Field: A Practical Introduction and Casebook*, edited by De Munck, V. and Sobo, E., Altamira Press, p. 288.

Denscombe, M. (2007), *The Good Research Guide: For Small-Scale Social Research Projects*, Open University Press, p. 349.

DeWalt, K.M. and DeWalt, B. (2002), *Participant Observation: A Guide for Fieldworkers*, edited by DeWalt, K.M. and DeWalt, B., AltaMira Press, Lanham, [Md.] ; Oxford.

Fleischmann, K. (2013), 'Big Bang technology: What's next in design education, radical innovation or incremental change?', *Journal of Learning Design*, Vol. 6 No. 3.

Fleischmann, K. (2015), 'The Democratisation of Design and Design learning: How We Educate the Next-Generation Designer', *International Journal of Arts & Sciences*, Vol. 8 No. 6.

Fleischmann, K. (2018), 'Online design education: Searching for a middle ground', *Arts and Humanities in Higher Education*, SAGE Publications.

Garrison, D. R., Anderson, T., & Archer, W. (2000), 'Critical inquiry in a text-based environment: Computer conferencing in higher education', *The Internet and Higher Education*, Vol. 2 No. 2-3.

Gillham, B. (2000), *The Research Interview*, Continuum, London.

Golde, C.M. (2007), 'Signature Pedagogies in Doctoral Education: Are They Adaptable for the Preparation of Education Researchers?', *Educational Researcher*, American Educational

Research Association, Vol. 36 No. 6.

Gray, S.L. (2007), 'Teacher as Technician: Semi-Professionalism after the 1988 Education Reform Act and Its Effect on Conceptions of Pupil Identity', Policy Futures in Education, Symposium Journals. Vol. 5 No. 2.

Greenbank, P. (2006), 'The Evolution of Government Policy on Widening Participation', Higher Education Quarterly, Vol. 60 No. 2.

Gurung, R.A.R., Chick, N.L. and Haynie, A. (2009), Exploring Signature Pedagogies: Approaches to Teaching Disciplinary Habits of Mind, Stylus Publishing, LLC.

Harden, N. (2012), 'The End of the University as We Know It', The American Interest, available at: <http://www.the-american-interest.com/2012/12/11/the-end-of-the-university-as-we-know-it/> (accessed 30 December 2016).

Hart, J. and Zamenopoulos, T. (2011), 'The learningscape of a virtual design atelier', Compass: Journal of, journals-vip.gre.ac.uk, available at: <https://journals-vip.gre.ac.uk/index.php/compass/article/view/45>.

Harwood, E. (2007), 'Artists in the Academy: Curriculum and Instruction', in Bresler, L. (Ed.), International Handbook of Research in Arts Education, Springer Netherlands, Dordrecht.

Hatfield, C., Montana, V. and Deffenbaugh, C. (2006), 'Artist/Art Educator: Making Sense of Identity Issues', Art Education, Routledge, Vol. 59 No. 3.

Hawkins, A., Barbour, M.K. and Graham, C.R. (2011), "Everybody is their own island": Teacher disconnection in a virtual school', Society for Information Technology & Teacher Education International Conference, Association for the Advancement of Computing in Education (AACE).

HmsO, L. (1963), Higher Education: Report of the Committee Appointed by the Prime Minister under the Chairmanship of Lord Robbins, available at: <http://www.educationengland.org.uk/documents/robbins/robbins1963.html> (accessed 21 June 2019).

Ijsselsteijn, W.A., H. Ridder, D., Freeman, J. and Avons, S.E. (2000), 'Presence : concept, determinants and measurement', Human Vision and Electronic Imaging V, January 24-27, 2000, San Jose, USA, presented at the conference; Human vision and Electronic Imaging, SPIE.

Ivinson, G. (2012), 'The body and pedagogy: beyond absent, moving bodies in pedagogic practice', British Journal of Sociology of Education, Routledge, Vol. 33 No. 4.

Koch, A., Schwensen, K., Dutton, T. and Smith, D. (2002), The Redesign of Studio Culture: A Report of the AIAS Studio Culture Task Force, American Institute of Architecture Students.

Kvale, S. (2007), Doing Interviews, Qualitative Research Kit, edited by Kvale, S., London: SAGE, available at: (accessed 7 July 2019).

Kvan, T. (2001a), 'The pedagogy of virtual design studios', Automation in Construction, Elsevier.

Kvan, T. (2001b), 'The problem in studio teaching—revisiting the pedagogy of studio teaching', Elsevier.

Longden, B. (2006), 'An Institutional Response to Changing Student Expectations and their Impact on Retention Rates', Journal of Higher Education Policy and Management, Routledge, Vol. 28 No. 2.

Lupton, E. and Bost, K. (2006), D.I.Y.: Design It Yourself: A Design Handbook, Princeton Architectural Press.

Marshall, C. and Rossman, G. (2006), Designing Qualitative

Research, edited by Marshall, C. and Rossman, G., Fourth edition, Sage Publications, Thousands Oaks, California.

McClellan, D. and Hourigan, N. (2013), 'Critical Dialogue in Architecture Studio: Peer Interaction and Feedback', Journal for Education in the Built Environment, Routledge, Vol. 8 No. 1.

McClellan, D., Lamb, N. and Brown, A. (2013), 'Marginal voices: capitalising on difference in the design studio', Architectural Education, field-journal.org.

Morgan, D.L. (1993), 'Qualitative content analysis: a guide to paths not taken', Qualitative Health Research, journals.sagepub.com, Vol. 3 No. 1.

Morse, J. and Niehaus, L. (2009), Mixed Method Design: Principles and Procedures, edited by Morse, J. and Niehaus, L., Routledge.

Noddings, N. (2003), Caring : A Feminine Approach to Ethics & Moral Education, Second edition / with a new preface., University of California Press, Berkeley ; London.

O'Connor, E. (2007), 'The Centripetal Force of Expression: Drawing Embodied Histories into Glassblowing', Qualitative Sociology Review, search.ebscohost.com, Vol. 3 No. 3.

Opie, C. (2004), Doing and Reporting Educational Research, Vol. 30, SAGE.

Radclyffe-Thomas, N. (2011), Concepts of Creativity Operating within a UK Art and Design College (FE/HE) with Reference to Confucian Heritage Cultures: Perceptions of Key Stakeholders, Durham University, available at: <http://etheses.dur.ac.uk/3195/>.

Richardson, J. and Alsup, J. (2015), 'From the Classroom to the Keyboard: How Seven Teachers Created Their Online Teacher Identities', International Review of Research in Open and

Distributed Learning, Vol. 16 No. 1.

Richardson, J.C., Arbaugh, J.B. and Clevela, M. (2012), 'Using the Community of Inquiry Framework to Inform Effective Instructional Design', in Moller, L. and Huett, J. (Eds.), *The Next Generation of Distance Education*, Springer.

Richardson, J.C., Koehler, A., Besser, E., Caskurlu, S. Lim, J., & Mueller, C. (2015). (2015), 'Conceptualizing and Investigating Instructor Presence in Online Learning Environments', *International Review of Research in Open and Distributed Learning*, Vol. 16 No. 3.

Ritchie, J. and Lewis, J. (2003), *Qualitative Research Practice : A Guide for Social Science Students and Researchers*, edited by Ritchie, J. and Lewis, J., London: SAGE.

Rodgers, C.R. and Raider-Roth, M.B. (2006), 'Presence in teaching', *Teachers and Teaching*, Routledge, Vol. 12 No. 3.

Rodgers, C. and Scott, K. (2008), 'Handbook of Research on Teacher Education : Enduring Questions in Changing Contexts', in M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre & K. E. Demers (Ed.), *The Development of the Personal Self and Professional Identity in Learning to Teach*, New York: Routledge.

Rodriguez, C., Hudson, R. and Niblock, C. (2018), 'Collaborative learning in architectural education: Benefits of combining conventional studio, virtual design studio and live projects', *British Journal of Educational Technology*, Vol. 49 No. 3.

Rogers, P. and Lea, M. (2005), 'Social presence in distributed group environments: The role of social identity', *Behaviour & Information Technology*, Taylor & Francis, Vol. 24 No. 2.

Saghaf, M.R., Franz, J. and Crowther, P. (2012), 'Perceptions of physical versus virtual in design studio education', *International Journal of Architectural Research: ArchNet-IJAR*, Vol. 6 No. 1.

Salama, A. and Wilkinson, N. (2007), *Project: Paradigms and Directions in Architectural Education and Design Studio Pedagogy*, edited by Salama, A. and Wilkinson, N., Urban International Press.

Schön, D.A. (1983), *The Reflective Practitioner: How Professionals Think in Action*, Routledge.

Schön, D.A. (1985), *The Design Studio: An Exploration of Its Traditions and Potentials*, Riba-Publ.

Schön, D.A. (1987), 'Educating the reflective practitioner', Jossey-Bass San Francisco, available at: <http://www.thecommonwealthpractice.com/reflectivepractitionerreview.pdf>.

Scott, C. (2016), 'The Presence of the Teacher: Theory into Practice', in Flores, K., Kirstein, K.D., Schieber, C.E. and Olswang, S.G. (Ed.), *Supporting the Success of Adult and Online Students*, CreateSpace.

Shaughnessy, A. (2013), 'The state of design education', *Creative Bloq*, Creative Bloq, 13 August, available at: <https://www.creativebloq.com/state-design-education-8133968> (accessed 13 July 2019).

Shaw, J., Brain, K., Bridger, K., Foreman, J. and Reid, I. (2007), 'Embedding Widening Participation and Promoting Student Diversity', <https://www.heacademy.ac.uk/>, July, available at: https://www.heacademy.ac.uk/sites/default/files/resources/embedding_wp_business_case_approach_july07_0.pdf (accessed 12 June 2019).

Shea, P. Hayes, S. and Vickers, J. (2010), 'Online Instructional Effort Measured through the Lens of Teaching Presence in the Community of Inquiry Framework: A Re-Examination of Measures and Approach', *International Review of Research in Open and Distance Learning*, Vol. 11, No. 1.

Sheridan, K. and Kelly, M. (2016), 'The indicators of instructor presence that are important to students in online courses', *MERLOT Journal of Online Learning and Teaching*, Vol. 17 No. 4.

Shreeve, A. (2011), 'Being in two camps: conflicting experiences for practice-based academics', *Studies in Continuing Education*, Routledge, Vol. 33 No. 1.

Shulman, L.S. (2005), 'Signature pedagogies in the professions', *Daedalus*, Vol. 134 No. 3.

Stevens, G. (2002), *The Favored Circle: The Social Foundations of Architectural Distinction*, MIT Press.

Swan, K. (2004), 'Learning online: current research on issues of interface, teaching presence and learner characteristics', in Bourne J & Moore J (Ed.), *Elements of Quality Online Education, Into the Mainstream*, Needham, MA: Sloan Center for Online Education.

Swann, C. (2002), 'Nellie is dead', *Art, Design & Communication in Higher Education*, Intellect, Vol. 1 No. 1.

The Future of Higher Education. DfES. (2003), *The Future of Higher Education*, available at: <http://www.educationengland.org.uk/documents/pdfs/2003-white-paper-higher-ed.pdf>.

Thomson, P., Hall, C., Jones, K. and Sefton-Green, J. (2012), 'The Signature Pedagogies Project: Final Report', London and Newcastle-upon-Tyne: Creativity, Culture and Education.

Trautwein, C. (2018), 'Academics' identity development as

teachers', *Teaching in Higher Education*, Vol. 23 No. 8.

Trowler, P. and Cooper, A. (2002), 'Teaching and Learning Regimes: Implicit theories and recurrent practices in the enhancement of teaching and learning through educational development programmes', *Higher Education Research & Development*, Routledge, Vol. 21 No. 3.

United Kingdom Government General Acts. (2018), 'Data Protection Act 2018', [Legislation.gov.uk](http://www.legislation.gov.uk), Queen's Printer of Acts of Parliament, available at: <http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted> (accessed 7 July 2019).

Vaismoradi, M., Turunen, H. and Bondas, T. (2013), 'Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study', *Nursing & Health Sciences*, Vol. 15 No. 3.

Vowles, H., Low, J. and Doron, H.R. (2012), 'Investigating Architecture Studio Culture in the UK: A Progress Report', *Journal for Education in the Built Environment*, Routledge, Vol. 7 No. 2.

Wang, Y., Liu, Q., Chen, W., Wang, Q. and Stein, D. (2019), 'Effects of instructor's facial expressions on students' learning with video lectures', *British Journal of Educational Technology*, Vol. 50 No. 3.

Waterson, R. (2011), 'The Art of Teaching: Ernest Shackleton as Navigator/Teacher', *Journal of College and Character*, Routledge, Vol. 12 No. 2.

Watson, S. Watson, W. Richardson, J. and Loizzo, J. (2016), 'Instructor's Use of Social Presence, Teaching Presence, and Attitudinal Dissonance: A Case Study of an Attitudinal Change MOOC', *International Review of Research in Open and Distributed Learning*, Vol. 17 No. 3.

Webster, H. (2004), 'Facilitating critically reflective learning: excavating the role of the design tutor in architectural education', Art, Design & Communication in Higher Education, ingentaconnect.com, Vol. 2 No. 3.

Webster, H. (2005), 'The Architectural Review: A study of ritual, acculturation and reproduction in architectural education', Arts and Humanities in Higher Education, SAGE Publications, Vol. 4 No. 3.

Wenger, E. (1998), Communities of Practice : Learning, Meaning, and Identity, Cambridge University Press, Cambridge, [England] ; New York, N.Y.