

The Role of Flexibility in Shaping Teachers' Digital Learning Agility: A Preliminary Study

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Abstract: Digitally agile teachers are capable to deal with new experience flexibly and rapidly by trying new behaviors and making quick adjustment so that learning can take place even they have constraints especially in using technologies. Flexible teachers are capable to adjust their plan on the fly and make changes to suit current demand. This preliminary study explores the role of flexibility in supporting teachers' digital learning agility. The study employed qualitative approach with three in-service teachers through semi-structured interviews. Findings suggest that flexibility helped teachers to become digitally agile by developing more effective and strategic behaviors to overcome difficulties in online learning. This study emphasizes the value of flexibility in enhancing teachers' digital learning agility and offers suggestions for personal and professional development.

Keywords: Teachers, flexibility, digital learning agility, online learning

1. Introduction

The term "flexibility" describes individuals who are able to adapt or adjust to changes in circumstances or expectations, enabling them to remain open-minded and responsive to new ideas, situations, or challenges (DeRue et al., 2012; Burke, 2018; Murphy, 2021). Flexibility is a crucial trait for teachers, enabling them to adapt to changing circumstances and expectations. It allows them to remain open-minded and responsive to new ideas, situations, and challenges. Corpus et al. (2022) found that teachers who can utilize ICT and adjust their teaching methods to suit their students' needs improve learning quality. This paper explores the flexibility of Malaysian teachers as a key factor in supporting digital learning agility and enhancing their performance in the digital age.

Learning agility is a crucial aspect of organizational leadership (Lombardo & Eichinger, 2000; DeMeuse et al., 2010; Bedford, 2011; DeMeuse, 2017a; Burke & Smith, 2018), but it has received less attention in educational settings. Warkentien's (2016) study highlights teachers as strategic classroom leaders, emphasizing teachers are also capable of serving as leaders and can benefit from developing their agility. The importance of flexibility and speed in learning. DeRue et al. (2012) defined learning agility with a primary focus on flexibility and speed. Regarding flexibility, they emphasized the crucial nature of being able to change one's viewpoint to better comprehend how information is related and how it is used to describe a given circumstance. Technology ability is a challenge for teachers in Malaysia, especially during the COVID-19 pandemic. However, a quick response to unexpected situations can help curb learning delays and loss. Thus, exploring teachers' flexibility using qualitative approaches can help develop digital learning agility, enabling them to cope with steep curves and adapt to changing environments.

2. Literature Review

Flexibility is a sign of a better cognitive skills that the capacity to visualize links and move between concepts with ease (DeRue et al., 2012). Flexibility plays a crucial role in enabling teachers to be agile in today's rapidly changing world, allowing them to grasp evolving educational pedagogies and technologies and adjust accordingly for effective teaching. DeRue et al. (2012) defined learning agility based on cognitive and behavioral processes, with a primary focus on flexibility and speed. In contrast, Burke (2016) presented a different perspective on learning agility, defining it through behavioral components and identifying nine dimensions, including flexibility, speed, experimenting, performance risk-taking, interpersonal risk-taking, collaborating, information gathering, feedback seeking, and reflecting. Despite their divergent approaches, flexibility remains a vital component of learning agility.

Maintaining consistent high performance requires a willingness to learn from mistakes and a positive outlook toward change and failure. These traits underscore the importance of flexibility for agility, as it encourages adaptability in response to situational demands. Allen (2016) examined the value and distinctiveness of learning agility in the workplace and found a significant correlation between flexibility and learning agility. Therefore, it is essential to explore how flexibility shapes teachers' learning agility, particularly in utilizing digital tools to cope with the ongoing technological advancements in education, to ensure teachers reach their maximum potential in the classroom.

Learning agility is a crucial predictor of leader success (De Meuse, 2017), with only 10% of current leaders having high levels as noted by Joiner and Josephs (2007). This is because, under pressure to complete tasks quickly, people are more likely to make false decisions. Teachers, as classroom leaders responsible for students' cognitive and social development (Lieberman & Miller, 2005), face the risk of making poor judgments too. Developing learning agility is crucial for motivation, leadership, and engagement (Juhdi et al., 2012). Teachers' digital learning agility is characterized by speed and flexibility in responding to uncertain circumstances. Strong technology understanding allows them to confidently use various methods (Csordás, 2020; Seale et al., 2010), including modifying, adapting, or personalizing technology to meet current teaching and learning needs. Identifying characteristics that support teachers in becoming digitally agile is crucial.

Research on learning agility in the business sector is extensive, but few studies have explored it in the educational sector. Schools too face dynamic changes due to factors like immigration flows, demographic shifts, and emerging technology (Brzychcy, 2019). The Malaysian Teacher Standard (MTS) 2.0 framework emphasizes four competencies for soulful teachers: knowledge orientation, instructional, community involvement, and personal quality. However, technology expertise is not specifically addressed in this area. To address these gaps and identify the characteristics of digitally agile teachers, the following research question has been posed: *How does flexibility shape teachers' digital learning agility?*

3. Methodology

It is worth emphasizing that the actual research focuses on the development of a digital learning agility framework for Malaysian teachers. To meet the study's aims, a larger set of data was gathered. Nevertheless, a limited scope of the study was extracted for this article, and the objective of this study was to examine teachers' flexibility in shaping their digital learning agility by examining their experiences with digital tools for online teaching and learning during the school closure caused by the COVID-19 pandemic.

Three Malaysian public-school teachers aged 30 to 44 were selected using purposive sampling, with a minimum of five years of experience or involvement in online teaching during the COVID-19 pandemic. The findings included annotations of the responses from the three teachers, identified as P1, P2, and P3. Semi-structured interviews were conducted to gather data, providing a deeper understanding of the overall experience compared to structured components alone (Moustakas, 1994). End-of-term holiday closures led to interviews conducted via online meeting rooms via Google Meet. Data collection began after ethical approvals from institutions and the Ministry of Education. Participants provided a plain language statement, completed consent forms, and provided audio recordings. Interviews lasted 80 minutes, and audio recordings were transcribed and stored securely.

The interview process involved gathering demographic information, exploring teachers' experiences with technology in the classroom, and their attitude towards being digitally agile teachers. The transcribed data were then structured by using thematic analysis (Braun & Clarke, 2006) as a 'coding frame'. Data analysis involved recognizing and classifying themes connected to flexibility characteristics that support teachers in becoming digitally agile. Data collected from the participants were coded based on themes and analyzed based on them. Firstly, the phrases and sentences from the data were highlighted and coded according to the meaning of words and sentence structure. The coded data were then consolidated and themes were developed.

4. Findings and Discussion

4.1 Adapting and Thriving in the Digital Classroom

The teachers ranked their digital teaching and learning knowledge as proficient, with most using digital technologies during online learning. They found it helpful, easier, and enhanced their performance. However, their utilization of digital tools decreased after the schools reopened for physical classes. While two teachers continued to employ digital technologies, one teacher has stopped using them. From the thematic analysis, this theme encapsulates the essence of digital agility and flexibility, encompassing the underlying themes of (1) students' engagement, (2) professional growth, and (3) instructional effectiveness. The participants emphasized the necessity for them to adapt their teaching practices to navigate the digital landscape, creating dynamic classroom environments, fostering professional growth, and enhancing instructional effectiveness by adopting an adaptable mindset and leveraging technology for engaging learning experiences.

This section discusses students' engagement, the first theme of the findings. The teachers said that they have used several web-based applications online during class. *"While doing the Google Meet, after the session I use Quizziz and usually I'll ask them to give answers in the chat box."* (P2) and *"I used an app on the internet called The Wheel of Fortune. I used the wheel of fortune and made a lucky draw. And I used the medium at the time, Telegram; I used Telegram using video chat, so I used both Telegram and Wheel of Fortune."* (P3). They explained that by trying several platforms, it increases students' participation and helps teachers' ability to control and manage the class. P2 explains that *"... maybe like doing some quiz and then the chat box so they get excited."* P3 in the interview highlights that *"When a name was selected, the students got excited. ... They'd spread the news, telling their friends that I do lucky draws in my class."* While P1 stated that *"...I don't really know how to switch between devices but after several classes it becomes smoother."* In other words, teachers who are flexible in finding technology integrated strategies in teaching can increase students' engagement. These findings are in line with a study conducted by Park and Park (2020) who found that flexibility helps individual to solve problems, achieve goals and perform effectively.

Professional growth served as the second findings. According to P2, their ability to be adaptable allowed them to gradually overcome unforeseen circumstances *"...we can adapt to the situation slowly, but we can adapt. Like myself, so, like we start from zero but everything we learned by ourselves (and) we managed to overcome the situation ..."* This findings supported by a study by Barak and Levenberg (2016) which they highlighted that the readiness to participate in unknown settings and enables a learner to efficiently interact with difficult situations. P3 states that online learning requires teachers' technological proficiency to navigate online tools and thus, by being flexible in responding to this situation, it benefits teachers to expand their digital literacy skills *"At that time, most people were more familiar with Google Meet because this feature was very new to Telegram. But after I got the hang of it, it was easier for me."* It is advantageous for an individual's flexibility to successfully cope with online learning to provide them the technological skills essential to handle unforeseen changes (Răducu & Stănculescu, 2021), which supported the finding.

The third findings focuses on the instructional effectiveness which can be done by teachers who are flexible related online teaching and learning. They went through several digital platforms and chose platforms that could be more effective to teach students digitally

“...try a few apps that is east to be integrated during lessons. So, in the end, I used WhatsApp and then in order to check the answers as well I use another app...” (P1). P1 explained that from the chosen platforms, s/he found out it ease students’ evaluation *“...so that it’s easier to link the checked worksheet or the products that the kids did to Google Classroom.”* P3 stated that online lessons is intimidating but s/he was able to optimally prepared class materials using digital tools *“...the preparation was paperless and actually faster.”* According to Lübke et al. (2021), flexibility play a significant role in explaining teachers’ intention to use strategies for students’ achievements and thus, it is evident that flexibility shape teachers’ attitude towards the effective teaching

Despite being able to understand teachers’ motivational factors of being flexible related to teaching online in this study, the researcher noticed that the data inadequate considering only two teachers teach using digital technology after class resumed physically. It is important to note that students currently attending schools that they are characterized as experts in understanding technology (Cruz & Díaz, 2016). Poláková and Klímová (2019) suggest that mobile devices enhance students’ knowledge, prompting teachers to update traditional teaching methods and create a modern learning environment. However, challenges in utilizing technology during physical classes should not be overlooked.

4.2 Teachers’ Adaptability to Online Teaching

In this study, the teachers expressed various ways of flexibility specially to navigate the digital teaching environment through their adaptability in response to a new and challenging of online lessons. The teachers’ ways of adaptability were divided into two main themes: (1) Teachers as learners, and (2) Supportive network contribution.

All teachers strongly agreed that they had to come out with solutions while teaching online during the pandemic. P1 says that s/he need to find ways to conduct his/her class *“...I have to think how to incorporate digital and hardcopy resources...”* while P2 says *“I have to think something creative to attract the children and focus.”* P3 also echoes the same statements when s/he states *“...I was looking for a way to get this student to come to my class.”* They expressed that through learning, they were able to utilize new digital technologies in online teaching. P1 explains that *“I prepared my materials online, but I upload them in the group or Google Classroom ... I borrowed my husband’s tablet so that I can use two screens at once to show solutions in doing Math questions ... I attend Google Training, webinars, watching videos, that were sent by PPD officers and school.”* P2 states that h/she were anxious of using online meeting but managed to conduct class well after several trial and errors *“...I did Google Meet first time ...I was panicking because it was like trial-and-error session. The, I managed. Actually, I was learning at that time.”* It is crucial for teachers to stay current with recent digital teaching needs, by learning, it enables the best adaptability to online learning because the learner and the meaning are prioritized over the content and the activity (Răducu & Stănculescu, 2021).

In addition, the teachers’ adaptability to online teaching were contributed by their supportive network. A teacher commented that his/her colleague help to get knowledges on how to use digital technology to conduct online lesson *“Sometimes my friends will give me ideas like why don’t we use this even they said we can play Kahoot games and everything’s right so I learned from friends.”* (P2). P3 concurred that using digital technology in partnership with other educators increases their desire in doing so over doing it independently *“Like Excel, there are some teachers who I can talk about the internet, the materials they found. When the team is driven, we feel excited, when the team is one-man show, that’s when things become difficult.”* It also helps teachers when involves time constraints *“...it’s quite helpful because sometimes we don’t really have the time to do everything something you don’t have time to even think for that thing so that’s when collaborating actually helps.”* (P2). The findings from all three teachers highlighted the ease with which a supportive network truly contributes to the usage of utilizing modern technology throughout the pandemic. It is notable that teachers who work in supportive environments can increase the quality of their teaching in a variety of ways, including through teacher cooperation (Podolsky & Darling-Hammond, 2019).

Adaptability in teachers is important to keep up with constant evolving learning environment especially in mastering technological skills. However, teachers who find this intimidating need support to boost their confident and competence, even post-COVID-19, school might have possibility to close again (Guttentag, 2020). Lieberman (2020) emphasized five strategies to support online adaptability; (1) Providing collegial guidance, (2) Evaluating technology tools collaboratively, (3) collecting data on effective baseline use, (4) Considering online learning applications beyond mandatory, (5) planning intentional technology use to accommodate potential situations.

In summary, based on the findings and discussion of the preliminary study, it is evident that flexibility does support teachers to be digitally learning agile. Flexibility support teachers in many ways. First, being flexible allow teachers to embrace and adopt new technologies by exploring and integrating various digital tools and online platforms (Ulanday et al., 2021). Second, it helps educators to adapt to any changes by staying updated on latest advancements and learn new digital tools (Mardiana, 2020). Third, flexible teachers are able to facilitate collaborative and interactive learning between other teachers or students (Kariippanon et al., 2019). Thus, by embracing flexibility, teachers can become digitally agile, adapt to new technologies, exploring digital sources, and customizing instructional delivery in the online teaching environment. This adaptability enables teachers to effectively utilize digital tools and platforms to facilitate meaningful learning.

5. Conclusions

In conclusion, this preliminary study has added to the corpus of knowledge on flexibility and how it affects teachers' digital learning agility. The literature review has emphasized the value of flexibility in current educational environments and how it might help teachers be nimble. The qualitative research methodology used in this study, which employed semi-structured interviews with public school teachers in Malaysia, has been detailed in the methodology section. The research has shown what motivates teachers to be adaptable when they teach online. The study also revealed how teachers prepared for online instruction and found methods to adjust to unanticipated changes.

Overall, this study has contributed to existing literatures on flexibility and digital learning agility among teachers. The findings of this preliminary study may serve as the basis for the extensive investigation that could provide best practices to be shared with educators, contributing to their professional development and growth. Besides, this study can be beneficial to inform policy makers for policy development and decision-making at various levels. Prior to this study, emphasis was mostly placed on instructors' experience in supporting their ability to be flexible. Future research is advised to focus on larger concerns, such as the difficulties teachers may have in adapting to the use of digital technology in physical classes and how these difficulties can influence current teaching methods.

Acknowledgements

This study is supported financially by the Fundamental Research Grant Scheme (FRGS) of the Malaysian Ministry of Education (FRGS/1/2022/SSI07/UPM/02/1). The assistance of the Research Management Center (RMC) of Universiti Putra Malaysia in coordinating and distributing funds for this research is greatly appreciated.

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