

The use of mobile learning technologies for corporate training and development: A contextual framework

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Abstract

This chapter presents a thorough review on the mobile learning concept. It also explores how businesses are using mobile learning (m-learning) technologies for the training and development of their human resources. The research involved semi-structured interviews and an online survey. The research participants were expected to share their opinions about the costs and benefits of using m-learning applications (apps). The findings reported that the younger course participants were more likely to embrace the m-learning technologies than their older counterparts. They were using different mobile devices, including laptops, hybrids as well as smartphones and tablets to engage with m-learning applications at work, at home and when they are out and about. This contribution has identified the contextual factors like the usefulness and the ease of use of m-learning applications (apps), individual learning styles and their motivations, time, spatial issues, integration with other learning approaches, as well as the cost and accessibility of the m-learning technology. In conclusion, this contribution identifies future research avenues relating to the use of m-learning technologies among businesses and training organisations.

Keywords: mobile learning; m-learning; m-learning framework; m-learning contextual factors; corporate training; training and development.

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1. Introduction

Managers are pressurised to find new and better ways to communicate with their employees. They need to understand how to harness emerging communication technologies to improve the performance of their organizations (Lee, Mazmanian & Perlow 2020; Camilleri, 2019). Therefore, this chapter clarifies how businesses and training organisations can use m-learning technologies to improve their engagement with their human resources. Following a critical review of the relevant literature, an exploratory research identified the use of m-learning for the continuous training and development of employees. The data was gathered through a short online survey questionnaire and via semi-structured interviews. In conclusion, the researchers identify the contextual factors that can influence the successful implementation of m-learning. They also put forward a m-learning framework for business practitioners and training organisations.

2. The m-learning concept

The corporate sector is increasingly using mobile technologies to train employees and develop their skills and competences. This learning methodology is known as mobile learning (m-learning). Whilst there are various definitions for this term (see Wu, Jim Wu, Chen, Kao, Lin & Huang, 2012; Sung, Chang & Liu 2016; Grant 2019; Janson, Söllner & Leimeister 2019; Petrucco, 2020), this study addresses a gap in the extant academic knowledge as it investigates how, where and in what context m-learning is being utilised during the training and development of managers and employees.

Several organisations are striving to differentiate themselves by using m-learning practices in their learning and development strategies (Noe, Clarke & Klein 2014). The corporate investments in the education and training of human capital has often yielded increased

productivities and an improved organisational performance (Camilleri, 2020; Joseph & Gaba 2020). Examples of work-based m-learning include the provision of podcasts or short videos that are increasingly being accessed through mobile phones, tablets or mp3 players to augment classroom training. M-learning can also involve online simulations, or more informal scenarios where employees engage in collaboration through social networks on their mobile devices (Collins & Halverson 2010; Park & Gu 2018). Additionally, they are used during work-based learning, including work placements, formal on-the-job training, or in informal coaching and mentoring (Laouris & Eteokleous 2005; Pimmer, Pachler & Attwell 2010). Sometimes m-learning courses are delivered through a kaleidoscope of different media. This multi-dimensionality is analogous to m-learning, where actors, including employees or students, can immerse themselves in the educational technologies (Naumovska, Lee & Zajac 2012; Tischer & Leaver 2017; Camilleri & Camilleri, 2017a; Ungureanu & Bertolotti 2018). The burgeoning nature of this promising field of study indicates a need to expand on the bubble concept and to investigate innovative approaches that address the businesses' training needs in management, especially those relating to the provision of corporate education or on-the-job training.

The ubiquity of mobile technologies is one of the reasons why it may prove difficult to define the m-learning concept (Grant 2019; Ferreira et al. 2015). Despite this ambiguity, its definition can be associated with electronic learning (e-learning). E-learning occurs through various electronic media including personal computers and laptops, among others, as these devices can access online and offline programmes. However, the mobile users can access m-learning content from any place, while they are out and about. Some studies consider m-learning as an evolution or as a subset of e-learning instead of being another discipline. Garcia-Cabot, de-Marcos and Garcia-Lopez (2015), and Crescente and Lee (2011) among others believe that mobile learning is an offshoot of e-learning as it has emerged as a more advanced technology than the latter one. Yet, some recent studies suggest that m-learning is a stand-alone discipline

(Grant, 2019). Some commentators argue that the 'mobile' component of m-learning refers to the mobility of their users. However, the word 'mobile' can also refer to the portability of the mobile device (O'Malley et al. 2005).

Recently, various researchers are considering other aspects of m-learning as they conceive that these technologies enable their users to learn in different contexts (Grant, 2019). The mobile users can easily assess their educational content from different locations. They do not have to physically attend courses that are provided by educational institutions or by corporate training providers. In this sense, the m-learning devices are not driving the activity of learning, but they are merely the enabling medium (Brown & Mbat, 2015). M-learning can include academic or work-related content that is readily accessed through multiple locations at various times. This argumentation is associated with the notion 'anytime anywhere learning', which is increasingly becoming a common theme, particularly in the academic literature (Ferreira et al. 2015; Chen & Yan, 2016; Kukulska-Hulme, 2012).

Another perspective on m-learning relates to the context or setting where learning takes place. This view also seeks to break away from more traditional, formal styles of learning. In this case, m-learning has often been described as informal (Crescente & Lee 2011). A few authors have linked m-learning with microlearning (Skalka & Drlik, 2018), situated learning (O'Malley et al. 2003) and/or personalised learning (Chen, 2008). Others made reference to the physical location or to the spatial environment where the learning occurs (Crompton, 2013). Various researchers have often relied on the traditional learning theories to clarify that the context is very important for m-learning. This is clearly explained in Kolb's (1984) theory of learning, whereby the learners' knowledge is drawn from a combination of direct experiences and from socially acquired understandings that will ultimately impact on the individuals' attitudes, intentions and behaviours. Considering that learning is a highly individual experience, it is reasonable to conclude that a person's prior knowledge, motivations and values will also affect

how they engage and consume new knowledge. This idea is supported by Jha-Thakur, Gazzola, Peel, Fischer and Kidd's (2009) review of learning theories. The authors conclude that various individuals learn in different ways, as they are influenced by their surrounding contexts. Other researchers like Pachler, Bachmair and Cook (2013) have also grounded their definition on mobile learning from similar learning theories, as they assert that learning is affected by the students' context.

While, for the time being, there is no clear definition about m-learning (Grant, 2019; Ferreira et al. 2015), it may appear that its modality is emerging, as more users are becoming acquainted with its unique and distinctive characteristics. For instance, Crompton (2013, p.4) suggested that m-learning is delivered through multiple contexts. It involves the transmission of content through interactive, [wireless] electronic devices. Note that we have included wireless in this definition as the wireless capabilities enable the technology to be utilised in multiple contexts. However, it is important to distinguish between different wireless, mobile technologies.

According to Wu et al.'s (2012) meta-analysis on m-learning research, the most commonly used technologies were mobile phones and personal digital assistants (PDAs). Other common mobile technologies include the tablets, mp3 players, e-book readers (e.g. Kindle), and laptops, among others. Crescente and Lee (2011) maintained that although laptops may be transported with relative ease, they should not be counted as mobile learning devices. They argued that they are not as portable as other mobile technologies like the smart phones. Traxler (2007) contended that whilst individuals will usually premeditate to use their laptops (for work and educational purposes), he noted that they habitually (and regularly) carry their phones with them. Arguably, in the light of the latest technological advancements in terms of wireless networks, software, and hardware, the laptops ought to be included in the category of mobile learning as they provide additional features that can improve the delivery of the learning

outcomes of education or of professional training and development (Camilleri & Camilleri, 2017a; 2017b; Chang, Chen, Yu, Chu & Chien, 2017).

3 The use of m-learning

The notion of ‘anytime anywhere learning’ is receiving considerable attention within the extant literature (Grant, 2019; Du, Yang, Shelton & Hung, 2019; UNESCO, 2019). However, there is less focus on how, where and when students or course participants are using m-learning technologies (Kukulka-Hulme, 2012). Very often, the educators and/or practitioners are engaging with m-learning technologies to fill down-time gaps with bite-sized learning (So, 2016). The use of these technologies may appear to improve the students’ learning experience as they can use them whenever they please, in the most appropriate places for professional development, in the comfort of their home, or while they are out and about (Kukulka-Hulme 2012; Camilleri & Camilleri 2019).

Squire (2009) uses two terms, namely, ‘cocooning’ and ‘camping’ to explain how mobile learning involves the creation of one’s own personal learning contexts. He held that cocooning is the act of creating a personalised learning space, whilst camping is a constructed personal workspace that is created in public areas. An example of the latter may include an individual going to her/his favourite café and using headphones and a tablet to watch a vodcast as part of her/his m-learning journey. Crescente and Lee (2011) note that people who are comfortable with the use of their mobile device would enjoy learning through this technology. Hence, individuals can improve their learning journey in different contexts, at their own pace. This argumentation is synonymous with the situated learning theory and with the blended learning approaches that are aimed at maximising the students’ motivation through education technologies (Cajiao & Burke, 2016).

Prensky (2001) suggested that there are individuals who feel more comfortable with the use of technologies as they have used them since a very tender age. He labelled these individuals as 'digital natives'. These 'natives' include those individuals who have been raised in the (wireless) internet age. Moreover, he explained that other individuals may belong to the 'digital immigrants' segment in society. Those individuals were born before the proliferation of digital technology. This latter generation is more accustomed to paper-based communications. The digital natives have a higher ability to access content quickly and possess multi-tasking abilities (Prensky 2001; Chen & Yan 2016). This is consonant with the motivation theory. Herzberg (1968) argued that if learners can perform their tasks well, then they will be motivated to continue learning about them. The premise is that the digital natives are well acquainted with the use of technologies. Therefore, it is very likely that they will perceive the ease of use as well as the usefulness of m-learning (Davis, 1989). The learners will be willing to use the mobile technologies as they have the competences and the technical abilities to engage with them.

An alternate view is that the learning context can disadvantage m-learning as there are distractions in different spatial environments. Moreover, individuals may have distinct cognitive abilities, skills and memory capacities. O'Malley et al. (2005, p. 41) asserted that m-learning is a 'highly fragmented experience'. The levels of concentration and reflection that is required during formal learning cannot be maintained because the mobile users may find themselves in situations that are intermittent and unpredictable, whilst simultaneously demanding their attention. Various studies have investigated how multi-tasking or distractions in the environment can hamper learning and understanding. Hembrooke and Gay (2003) found that students who were allowed to use their laptops during a lecture for web-browsing performed relatively worse than other students who were prohibited to use them. Their study suggested that the individuals' ability to engage in simultaneous tasks is very limited.

Other authors have highlighted the notion of divided attention which can be expressed as receiving input from two simultaneous stimuli, or through rapidly switching between stimuli (Chen & Yan, 2016). Hence, whilst it can be said that mobile devices are particularly suited to multi-tasking (Pettit & Kukulska-Hulme, 2007), this may be to the detriment of acquiring and processing new information. For instance, Doolittle and Mariano (2008) found that the students' mobile multi-media learning was negatively affected when they were distracted. They reported that their divided attention can disrupt their m-learning. Therefore, the setting where m-learning is being delivered can have an effect on the quality and effectiveness of learning. One may use a metaphor relating to the 'doorway effect' to describe this matter. For instance, individuals walk through a doorway and forget what their original intent was. This issue can affect their ability to access information about objects, including the ones they had recently interacted with (Radvansky & Copeland 2006).

Arguably, if the individuals' memory can be easily erased by moving to a new location, they will not be in a position to learn and retain new knowledge when moving through contexts, or when entering different virtual places. Radvansky, Tamplin and Krawietz (2010) investigated this phenomenon. They tested multiple scenarios where they observed that the individuals experienced a short-term memory loss because of a physical change in the external environment (see also Radvansky Krawietz & Tamplin 2011; Pettijohn & Radvansky 2018). Radvansky et al. (2010) implied that this effect may be due to a range of different circumstances, including neurological processes. Hence, future research ought to investigate the effectiveness of utilising the mobile technologies in different locations, where the learners' context is changing, like for example, switching from laptop to a smartphone, reading on screen to listening to a podcast, or simply changing from one app to another with altered functionality.

4. Methodology

This research builds on the extant literature that is focused on m-learning and its related concepts within the context of corporate training and development. The continuous professional training may be delivered inhouse, or it can be outsourced to specialised, external training organisations or it can be provided by academic individuals. Such training is usually given within the organisational premises in workplace environments in order to nurture the skills and competences of the human resources (Pimmer, Pachler & Atwell 2010). In this case, the course participants may also benefit from collaborative and social interactions with their colleagues. Very often, the managers and employees are learning through informal, incidental channels (Matthews & Candy 1999; Naumovska, Lee & Zajac 2012; Tischer & Leaver 2017; Ungureanu & Bertolotti 2018).

In this light, this study used a mixed method approach to explore the respondents' attitudes and perceptions towards m-learning technologies. The research was carried out in the Australian city of Melbourne. The descriptive data was collected among course participants via a short, electronic survey questionnaire and through semi-structured interviews. This mixed-methodological approach allowed for a larger, heterogeneous sample (Merriam & Tisdell 2015; Birnbaum 2004). At the epistemological level, the survey provided a positivist view about the respondents' attitudes, while the interviews presented interpretive insights about their preferences and predispositions (Saunders et al. 2018). The latter resulted in a rich, inductive data on their beliefs, intentions and behaviours.

Ontologically, the quantitative survey has validated previous studies on this topic and can be replicated in future research. Moreover, the interpretative data that was gathered during the interview sessions was rigorously compared with previous findings from the relevant literature

(Kukulska-Hulme 2012; Vavoula & Sharples 2009; Wu et al., 2012). In sum, the mixed method approach has triangulated the findings of this research.

The researchers disseminated by email their online survey questionnaire among practitioners having used mobile learning as part of their corporate learning and training. The practitioners received explanation about the rationale of this study and appropriate instructions on how to complete the questionnaire. Firstly, the respondents identified which mobile technologies they had, or were using. If they chose the option 'None of the above', the survey automatically excluded them from completing the survey and redirected them to the survey termination page. The other questions featured 5-point Likert scales. Therefore, the respondents were expected to indicate their level of agreement with the survey items, where 1 represented strongly disagree and 5 represented strongly agree.

In addition, the researchers gathered interpretative, qualitative data through six semi-structured interview sessions. Four of the six interviews were face-to-face and the other two were carried out through Skype. On average, the interviews took about 35 minutes to complete. The semi-structured interviews involved open-ended questions to better understand participants' opinions on the themes of this study. The researchers have used interview guiding questions during their conversations with the research participants (see Appendix A) and annotated their detailed responses. After the data gathering process, the interpretative findings were categorised and coded by using NVivo software, according to the relevant themes of this study. The key words included learning delivery, learning outcomes, learning constraints, accessibility, learning style, individual differences, technology, type of content, learning environment, and time, among others.

5. The results

There were eighty course respondents who completed the survey questionnaire ($n = 80$). They represented a response rate of almost ninety percent (87.9%) of all the targeted respondents. Thirty-one respondents were males, and forty-nine were females. The mean age of the respondents was 34 years.

The majority of respondents who were in the 18-24 age category, indicated that they preferred to learn via m-learning, whilst a few of them indicated that they wanted to learn in a classroom environment. They showed a slight preference toward learning via a mobile device rather than reading a textbook. However, there were mixed attitudes among the respondents who were in the 25-34 age group. The 35-44 age group indicated that they clearly preferred the classroom than the mobile learning. Moreover, the older respondents (those were more than 45) reported that they were more likely to learn from a textbook. This descriptive research suggests that the digital natives had different perceptions toward m-learning when compared to the digital immigrants. This finding suggests that the training organisations and/or the individual trainers ought to consider the ages of their course participants before implementing m-learning. Perhaps, it would be wiser for them to use blended approaches where traditional teaching resources are supplemented with m-learning technologies.

The qualitative study relied on a convenience sample of four females and two males who followed courses that included m-learning. Their age ranged between 25-66 years. These interviewees had varying levels of m-learning experiences. All interviewees shared their opinions about the advantages and disadvantages of using m-learning technologies as they communicated their user perspectives. Generally, these interviewees agreed that their mobile technologies enabled them to instantly access their course content from wherever they were. They maintained that they could follow their courses and learn at their own pace. These

findings mirror previous findings in the academic literature, particularly those that describe m-learning as “anytime anywhere” (see Ferreira et al. 2015; Chen & Yan 2016; Kukulska-Hulme, 2012). The interviews communicated about the benefits of these ubiquitous technologies. For example, “I like the convenience and control.... I can do it anywhere in my spare time ... I can learn at my own pace, do any activity I want..... I can stop it and start it.“. “You couldn’t do that in a classroom environment” (interviewees R2 and R5). These were some of the most popular opinions that emerged during this study.

Interestingly, the findings of this qualitative research are consistent with what was reported in previous studies. The interviewees argued that the m-learning technologies enabled them to access their course content where and when they wanted. Collectively, these findings indicated that the mobile users were inclined to maximise their productivity throughout the day as they were willing to use their devices whenever they can. This issue is noteworthy to those training organisations that are planning to utilise m-learning technologies as it enables them to engage with their course participants outside of their conventional workplace environments.

The interviewees responses revealed that m-learning ought to be used in conjunction with traditional learning methodologies. They hinted that it could be used to revise course material. Another factor of this preference was dependent on the simplicity or complexity of the taught content. The interviewees agreed that the more complex the content, the more likely the users would prefer traditional learning methods. Interviewee R1 held that she would use the textbook to learn about highly complex technical issues. Generally, the interviewees agreed that they would recommend using the m-learning technologies during downtime to increase their productivity. For instance, interviewee R5 maintained that their course participants are encouraged to use their m-learning applications (apps) when they are commuting to work or at leisure. Similarly, interviewee R1 echoed that she uses her time in a more productive manner if she is carrying her laptop in times of transit.

The results of this study are in stark contrast with Wu et al.'s (2012) contribution. This study reported that the research participants (in both the quantitative as well as in the qualitative studies) liked to use their laptops, netbooks and/or hybrids (i.e. tablets with keyboards) technologies, as opposed Wu et al.'s (2012) findings . The reason for this is that today's laptops have decreased in size and are much lighter. This technology has improved throughout the past twenty years or so. In fact, all interviewees maintained that they were using a laptop at work rather than a desktop computer. Of course, this is not a representative sample of the whole population. Further research is required in this regard to better understand how m-learning in organisations may (not) be adapted for laptops and/or hybrids.

This study reported that the respondents are increasingly engaging in education technologies in different ways and for different reasons. The relevant literature as well as the findings of this research suggest that formal m-learning may also involve accessing course content from higher education institutions. This may include accessing educational videos like TED Talks for the professional development of soft skills, among others. This is a good example that is associated with microlearning, an action orientated approach that offers bite-sized education to online and mobile users (Skalka & Drlik 2018). Microlearning epitomises Miller's (1956) seminal work on the individuals' capacity to process information. It may be easier for individuals to process smaller bits of information through short videos and podcasts (that can be readily available on-demand) in a gradual manner than to absorb larger chunks of information (Bodie, Powers & Fitch-Hauser 2006).

6. A contextual framework for m-Learning

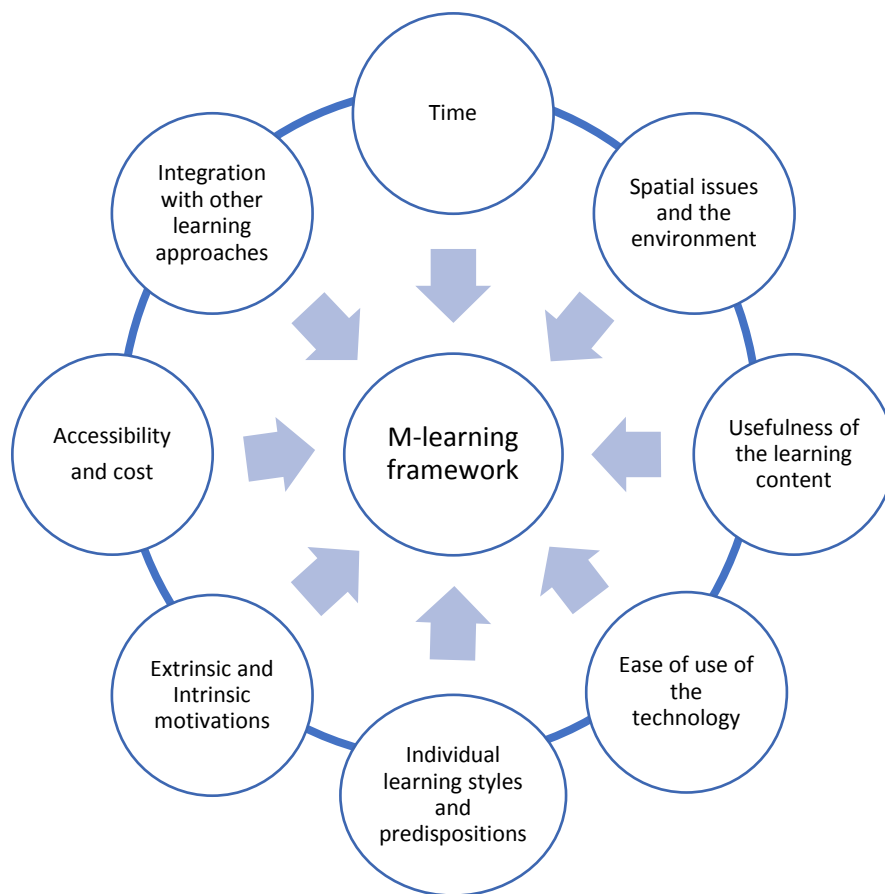
There are a number of contextual factors, including the course content, its learning outcomes, the users' perceived ease of use, usefulness and enjoyment with m-learning technologies, et

cetera, that could determine whether the individuals would use them for training and development purposes (Ferreira et al., 2015; Crescente & Lee, 2011). Sometimes, there may be other issues like the individuals' accessibility to these technologies or their spatial environment that can also have an effect on their engagement with m-learning (Doolittle & Mariano, 2008). There may be certain distractions in the environment that can disrupt m-learning and/or decrease their effectiveness.

Today, mobile users can avail themselves of noise cancelling headphones and can easily engage in m-learning when they are out and about in public places and/or commuting. This is synonymous with Squire's (2009) 'cocooning', as individuals can create their own personalised learning spaces in different contexts. In a similar vein, Csikszentmihalyi's (1975) flow theory suggests that individuals can be completely focused on specific tasks (Csikszentmihalyi, Aduhamdeh & Nakamura 2014). They may immerse themselves in their training and development through m-learning. Of course, they have to be in the right environment where there are no distractions. Hence, the contextual setting of m-learning can influence its effectiveness. For example, experiential learning theory suggests that the individuals learn through their ongoing interactions with their surrounding environment as they find meanings to problems and develop their understanding (Illeris, 2007). Similarly, Kolb's (1984) learning theory posits that knowledge may result from a combination of direct experiences and socially acquired understandings (Matthews & Candy 1999). Laouris and Eteokleous (2005) discuss about the critical factors that could influence the outcomes of m-learning. Hence, this contribution builds on these theoretical insights and on the findings from this study. The authors of this chapter put forward a contextual framework for m-learning. They identify the specific factors, including; accessibility and cost; the usefulness of the learning content; the ease of use of the technology; time; extrinsic and intrinsic motivations (e.g. rewards and perceived enjoyment, among others); integration with other learning approaches; individual learning

styles and predispositions; and spatial issues and the surrounding environment, as featured in Figure 1.

Figure 1: A contextual framework for m-learning



(source: Butler, Camilleri, Creed & Zutshi, 2020)

The authors argue that these eight contextual factors can have an effect on the successful implementation of m-learning.

- i. Time: This relates to the time that the users dedicate to learn to use and to engage in m-learning.

- ii. Spatial issues and the environment: These relate to the physical location of the user when they access m-learning content.
- iii. The usefulness of the learning content: The learning content (video, audio, written, or a combination of these) has to be useful to improve the mobile users' knowledge, skills and competences.
- iv. Ease of use of the technology: The m-learning technology has to be easy to use. It may (not) be connected to wireless networks (if it is, there should not be connectivity problems when accessing the content). The m-learning technology may require passive or active learning (for example, reading and/or interacting through games).
- v. Individual learning styles and predispositions: The m-learning technology should consider the individuals' age, cognitive knowledge (e.g. memory); skills; visual, auditory and/or kinaesthetic abilities, as well as their preferences toward certain technologies. The technology may require interaction with peers or facilitators in synchronous, or asynchronous modes (these issues will depend on the learning outcomes of the mentioned technology).
- vi. Extrinsic and intrinsic motivations: Organisations and professionals should also consider extrinsic and intrinsic motivations to entice the mobile users to use the m-learning technology.
- vii. Accessibility and cost: These relate to the accessibility and cost of the m-learning technology. It can be available through different mobile platforms. It may be used by wide range of users (who have different learning needs) for different purposes. The software and/or hardware ought to be reasonable priced.
- viii. Integration with other learning approaches: The m-learning technology ought to be complemented and blended with offline teaching approaches.

This proposed framework represents different contextual factors that can have an effect on the successful implementation of learner-centred corporate education (see Grant, 2019; Janson, Söllner & Leimeister, 2019). These eight factors are influencing the effectiveness of m-learning during the training and development of human resources. Hence the arrows are pointing inwards. However, the factors in the outer circle are related to each other and they can lead to further considerations. M-learners may choose a short video over a longer podcast to learning or revise depending on the content or their situation. There are innumerable other examples of contextual learning due to the diversity of people, organisations and learning resources, objects and opportunities. For example, how does time, ~~is-related~~ to the spatial issues and the environment. The mobile users will use their downtimes wisely at the office, at home, or whilst commuting to and from work if they engage with the m-learning applications. Their down time may provide them with an opportunity to improve their learning journey.

7. Conclusions and implications

The contextual factors for mobile learning encompass a variety of dimensions including time, spatial issues and the environment, the usefulness of the learning content and the ease of use of the technology, individual learning styles and predispositions, extrinsic and intrinsic motivations, accessibility and cost, as well as integration with other learning approaches. The authors posit that this comprehensive framework can support businesses in their human resources training and development. It enables them to identify all the contextual factors that can have an effect on the successful roll out of m-learning designs.

This chapter has featured a critical review of the relevant literature and has presented the findings from an empirical research. The data for this study was gathered through quantitative and qualitative methodologies. The researchers have disseminated a survey questionnaire

among course participants and have organised semi-structured interview sessions with corporate training participants. In sum, this study reported that the younger course participants were more likely to embrace the m-learning technologies than their older counterparts. They suggested that they were using laptops, hybrids as well as smartphones and tablets to engage with m-learning applications at home and when they are out and about. These recent developments have led many businesses to utilise the mobile technologies to engage with their employees or to use them for their training and development purposes. Therefore, this contribution has identified the contextual factors that should be taken into account by businesses and/or by training organisations. Thus, the authors have presented their proposed framework for mobile learning. This framework is substantiated by their empirical research and by relevant theoretical underpinnings that are focused on m-learning.

The authors are well aware that every study has its inherent limitations. In this case, this sample was small, but it was sufficient for the purposes of this exploratory study. Future studies may include larger sampling frames and/or may use different research designs. The researchers believe that there is still a knowledge gap in academia on this topic. For the time being, just a few studies have explored the use of mobile learning among businesses. The mobile learning technologies can be rolled out for the training and development of corporate employees. The training organisations can encourage their course participants to engage in self-directed learning and development through formal, informal or micro learning contexts. Corporate educators and services providers of continuous professional training and development can use the mobile learning applications to improve the employees' skills and competences. This may in turn lead to increased organisational productivities and competitiveness.

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Appendix A: Interview Guiding Questions

The qualitative study involved a semi-structured interview sessions. The research participants were expected to answer the following questions.

Interview Guiding Questions

- 1 What is your preferred learning method?
- 2 What do you (or don't) like about mobile learning?
- 3 Is mobile learning an effective way for you to learn?
- 4 How comfortable are you with using mobile learning?
- 5 Would you like to learn through the mobile learning or via a textbook? Why?
- 6 Where and when do you access m-learning content?
- 7 How long do you usually spend accessing m-learning content?
- 8 Do you like to learn through small bite-size learning (this notion was explained to the interviewees)? Why (or Why not)?
- 9 Has your employer ever used m-learning? Discuss. How was it?
- 10 What can organizations do to improve their mobile learning technologies?
- 11 Do you use m-learning whilst doing other tasks such as housework and/or commuting to work?
- 12 Do you find it distracting if you use m-learning whilst doing other tasks?
- 13 What is your preferred device to learn with?
- 14 How easy is it for you to recall the info that you learned whilst multi-tasking?
- 15 What does mobile learning mean to you?
- 16 Would you like to use mobile learning in future? Why?