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Research Article

The role of technology as mediating tools in developing professional identity & competency of trainee accountants.

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Abstract

The paper contributes to the literature on technology mediation, albeit within a specific assessment context. It achieves this through an exploratory study, in which different perspectives of social actors (n=34) interacting within the initial professional development (IPD) assessment environment of trainee accountants are explored and interpreted. The experiences of social actors' interactions with technology within the assessment environment are explored to reveal the ways in which technology impacts and shapes the interpretations of professional identity and successful performance within the assessment environment. In doing so, the findings show that mediation of technology in this context, is an emotive and sensory interaction, in which power relations are formed between agents within the assessment environment.

Keywords

Technologies, mediating role, professional identity, assessment

Introduction

The author is a Fellow of Association of Chartered Certified Accountants (ACCA) and is a Senior Lecturer at Leeds Business School, teaching on a range of modules on undergraduate, post graduate and professional accounting programmes. She has an active research interest in accounting education and is interested in technology-enhanced learning.

This paper is an output from a PhD study that evaluates assessment of trainee professional accountants during their initial professional development (IPD). It explores the mediating role of technologies in this specific assessment context. This paper focuses on the mediating role of technology in developing competency and

professional identity of trainee professional accountants, which emerged as significant themes of the original study.

The paper will present data analysis findings of the study relating to the mediating role that technology plays in developing competency and professional identity of trainee professional accountants. In doing so, the paper explores the emotions and beliefs interpreted from participants' accounts of interactions with technology in this specific assessment context.

Technology is being increasingly by professional accounting bodies (PABs) to assess the performance of trainee professional accountants in exams e.g. computer based testing (CBT) and exams (CBE). Consequently, CBT and CBE are due to be implemented in higher education institutions delivering professional accounting programmes, in the near future. Technology is ubiquitous in the workplace, with the performance of trainees' use of technology being assessed as part of their recruitment process.

As the use of technology increases in professional accounting assessment it is important to understand the emotions, beliefs and values accounting professionals place on technology and its use in assessment. This allows for professionals involved in accounting education to better develop assessment strategies which leverage the capabilities and potentiality of technology to enhance professional learning, development and assessment.

Background

"The overall objective of accounting education is to develop competent professional accountants" (IAESB, 2014, p.4).

Initial Professional Development (IPD) is defined as, "the learning and development through which (trainee) professional accountants first develop competence leading to performing a role as a professional accountant. IPD includes general education, professional accounting education, practical experience, and assessment." (International Education Standard 3, 2015)

IFAC (2015) states, "Assessment, measurement and monitoring are central to the process of demonstrating that professional competence has been achieved and therefore that learning and development has been effective."(Para 43.)

Professional accounting bodies (PABs) have implemented practical experience and its assessment as an integral part of IPD since 2003. Reports such as the Mercer Report (2010), "Generation Y, Realising the potential," evaluate changes to work practices in the accounting profession and critical talent challenges for organisations. The report explains work practice changes in the profession are being accelerated by ever-changing technologies. Additionally since 2015, that PABs have introduced computer based testing (CBT), exams (CBE) and assessment (CBA) into professional accounting education and its assessment within IPD.

Despite the increased use of technology in IPD, to date there have been no studies that explore the mediating role of technology within the assessment environment. This demonstrates a significant gap in knowledge because in order to use technologies effectively it is important to understand, not just the capabilities of the technology itself but also the values, affordances, beliefs, perceptions placed on those technologies by the social actors using them.

The aim of this paper, therefore, is to present findings relating to a study undertaken that explores the mediating role of technologies within IPD assessment of trainee accountants. In doing so, an understanding of the mediating role of technology in this specific assessment context is gained. In addition, new knowledge is created relating to the emotions and beliefs placed on technology by trainee accountants being assessed and by professionals assessing the performance of trainee accountants within the assessment environment.

In exploring the mediation of technology in this specific assessment context, people working in professional accounting education can better understand the values, beliefs, perspectives held by accounting professionals, on technology for the purpose of assessment. Additionally, in understanding the capabilities of technology in this context, people working in professional accounting education can better leverage the potentiality of technology to develop effective learning and assessment strategies.

Literature Review

The review of literature seeks to provide a context in which the phenomenon being explored; technology-mediated competency assessment is grounded.

Technology

The word "technology" stems from the Greek word *techné*, which designates "skill," "art," and "craft," a mode of doing or making. *Techné* in the original Greek usage referred to the skill or power of doing/making as well as that which is performed, produced, or fabricated—in other words, *techné* as designating both art and artifice (Heidegger, 1953). He goes on to explain that *Techné* is said to have opposite meaning to *physis* (nature), which is 'arising out of something of itself.' This therefore implies *Techné* is mediation by an external agent (reason) to an object in order to bring about change in it.

The role of technology is as an external object, but one with its own intentionality and identity. Technologies are used in a range of different contexts to perform actions and mediate interactions. Weller (2011) notes, new technologies have the potential to reshape all scholarly areas.

"There is no doubt that professional learning in all disciplines is changing fast, not only in answer to market pressures and regulatory concerns, but also in response to new technologies and the pedagogies that are being constructed around them" (Wenger 1998;Maharg 2006; Barnett 2000; Eraut 1994; Schaffer 2004) cited Maharg (2007, para.55).

Technology is conceptualised as an agent within the competency assessment environment. The research undertaken seeks to explore its mediating role within assessment. In its agency role, technology is a medium of human action, facilitating certain types of work and constraining others. (Orlikowski, 1992).

Technology in assessment

The research study explores the mediating roles of technology in a specific assessment environment. Hence, observations, perceptions, values, beliefs associated with technology and the ways in which technology exercises agency is within a specific assessment context.

There are a wide range of studies that explore the use of technology in different contexts; Learner self-regulation, Nicol, (2008), formative assessment; Peat and Frankin (2002), disability access; Almond et al (2010), essay scoring approaches; Valenti, Neri and Cucchiarelli (2003), transformative learning & professional contexts; Charlton et al. (2009), simulation of professional environments; Maharg (2006).

However, typically, research papers in the area of assessment do not address the issue of mediation, instead focusing on the use of technology in these contexts.

Mediation of Technologies

Vygostsky (1978) writes about the "Mediation Triangle", in which humans in inquiry and the subject matter of inquiry are thought of as directly related but also indirectly related via an artefact/tool.
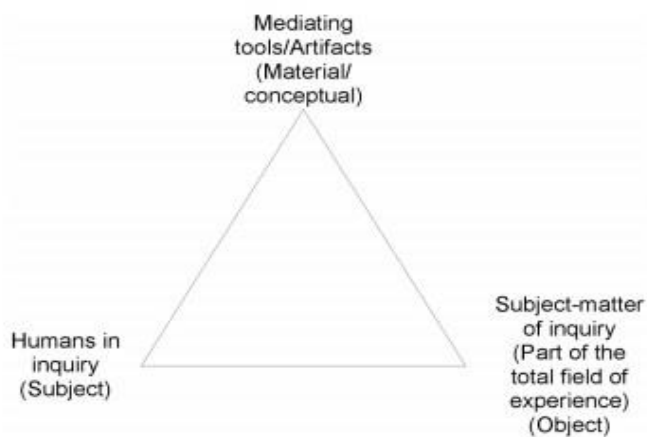
Fig. 1 The Mediation Triangle (Vygotsky, 1978)

Figure 1 shows the inter-relatedness of humans (trainee accountants) who interact with mediating tools/artefacts (technology, people) within their field of experience (initial professional development).

In What Things Do, Peter-Paul Verbeek (2000), explains the concept of mediation helps to show that technologies actively shape the character of human-world relations. "Human contact with reality is always mediated, and technologies offer one possible form of mediation." (pg. 11)

Technology does not just mirror reality but actually shapes the relationship between humans and their world. "Technology is an outcome of design and design is under the aegis of human intentionality and imagination." (Kaptelinin and Nardi, 2012, p.3)

A post-modern view of technology, suggests that reality is co-shaped by technologies. Technology represents a reality which is interpreted by the user in different contexts by different users. As such, technology can be transformative, impacting on the way humans interact with the world as well as what humans learn and know about the world. In mediating an action or interaction artefacts influence how things are revealed to us, influencing perception, interpretation and action.

Therefore, technology is an active agent that mediates assessment and has the capability to influence the perception of human agents involved in IPD assessment of trainee professional accountants.

Done Ihde (ibid) regards mediated perception as the intentional relationship between humans and their world as mediated by technology;

Human ⇔ Technology ⇔ World

"Technologies are nearly and simultaneously social. They are conduits of essentially social knowledge and communicative patterns, such as those that are characteristic of learning and its assessment." (Cope et al, 2011, p.87). Waltz (2004), suggests we need to give artefacts a voice and "[bring] into account technology in educational analysis."

Mediation theory suggests that certain aspects of human's perceptions or interpretations are shaped by mediating tools. As such, technologies mediate perception and action and can facilitate or constrain performance of certain actions. Artefacts that we use influence how things in the world are revealed. Ihde's theory is based on interactions between humans and artefacts through actual use. This is significant in the positioning of the study to which this paper relates, as the study explores how technology impacts on the ways in which trainee accountants think of themselves and their performance, as professionals during their IPD assessment.

Mediating tools

Mediating tools have dual purpose; they shape human interpretations of the world but they also shape humans and their interactions in the world.

In this study, technology is conceptualised as a mediating tool which is used by humans during interactions with their everyday life-worlds. Bernhard (2007) explains that using tools makes it possible to act in more powerful and functional ways and enhances and alters human development.

Influential analysis of post-phenemological analysis of technologies by Don Ihde (1979) evaluates how technology mediates humans' relations to the world. Human experience is shaped by mediating tools.

Mediating tools have dual purpose; they shape human interpretations of the world but they also shape humans and their interactions in the world.

Human ⇔ Mediating tools ⇔   World (Don Ihde, 1979)

Tools play an important role in Dewey's philosophy of education and in his philosophy of technology (see for example Hickman 1990). Mediating tools are used to enhance and support our thinking (Mitcham, 1994), who suggest that "*We think through technology.*"

In exploring the mediating role played by technology in the initial professional development of trainee accountants, an understanding of how those involved in assessment, *think through technology* is to be gained. Importantly, this will provide knowledge on the values, perceptions, beliefs ascribed to technology by those using it for/during IPD assessment.

Professional Identity

Professional identity of trainee professional accountants is often expressed through "everyday interactions as part of cultural traditions and institutionalized patterns of behaviour (Alvesson and Willmott, 2002, p19). Beijaard et al (2004) suggest that a person's identity is not fixed but relational, in that it changes in different contexts.

The literature informs us that technology mediates our everyday life-worlds and impacts on interactions with others in the world and how we view the world. Through exploration of interactions within the assessment environment, the study presents how technology mediates the development of professional identity of trainee accountants within the IPD assessment environment.

Professional Competency

Professional (accounting) competency is socially constructed through the interactions, knowledge and ideologies of social actors within the professional accounting world. This shared meaning of professional competency translates into set of ideals (Macdonald, 1995), behaviour and presentation (Anderson-Gough et al 2000), corporate image (Coffey, 1994), identity regulation (Alvesson et al, 2008), technical expertise (Grey, 1998), social status and prestige (Weber, 1968) and moral communities (Durkheim, 1984) of like-minded individuals who are members of professional accounting. Notwithstanding requirements across the professional bodies, there is consensus that direct observation in the workplace is a better way to assess competence than paper based examinations (Stolowy, 2005).

In exploring interactions within IPD assessment environment, the study identifies the mediating role played by technology in developing trainee accountants to achieve successful accomplishment in the workplace.

Methodology

Case Study

Robson (2002), defines a case study as a "strategy for doing research which involves an empirical investigation of particular contemporary phenomenon within its real life context using multiple sources of evidence" (p.178). Punch (2005), discusses a case study strategy as an approach to qualitative research design alongside ethnography, grounded theory and action research. He goes on to explain, "The basic idea is that one case study (or perhaps a number of cases) will be studied in detail, using whatever methods seem appropriate. While there may be a variety of specific purposes and research questions, the general objective is to develop as full an understanding of that case as possible."(p.144)

This study seeks to develop an in depth understanding of the mediating role of technology within IPD assessment and how it develops the professional identity and competency of trainee accountants. The process of research undertaken involves thoughtful in depth research, with the objective of understanding not just how technology mediates IPD assessment, but why mediation happens the way that it does and the consequence of it. As such, this study seeks to capture the complexity of technology mediation within a specific assessment environment and explore the themes i.e. patterned meanings and responses in the data set.

Data Collection

Consequently, a qualitative, interpretative multiple case study (see Eisenhardt & Graebner, 2007; Bryman and Bell, 2007), was conducted. Data was collected from semi-structured interviews (see Appendix 1) with a range of social actors involved in IPD assessment.

Data from the interviews was analysed using thematic analysis (Braun and Clarke, 2006). Thematic analysis minimally organises qualitative data set in rich detail by adopting a theoretically flexible approach. A theme captures something important in relation to the research question and represents some patterned meaning or response in the data set (Braun and Clarke, 2006, p.82).

Sample

There are numerous social actors involved in IPD assessment of trainee accountants. In understanding technology mediation and how it develops the professional identity and competency of trainee accountants, it is important to gain range of perspectives, opinions, thoughts, and beliefs, from those involved in assessment. Thus, the study adopts a multi-perspective approach in which experiences of mediation are told not just from the lens of the trainee accountant, but a range of social actors interacting within the assessment environment.

The different range of contexts, and exploration of phenomenon of technology mediation within it, is guided by both theoretical and empirical logic (Mason, 2002).

Purposive sampling is concerned with constructing a sample which is meaningful theoretically and empirically, because it builds in certain characteristics (Mason, 2002). It is important, that in addressing the research aim, data is collected from participants who have experience of IPD assessment and interactions with technology within IPD assessment.

Accounting professionals purposively sampled to take part in the study form two main groups. The first group of participants trainee accountants currently experiencing initial professional development (n=8). The second group of participants are assessors who have responsibility for initial professional development assessment; accounting academics (n=9), professional body representatives (n=5), international accounting education standards board (IAESB) representatives (n=4) and workplace assessors (n=8) across six different UK professional accounting bodies (PABs).

Data Collection

Semi-structured interview

The data collection method employed needs to be sufficiently open-ended to capture rich contextual data. There is an integration of theory-informed questions and open-ended questions within the interview schedule in order to capture experiences of IPD assessment.   These questions probe for examples of experience in using technology within the IPD assessment process. Questions also ask about perceptions and beliefs motivating factors or barriers to using technologies. These questions are informed by theory. These include mediation of technology principles based on technology presence (Kiran, 2012), technology acceptance model (Ventakatesh et al 2002), affordances theory (Gibson, 1986) and structuration of technology theory (Orlikowski, 1992).

Data Analysis

Qualitative data that emerged from the interviews was analysed using thematic analysis.
Themes were formed as conceptual links of expressions (Ryan and Bernard, 2003) captured by the codes. I followed the principles of Braun and Clarke (2006) in analysing the coded data, to develop associated descriptions and narrative into themes, which are explained in the findings section of this paper. An open ended, iterative-parallel and comparative analysis approach to analyzing the data was employed.

Credibility

The credibility of the findings of the study are enhanced by adopting a scientific research approach in which knowledge claims are deemed to have scientific merit. This is achieved through the use of a rigorous research methodology. The data collection instruments use validated constructs which inform some of the questions posed. In addition, the interview schedule asks questions around the same valid construct in slightly different

ways. Participants are known to me through my work as a former tax accountant and presently an accounting educationalist. Lincoln and Guba (1985) suggest that the most important factor in ensuring credibility of a research study is the credentials of the participants. All participants' qualifications, membership/professional status were checked and verified through personal networks, organization websites and LinkedIn profiles.

Dependability

Marshall and Rossman (2006), pose the challenging question, "How can we be reasonably sure that the findings would be replicated if the study were conducted with the same participants in the same context?" (p.201).

Webb et al (1966, in Blaikie, 2000) asserts that it is essential for sociologists to "employ multiple methods in the analysis of the same empirical event [because] each method will reveal different aspects of empirical reality" (p.263). Marshall and Rossman (2008) explain that for the qualitative researcher, it is more important to register the intricacy of the different contexts. Rather than using multiple methods to register these intricacies, I used multiple *viewpoints* of those involved in IPD assessment to overcome the intrinsic bias that arises from singular observations of a process or interviews with trainee accountants.

Ethical considerations

I made initial contact to participants via email/LinkedIn and then followed up with an initial phone call or face to face meeting. It is in this meeting that I went through the research study information sheet. Just before commencement of the interview, participants were requested to read and complete and sign a consent form. I also explained how I would anonymise the interview data and ensure that anything cited would not be traceable back to them or the organisation to which they were referring. Additionally, each participant was informed of their option to withdraw from the study at any time.

Participants had volunteered a time when they were free for an hour or an hour and a half and subsequently, did not lose any remuneration or time from work in taking part. Those participants based outside of England were telephone interviewed on loudspeaker and recorded via a voice-recorder.   All interviews were recorded using a recording device (participants were notified of this as part of granting consent). The files were deleted once the data was uploaded onto the secure university network.

This study was approved with no recommendations by AREA 12-058 Ethics committee of University of Leeds.

Findings

There is a range of socio-cultural and socio-environmental factors that impact on the mediating role of technologies with the IPD of trainee accountants.

The role of technologies as mediating tools in developing the professional identity and competence of trainee accountants is transient and contextual. The extent to which technology is used and interacts with trainees depends on a range of factors; intrinsic/extrinsic motivation of use, technology affordance, and technology potentiality/presence.

Intrinsic/extrinsic motivation

All trainees remarked that they used technology in their jobs to construct work products e.g. statutory accounts, tax computations as it is normative action within their organisation i.e. everybody uses technology to do so. There is no issue for them in doing this, because they are motivated to do it, as they want to perform this action, even though it is a requirement. A small minority of workplace assessors (n=2) expressed that they only used technology because they have to (extrinsic motivation) and wherever possible, avoided its use.

Affordance

This construct is about the compatibility of using the technologies with its intended use i.e. can the user of technology use it in the way intended. When unravelling issues raised by participants, it is clear that some of the issues relate to the capability of the user. That is, that they are just unable to use the capabilities and functionalities of the technology in the way that they intend, due to a lack of operational skill and/or knowledge. However, there are also organisation level barriers that are cultural and structural that prevents the use of technology in the way intended by the assessee (trainee accountant) or assessor.

Potentiality/Presence

This construct relates to the capability of the technology rather than that of the user. Many participants explained that technologies probably have the capabilities to do a lot of the things that they do not think technologies should be used for in IPD e.g. marking case studies. It is therefore the case that participants feel that just because the technology has the potentiality to perform a role, it doesn't mean that it should. The affordance placed on the technology has to be driven by the intentionality and purpose of using it and then a determining of whether it can in the way intended.

For example, we have seen that it is perceived as acceptable to use technology to make recruitment and selection decisions, yet participants do not believe that technology should be used to mark case studies. It is the very absence of emotional intelligence and empathy by the technologies used in recruitment that is the reason for its selection for use by employers.

Thus, we see that technology can adopt a range of mediating roles within IPD.

However, the extent to which technology transforms an experience in a way that makes learning and development easier, better and indeed cheaper for the trainee accountant is found to be impacted by the following;

Power relations

Analysis of the data collected from participants, suggests that during interactions between the user, technology and resultant mediated action, clear power relations exists. If technologies cannot be used to perform action in the way intended, an emotive and sensory response is experienced by the user/potential user which often leads to non-use of the technology. This can be a result of power relations between the user and technologies, in which the user feels disenfranchised and demotivated by not being able to use the technology in the way intended. It is in this instance that technology becomes a disabling tool rather than an enabling tool. The extent, to which technology disables or enables, is based on a variety of contextual factors, one of which is the negotiation of power within the mediation triangle.

One way in which technology exerts power as an active agent during IPD, is in the recruitment and selection process. Here, technology is used in what Ihde (1979) refers to as an alterity context i.e. as if it were another person, by employers in the recruitment of trainee accountants. Trainee accountants and workplace assessors spoke extensively of the use of psychometric testing and profiling in recruitment and selection that is automated by technologies.

Trainees spoke of using informal spaces outside of work e.g. online forums to share stories and experiences. They also used forums as a means of asking peers for advice on work matters that they were unwilling or unable to share in work. This informal space is another area in which trainees develop their professional identity and competency. Interestingly a few assessors raised the use of unauthorised forums in this way as an issue. This is due to the lack of control that employers can exert over the trainee in these spaces.

Emotional and sensory response

It is very interesting that participants made no reference to emotional attachment of technologies that are used during the IPD of trainee accountants. In describing their use of technologies they made exclusive reference to the functionalities and capabilities of technologies used in their work to perform tasks or used in an education context to create or access learning and assessment materials. However, it is the case that in using the technology, the response to its mediation in action is always sensory and often emotive.

One trainee explained that the automation provided by technology to perform some of her work tasks, removed the fun from the experience. What is interesting in this case is that this trainee used technology (an online business simulation game) to mediate an assessment experience in which her knowledge of accounts preparation (what she now does in her job) was transformed. The mediation of technology of the assessment task enabled her to forensically analyse the information output from the technology and apply her own

knowledge to gain a better understanding of the task and how to perform the task. She was able to identify the error in her manual calculation by using the output of the business simulation game by replicating the inputs manually. She felt a great sense of satisfaction and fun in doing this.

However, she suggested she "loved" the business simulation game. Her emotive response to the mediation of her experience using the technology is actually due to the fact that the mediation transformed her understanding, enabling her to perform her tasks manually with confidence. She used the technology to check her performance when performed manually. Interestingly, at no stage, did she question whether the technology had made an error. She had complete faith and trust in the technology and used it to gain a better understanding of her own knowledge within the context of the task but also better knowledge of accounts preparation generally.

Deskilling of trainee

There was a strong view amongst some workplace assessors (n=4) that mediating action using technology to perform technical functions e.g. accounts preparation actually de-skills the trainee accountant.

One workplace assessor infers that manual working gives a deeper understanding because the trainee accountant actually puts the accounts together rather than the technology.

An alternative view proposed by an academic assessor suggests that technology can be used as an enabling tool to enhance fundamental understanding of accounts but that in doing so, it diminishes the writing skills of trainee professional accountants.

Interestingly, de-skilling as a consequence of using technology to perform tasks during IPD is not acknowledged by trainees themselves. They were very clear that the mediation of technology in their IPD learning and assessment on the higher education course prepared them to perform work tasks more effectively. Assessors suggest that the use of technology to mediate learning and assessment in this way is in a way a Platonic form i.e. it is the experience or idea of mediation (in this example, bad mediation) that is representative of the task in a real world setting.

It is of course important to note, that the experience of using technology is not the same for everyone. Whilst some workplace assessors felt that a consequence of trainees using technology in IPD leads to a deskilling of fundamental skills and knowledge, in contrast trainees feel empowered and more confident in using them. All trainees who encountered new technologies in work were all very accepting of them and suggested that the mediation of their work by technologies enabled them to perform tasks in a more efficient and powerful way.

Limitations

The mediating role of technologies is influenced by many different social factors such as time, context, socio-cultural structures, and product life-cycle. As such, the extent to which one can be reasonably sure that the findings would be replicated, even with the same participants, in the same context is questionable. The

separation of storied experience and actual events, has been carried out by myself as the researcher. The process of doing this is unquestionably influenced by my own experiences, my inexperience as a researcher and personal bias. However, I have tried to employ a rigorous research design and data analysis techniques to mitigate against this, but there is inevitably intrinsic bias within the research process

Whilst the sample size of the purposive sample selected for the study is defended, (see Mason, 2012), it is the case of course, that a much bigger sample size with equal representation of all PABs across both assessees and assessors interviewed, would have provided increased depth and more representative picture.

The most significant criticism of a case study strategy is the lack of generalisability (Hilderbrand et al, 2001). Bhatt (2014), explains case studies lead to a uniquely different form of generalisability; one which is gleaned from the dialectical process of theory generation between the issues identified as salient before the research, and emergent findings in the data during the research (p.134)

In adopting a multiple case study design, the analysis of the data will produce situated knowledge and theory rather than generalisations (Taylor, 2002). It is therefore the case, whilst the findings of the study cannot fully represent the views of all UK PAB students and members, they can provide insight into social forces that can chance or re-produce social processes (Blair-Loy, 1999). "For a qualitative research community, case study concentrates on experiential knowledge of the case and close attention to the influence of its social, political and other contexts" (Blair-Loy, 1999, p.443p.444).

Conclusion

It is clear from analysis of data collected from participants that the use of technology changes the meaning of the technology to the trainee or assessor of IPD using it. In turn, using the technology mediates the perceptions and actions of all agents involved in IPD assessment. Some participants spoke of feeling disempowered or disenfranchised in their roles because of their inability to use technology in the way that they intend. Similarly, technology empowers others, providing new ways of gaining knowledge that they had not been able to access without using the technology.

Hence, technology influences the ways in which both trainee accountants and assessors of IPD think and act and the meanings ascribed to technology. It is clear that within the context of IPD assessment; technology, the trainee and assessor, have a recursive relationship. The use of technology is generally a requirement. It is increasingly used for computer based testing in PAB exams (since 2015) and is likely to be implemented in HEIs PAB exams in the near future as a result. Trainees find that they have to use technologies in the workplace to carry out work duties. This imposition of technology on actions within IPD competency assessment draws out a sensory and emotional engagement between those involved in the IPD assessment process.

At an individual professional level, the emotional and sensory engagement of technologies that mediates IPD, influences identify formation and development of trainee accountants. They may feel empowered and more

confident in work environments that are new and unfamiliar. Technology enables collaborative spaces of informal learning and gamification of work based tasks via simulation.

On a wider, profession level, the mediation of recruitment and selection decisions based on psychometric profiling means that it may be the case that technology is stifling diversity within the profession. However, we have seen that it may also lead to opportunities for change driven by professionals and experiences associated with professional identity and competence development from within the profession itself.

Mediation happens within a socio-environmental context and as such that the mediating role of technology as tools is impacted by factors associated with people, organisations, policies, structures, social norms etc. Contextual factors include; organisational dynamics/power relations, resources, skills & capabilities of staff, infrastructure, life-cycle of technologies.

Looking to the future, there is a belief amongst key assessment policy makers that technology could revolutionise the way in which professional accountants construct evidence of professional competency. A unanimous opinion was shared that the traditional specialised tasks of accountants will be performed through automation by technology e.g. preparation of statutory accounts.

Consequently the competency of a newly professional accountant needs to be less functional (although they still need to be able to prepare a set of statutory accounts, simple tax computation) and more focused on asking the "right questions," interrogating the data, analysing what the information means, identifying risk etc. The ways in which professional competency is captured will become more transferable, tangible and explicit through using technology to collate experience through for example, badging. Some key IPD policy decision makers from international accounting education standards board (IAESB) spoke of dynamics changing within the profession as a result.

Technology could shape how people perceive themselves to be as professionals. Professional identity can be quite an implicit construct. However, the use of technology in a way that for example, badges pockets/episodes of competency makes professional identity more explicit. It is suggested by some participants that this may make professionals more self-reflective, self-aware and more in charge of their own career planning. In doing so, it is suggested for example, that it will be professionals driving what is expected of the profession rather than the other way around.

The transferability and options of roles and careers of tomorrow's trainee accountants is something that is discussed by key assessment policy decision makers (IAESB) interviewed. Consequently, rather than accountants remaining in one area of accounting, or working in a particular role for an extended period, the expectation is that trainee professional accountants of tomorrow will rotate frequently, picking up a diverse range of professional socialisation experiences along the way.

Hence, technology could play a very big part in mediating the professional identity and competence of future accountants, changing the face of the profession.

However, the study has shown that there is some division between some 'technology resistant' Generation X assessors and Generation Y trainee accountants who generally embrace technology. Accounting professionals working in education must avoid the *"use of technologies for the sake of it"* as this could create a situation where technology advances itself in a way that Heidegger (1953) proposes, 'threatens to slip from human control' (pg.4). Heidegger suggests that modern technology brings a new way of ordering the world, which is distortive and is capable of changing our sense of being in a misrepresentative way.

Therefore, it is an ongoing challenge to capitalise on the capabilities of technologies in a responsible way to develop accounting trainees as competent professionals, whilst balancing the emotions, beliefs and values placed on them by different agents within the professional accounting community. This challenge is significant given that according to one PAB representative accounting education is *"a slow adopter of technology."*

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