

A framework for seeking the connections between technology, pedagogy and culture: A study in the Maldives¹

Aminath Shafiya Adam
The University of Waikato
aminadam@waikato.ac.nz

Abstract

Educational technology researchers often overlooked the impact of culture on teachers' use of digital technologies in their pedagogical practices. This also includes a number of technology integration models (e.g. TAM and TPACK) that have failed to explain the connections between technology, pedagogy, and culture. This paper argues that teachers' pedagogical and technological practices cannot be fully understood without considering the social and cultural norms of their specific cultures. This study adopted an ethnographic methodology, linked with Bourdieu's (1977) habitus as a lens for exploring teacher educators' practices in the Maldives. Data were gathered from eleven teacher educators who work in a Maldivian university context: using interviews, observations, focus groups and the hanging out approach. Key findings demonstrated that teacher educators' pedagogical and technological practices were influenced by their own culture, early learning experiences in the Maldives, and their workplace (institutional context). Through this finding, this research proposes a framework, namely, Pedagogical and Technological Cultural Habitus (PATCH) for understanding teachers' pedagogical and technological habitus in various contexts. The PATCH framework is, theoretically useful for designing technology-oriented professional development for professionals in various pedagogical contexts including virtual and blended pedagogical spaces. It also contributes to TPACK framework by adding an outer layer to its current theorisation to represent teachers' backgrounds and habitus when examining their practices.

Introduction

The literature highlights the notion that traditional teaching methods continue with the addition of digital technologies in many pedagogical contexts (Adams, 2012; Bang & Luft, 2013; Baran, 2010; Jones, 2003; Judson, 2006; Perkins, 2012; Pritchard, 2007; Sipilä, 2010; Zisow, 2000). Considering these studies were published at different times from the 2000s until the 2010s suggests that teachers' use of digital technologies does not necessarily bring change to their pedagogical practices. In the context of this research, where digital technologies have only been introduced in the 2000s, the way teacher educators use digital technologies may mirror issues similar to those examined by the above researchers.

A number of researchers attempted to explore the factors that may perhaps explain what is behind a paucity of pedagogical change regardless of technology use in teachers' practices (Aldunate & Nussbaum, 2013; Chapman & Gaytan, 2009; Falloon, 2011; Gülbahar, 2008; Ihmeideh, 2009). Reflecting on these studies, it seemed that these researchers overemphasised understanding teachers' competencies in using technologies, rather than exploring the associated influence of their backgrounds when understanding why their practices may have remained as highly teacher-centric

¹ The Maldives is a small country, which consists of a chain of 1196 coral islands from the north to south in the South Asian Region.

and/or had not shifted. These researchers appeared to be techno-centric when understanding teachers' use of technologies. Perhaps more explanations could be provided if they attempted to understand teachers' backgrounds and cultures.

The problem being addressed

Due to many researchers' technicist thinking, none of the studies above have attempted an understanding of the roots of teachers' underlying benefits and practices that may be associated with their own culture. This research argues that technology integration cannot be fully understood by merely concentrating on technology, rather the focus ought to be teachers and the effect of their social, cultural and pedagogical contexts. This argument is very relevant because of the close connection between teachers' culture and their conceptualised pedagogy. Examples include influence of culture (Gay, 2010; Jenks, 1993; Richardson, 2001); influence of own experience of learning (Belland, 2009; Cheng, Cheng, & Tang, 2010; Kukari, 2004; Pajares, 1992; Wong, 2005); and the impact of the practising context on teachers' conceptualised pedagogies (Barton & Berchini, 2013; Bishop, 2003; Li, 2013; Williams, 2006).

Technology integration models also have provided scant attention to the connections between culture and teachers' use of technologies in teaching. For example, TPACK studies (Abbitt, 2011; Chai et al., 2011; Koh, Chai, & Tsai, 2013; Koh, Chai, & Tsai, 2010; Sahin, 2011; Schmidt et al., 2009) provide limited knowledge about teachers' backgrounds and culture when examining their use of digital technologies. This raises a question how far the TPACK model can be helpful to understand the connections between teachers' early background, culture, and their use of digital technologies. Second, researchers (Aldunate & Nussbaum, 2013; Govender, 2012; Howard, 2013; Lai & Chen, 2011; Somekh, 2008; Sprankle, 2012; Wright, 2014) who have used Technology Adoption Model (TAM) for understanding their participants' practices, also explain very little about teachers' background influence on how they taught and used technologies. The studies reviewed here suggest a critical gap in understanding the connection between culture and the way these teachers used digital technologies in teaching. This paper aims to explain this connection between teacher educators' culture, how they taught (pedagogy) and used digital technology (technology) in the Maldives.

Study design

This study adopted an ethnographic methodology to investigate how teacher educators' use of digital technologies in their pedagogical practices was formed in the Maldives. The ethnographic methodology considered two focuses: institutional (teacher education context) and cultural (the connection between teacher educators' early background and their later formed practices) when exploring teacher educators' practices.

Prior to conducting this research, the ethical approval from the University of Waikato was sought and granted on 5 May 2011. Eleven Maldivian teacher educators were interviewed individually, classroom teaching of six of them were observed in the initial visit. Eleven months later, ten teacher educators participated in focus groups and five of them were interviewed for further clarifications. Plus, reflective journal-field notes were written through hanging out activities with ten participants over two visits: once at the beginning of 2012 (6 weeks) and again in 2013 (5 weeks).

The main findings were generated through various strategies adhering to grounded theory, linking it with Bourdieu's (1977) habitus lens (seeking connections between participants' practices and their backgrounds within their specific culture). Several strategies (diagramming) iteratively used for seeking connections between teacher educators' pedagogy (how they taught), technology (what/how they used) and culture (their early backgrounds and cultural practices) in the Maldives.

Findings

The study indicates that teacher educators' pedagogical and technological practices are influenced by their social cultural learning norms such as learning to recite the *Qur'an* without understanding it. This cultural practice has also unconsciously influenced both teacher educators' view of learning and the pedagogical practices that formed later. This study indicates that the teacher educators formed cultural habitus in their pedagogical and technological practice through the influence of their culture and workplace context. The habitus they formed, however, involved three aspects represented within these two components (culture and workplace context). The three aspects are cultural (such as learning to recite the *Qur'an* without understanding reinforced with the rote learning experiences during schooling); technological (gained benefits as they continued teaching content); and pedagogical (pedagogical purposes of teaching content). These aspects made teacher educators form an overall pedagogical (content-oriented) and technological (PowerPoint-assisted) cultural habitus in their practices. More specifically, teacher educators' content-oriented pedagogical habitus was influenced by both the culture and the institutional pedagogical context, while their PowerPoint-assisted technological habitus was heavily influenced by their institutional context.

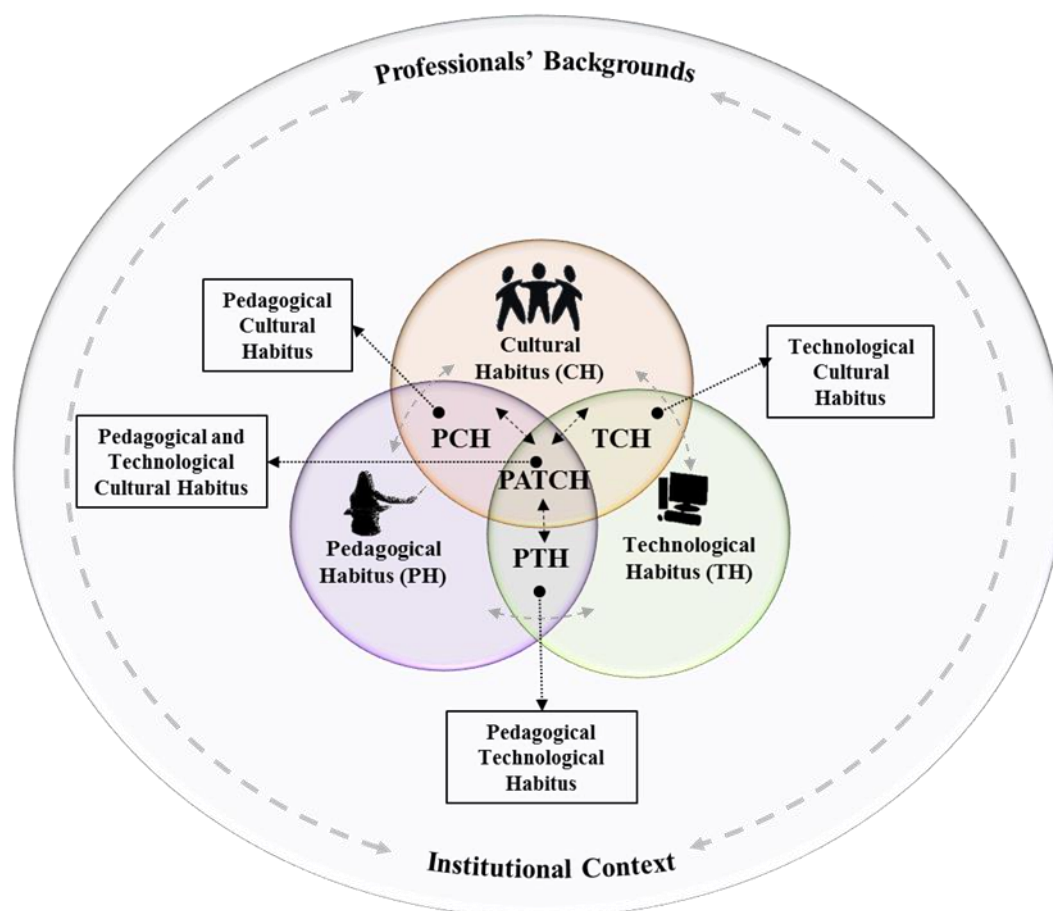
With these findings, the study proposes a framework namely, Pedagogical and technological cultural habitus (PATCH) for understanding the connections between teachers' culture and how they used technologies for teaching.

Discussion and conclusion

Pedagogical and Technological Cultural Habitus (PATCH) is an emergent idea developed to understand teachers' existing pedagogical practices with technologies in relation to their backgrounds and culture as outlined in Figure 1. The literature discusses the strong relationship between pedagogy and people's culture (Cheng et al., 2010; Gay, 2010a; Jenks, 1993; Kansanen, Tirri, & Meri, 2000; Kukari, 2004; Richardson, 2001; Wong, 2005). These researchers draw attention to the importance of understanding individuals' culture when explaining their pedagogical practices. It is noteworthy that though teacher educators in my research were individually different, their common culture largely influenced their pedagogical and technological practices. Culture in this sense can include teachers' own backgrounds (such as learning experiences), religious practices (such as learning recitation of the *Qur'an*), and the influence of the context where they teach (education system). This idea explains what Bourdieu (1977) argues, that teachers' culture can become a strong 'field' where individuals' dispositions are shaped through a socialisation process. The socialisation process is one in which teachers conceptualise their pedagogical practice with technologies. The facilities available (economic capital) in the teachers' workplace or their cultural upbringing (social and cultural capital) can become a large part of their formed dispositions.

The PATCH framework is pertinent to researchers' arguments about the strong connection between teachers' conceptualisation of pedagogical practice and their culture. This framework may help researchers not only examine teachers' use of technologies in teaching, but also identify what to address and which areas to focus on when change is necessary in order to enhance pedagogical practices. Also, it may inform those who design educational professional development programmes linking pedagogy with technologies.

Pedagogical and Technological Cultural Habitus (PATCH)



The PATCH framework is timely because a number of technology integration models have failed to explain the connection between technology, pedagogy, and culture. For example, Technology Adoption Model (TAM) (Davis, 1989); and TPACK (Technological, Pedagogical and Content Knowledge) model (Mishra & Koehler, 2006) have limited room for explaining the relationship between how teachers use technologies and their culture. None of these models helped me understand what my participants have shown me: that early learning experiences can have a profound impact on pedagogical thinking, which also affects their choice and use of digital technologies in their classrooms.

In summary, the PATCH framework is, potentially useful for teachers, teacher educators, and lecturers in various pedagogical contexts including virtual and blended pedagogical spaces. It contributes to theory in several ways:

- It contributes to an understanding of teacher educators' pedagogies in relation to their culture and habitus.
- It signals what aspects need to be considered when designing professional development in specific cultures.
- It illustrates three types of habitus associated with teacher educators' pedagogical and technological practice: cultural, pedagogical, and technological habitus.
- It recognises the link between teachers' habitus, their use of technologies and TPACK.
- It offers a working framework for investigating technological and pedagogical cultural habitus among teachers, teacher educators, and lecturers across disciplines.
- It proposes an outer layer, namely, 'Teachers' PATCH' to TPACK framework for helping researchers to consider teachers' backgrounds and culture when understanding their conceptualisation of TPACK in teaching.

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