Context in our pockets: Mobile phones and social networking as tools of contextualising language learning

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ABSTRACT

The analysis of current EFL (English as a Foreign Language) education and literature indicates that most EFL practices can be characterised as traditional language learning settings in which teachers direct the learning process, and students are then assumed as passive receptors of knowledge. Furthermore, EFL learning has also been criticised as an in-class-only learning practice due to the rare opportunities an EFL learner is expected to encounter outside the boundaries of the classroom. These limitations of EFL learning could be addressed through more student-centred, meaningful, and contextualised language learning that extends beyond the boundaries of the classroom. Mobile technology and social networking have the potential to establish learning practices that are not only based on learners' needs and experiences, but they can also involve learners in the overall learning process that sometimes goes beyond the classroom. In addition, much of the literature on mobile learning emphasises the effectiveness of mobile technology in creating contextually meaningful and authentic learning opportunities. A DBR (Design-Based Research) study was conducted with 33 EFL university students over a 16-week semester. Students experienced a contextual learning experience using Facebook via their mobile phones. The paper concludes that mobile social networking media, e.g., Facebook, provide rich learner-generated and contextual out-of-class language learning opportunities that exploit the norms of the learning context. Moreover, mobile Facebook provided students with reality-based learning experiences that utilised their own knowledge and personal values about their context.

Author Keywords

Mobile language learning, mobile social networking, user-generated content, contextual learning, design-based research

INTRODUCTION

Most EFL (English as a Foreign Language) contexts have been characterised as traditional language learning settings in which teachers direct the learning process, and students are then assumed as passive receptors of knowledge (See, e.g., Al-Hazmi, 2008; Chen, 2007). In addition, EFL learning has also

been criticised as an in-class-only learning practice due to the rare opportunities an EFL learner is expected to encounter outside the boundaries of the classroom. This indicates the need for practical incorporation of a student-centred approach and contextualised language learning. Thus, mobile technology is examined here as a means to enhance different student-centred practices and to create meaningful outside-classroom and contextualised learning opportunities.

Current practices of mobile learning are not theoretically guided, but rather, they are deemed to imply paradigms that are sometimes technology-driven, rather than pedagogy-based (Naismith, Lonsdale, Vavoula, and Sharples, 2004; O'Malley, Vavoula, Glew, Taylor, Sharples, and Lefrere, 2003). Hence, context-awareness is one of the rich aspects that can be enhanced by mobile learning in a way that exploits the affordances of mobile technology used outside the classroom in an exemplary way. Mobile learners, for instance, are now able to interact and communicate with the context in which a mobile learning task is taking place. Unfortunately, mobile language learning has not yet used an evidence-based research approach to adequately explore the context-awareness paradigm. Evidence is required to understand how mobile language learners interact with their surrounding environment and exploit the functionalities of their mobile phones to better realise the potential of out-of-class learning. Moreover, concepts of student-centred learning as well as mobile social-networking and collaborative learning have not yet been adequately investigated by mobile language learning research.

Using a DBR (design-based research) approach, the current paper tested, redesigned, and then refined learning designs to establish and then account for contextual implications for mobile language learning. The design involves reflections and feedback of EFL learners.

The paper also investigates the potential of mobile phones in maintaining effective learning environments, and to explore whether mobile phones can assist language learners in establishing a collaborative mobile medium that takes advantage of students' familiarity with the use of mobile phones, on the one hand, and social networking environments such as Facebook, on the other. The integration of mobile phone technologies into tertiary education holds both opportunities and risks for the quality of mobile learning (see Kukulska-Hulme, 2005; Kolb, 2008). As a result, it is essential that a better understanding is gained of learners' perceptions and attitudes towards the implementation of mobile phones in language learning.

LITERATURE REVIEW

The Potential of Student-Centred EFL Learning Design

As previously discussed, most EFL learning opportunities are usually classroom-based and/or teacher-centred rather than focused on students and their needs inside and outside of the classroom. However, there has been a growing interest in updating theoretical assumptions and new educational approaches and methods that can maintain effective learning, particularly, under collaborative, authentic, and meaningful conditions (Hu, 2002).

According to Levy and Stockwell, (2006), the move toward student-centred approaches was an attempt to gain a better understanding of students' backgrounds, roles, and perspectives. Student-centred approaches, as also noted by Hu (2002), are the most significant innovations in language learning that help students acquire communicative competence to meet their needs, and to engage them in purposeful communication in meaningful contexts. Students in turn are expected to "react to, reflect on, and make creative use of the information provided by the textbook and the teacher to engage in stimulating tasks and activities" (Hu, 2002, p. 40). However, this theme of personalised learning can also be broadened to

deal with other dimensions of learning beyond the roles of teachers and textbooks. For example, self-regulated learning approaches (Chang, 2005), student-generated learning approaches (Kukulska-Hulme, Traxler, and Pettit, 2007), and self-directed learning approaches (Nah, 2008) have been developed. Students themselves can become co-collaborators in the design of their learning experiences. For example, Levy and Stockwell (2006) argue that students with educational technology can play an important role in the design process if they were given the opportunity, and can then develop or review learning strategies and share with one another. Therefore, it is the learner's own responsibility for decision making and autonomy, which is integral to student-centred learning approaches.

Computer and internet technologies have been frequently used in language learning contexts to enhance student-centredness, students' engagement, interaction, and collaboration (Nah, 2008). More importantly, mobile learning as well as social media, e.g., Facebook, enableinteractions between students both beyond and within their own institution and can effectively maintain student-centred learning environments (Fisher and Baird, 2007; Sharples, Taylor, and Vavoula 2005).

The Potential of Contextualised Out-of-Class EFL Learning

Effective use of students' out-of-class time, as Kennedy and Levy (2009) note, is a basic goal of recent computer-based language instruction, particularly in a university environment, where in-class language practice time is limited. When an out-of-class practice is targeted, Kennedy and Levy (2009) continue, limited in-class time can be dedicated to face-to-face communication and useful guidance for students on how to exploit out-of-class learning opportunities and to "support students' development as independent strategic learners" (p. 449). Technology can also be integrated to provide EFL learners with authentic and meaningful dialogic engagement with contextual elements of an out-of-class learning environment (Shin, 2006). Indeed, technology can be used to engage language learners with broader communities and local and international cultures and enhances their sense of community by participating in the community outside the classroom (Reinhardt and Nelson, 2004). Examples of technological tools that can provide rich out-of-class learning opportunities for EFL learners include email (Torii-Williams, 2004), blogs (Comas-Quinn, Mardomingo, and Valentine, 2009), podcasting, (Ducate and Lomicka, 2009), and mobile technologies (Kolb, 2008; Kukulska-Hulme, 2009).

The internet technology has been found to be helpful in the assimilation of local cultural elements within EFL contexts (See, e.g., Al-Jarf, 2004; Torii-Williams, 2004). The integration of mobile technology, particularly, for contextualising language learning is potentially valuable. The sheer mobility of mobile technologies enables student interaction with such a wide range of location-based contexts. Mobile phones, for example, can effectively connect between the culture of student home life and student experiences, and can integrate home cultures of students into their classroom learning (Kolb, 2008). Furthermore, mobile phones can bridge the divide between the technologies students use at home and what they use in school (Prabhu, 2010). Besides, the mobile generation, i.e., current young students have developed extensive social communities outside the classroom that can be harnessed for contextually-based out-of-class EFL activities.

Mobile Learning and Context-Awareness

According to Pham-Nguyen, Garlatti, Lau, Barby, and Vantroys (2008), context-aware learning takes place when there is a combination of formal and informal learning in broader educational scenarios and different contexts, in which a learner successfully interacts and selects from adaptive resources. In this regard, mobile phones, as Naismith *et al.* (2004) point out, are particularly "well suited to context-aware

applicationssimply because they are available indifferent contexts, and so can draw onthose contexts to enhance the learningactivity" (p. 14). However, learning with mobile phones is not intended to make artificial mobile settings and push learning opportunities into them, but rather, it is to take advantage of "being mobile" to enhance learning.

Theng, Tan, Lim, Zhang, Goh, Chatterjea, Chang, Sun, Han, Dang, Li, and Vo (2007) implemented a context-aware procedure with secondary school students to help them to learn about climate elements such as temperature, rainfall, humidity, and air pressure in a geographical fieldwork study, in which students were trained to use their PDAs before going to certain locations using a geographical platform. Such illustrative systems, as cited in Carter (2009), are aimed at facilitating the acquisition of abstract knowledge in a meaningful and motivating way. Most importantly, it can be argued that location-based geography learning and similar out-of-class learning tasks are exclusive to mobile learning.

For language learners, the varieties of authentic location-based environments are almost limitless and offer significant opportunities for language learners to acquire linguistic and communicative skills meaningfully and in real contexts.

Mobile Language Learning and Authentic Learning

Petersen, Divitini, and Chabert (2008) considered a socio-constructivist authentic language learning approach to mobile language learning. Their learning design was highly supported by collaboration, interaction, and developing a sense of community through mobile community blogs, particularly when students were physically present in the target language setting and culture, and/or when they were away from their classmates. The study by Petersen *et al.* (2008) revealed that mobile blogs were effective tools that facilitated student-student interaction in different language settings and created authentic opportunities for students to interact with native speakers. However, the researchers found that participants' sense of community and belonging to the language learner community was not high, and participants' identity was not well identified. Researchers attributed this to the lack of identity among members as a community and believed that the blogs were incapable of strengthening new, rather than existing communities. It was also found that participants were not eager to collaborate in the mobile blog due to hesitation and lack of confidence among students. For the current paper, however, it is important to point out that sense of community and belonging to the learning context among students were high, and that students were keen to engage in authentic learning activities outside the classroom. As discussed subsequently, a positive sense of community and belonging can be attributed to students' familiarity with the learning context and the learning community as well.

METHODOLOGY

DBR and Mobile Language Learning

Design-based research can be defined as "a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories" (Wang and Hannafin, 2005, p. 6). Five fundamental characteristics of design-based research have been proposed by Wang and Hannafin (2005): grounded (in both theory and the real-world context), interactive, iterative and flexible, integrative, contextual, and above all pragmatic. The pragmatic characteristic of design-based research evolves from solving real-world problems by designing and practicing educational interventions (solutions) as well as extending theories and refining design principles through continuous cycles of design and redesign.

Most importantly, design-based research does not merely implement and test particular designs and interventions, but rather, it can contribute to learning and teaching theories (Design-Based Research Collective, 2003).

Based on the fact that mobile learning does not rely on a specific learning theory or approach due to its relative novelty, and that most current practices of mobile learning are teacher-driven rather than based on students' experiences and beliefs (Kukulska-Hulme, 2009), DBR can potentially address these limitations of mobile learning. Table 1 illustrates how the five characteristics of DBR (See, Wang and Hannafin, 2005), can be applied to research in the mobile language learning situation addressed in this paper.

Characteristics of DBR	Implications for research into mobile language learning
• Grounded in theory and real-world context	• Theory: student-centred /out-of-class context-aware mobile language learning • Practice: student-generated content and students' as co-contributors to the design
• Interactive, iterative and flexible	• Teachers and students interact with and input into iterations of mobile language learning designs • Mobile language learning tasks go through analysis, design, implementation, and redesign using various pedagogies • Alterations can take place *when* and *where* necessary
• Integrative	• Mixed methods are used e.g. analysis of mobile blogs, mobile quizzes, interviews, etc. • Mobile language learning is integrated with the curriculum and blended with other technologically-enhanced learning
• Contextual	• The research and implementation of context are taken into account when evaluating findings of the current design • Findings and changes of initial research are documented and then connected with the mobile design and the setting
• Pragmatic	• DBR defines and/or refines optimal practices for mobile language learning

Table 1: Characteristics of DBR (Wang and Hannafin, 2005) and their implications for mobile language learning

This research enquiry explored the following question: What are EFL students' perceptions of the effectiveness of mobile learning for:

a. establishing meaningful contextually-aware language learning designs? and

b. connecting in-class with out-of-class EFL learning?

Research Design

This paper examines the usefulness of mobile phone technologies for creating communicative, student-centred, and authentic language learning conditions that go beyond traditional EFL classrooms. It is also designed to evaluate the potential of the implications of DBR for mobile language learning. Further, as opposed to typical teacher-generated learning designs, this paper invites students, as co-collaborators, to contribute their voice, experiences and perceptions to the iterative design cycle.

The study was conducted over a 16-week semester using qualitative methods. Research tools included focus group interviews, Facebook observation, analysis of students' feedback and reflection, and stimulated recall sessions. The study was conducted with 33 EFL university students studying Bachelor of Education with a major in the English language at King Khalid University, Saudi Arabia. Students were

enrolled in a Vocabulary Building course, in which they were studying Academic Word Lists and doing intensive vocabulary exercises. For most students, the study was the first language learning experience that required them to reflect on their own contexts, and to imply that into their learning activities. In addition, students indicated that mobile Facebook was not utilised in their previous learning.

Procedure

Ten randomly-chosen students were interviewed before the task in order to identify any difficulties they might have encountered while learning English, and to reflect on the current design of the study. Over three days in a week, all students were scheduled to upload multimedia materials (photos or video clips) from their own contexts to a Facebook group using their own mobile phones. Students were expected to reflect on each other's uploaded materials using their mobile phones as well.

Students were informed that uploaded materials should be associated with captions, descriptions, or starter questions to the discussion board created by the uploading student. Materials also should reflect some social occasion or event that occurs out of class, or have some local or cultural characteristics. Specifically, captured materials could be something that other students may not be aware of, provided that participants are believed to have relatively different cultural backgrounds and customs. Other participants in the group, who will be automatically notified of the new thread by Facebook SMS service, will be required to respond and comment on those uploaded materials with 5 comments and 3 responses as a minimum for each participant over the six week duration. The researcher's role in this activity is to facilitate discussion and to provide guidance when needed. Moreover, both the students and the researcher have to identify, from the discussion, elements that have linguistic characteristics that could benefit language learning. The group also have to connect between in-class linguistic activities and Facebook contextual topics. In other words, the Facebook material and discussion board content from the week prior will be integrated back into in-class discussion.

This learning scenario lasted for six weeks (first iteration of the learning design), during which students' Facebook interaction was observed and analysed. After the first iteration was over, a stimulated recall session was conducted with five students to identify a rationale for students' Facebook interaction and the integration of cultural and contextual norms into their learning experience. Stimulated recall session also aimed to draw out students' reflections on the design, and what needed to be improved for the second iteration. An initial data analysis was conducted before the second iteration commenced.

The second iteration lasted for another six weeks and repeated the process detailed for the first iteration. After the study was over, another randomly-chosen ten students were interviewed to explore their experiences and perceptions toward the use of mobile Facebook in their language learning.

RESULTS

1. Pre-Task Focus-Group Interview

The pre-task focus-group interviews aimed to elicit students' own conceptualisation of context-awareness and whether there had been any impact of local and contextual norms on their learning experience. Although most students argued that they did not have rich opportunities to extend their learning activities beyond the classroom, some mentioned that there were some limited contextual elements being used in some other courses. Students indicated that they have few opportunities to write or speak about local situations. Overall, a student argued that only 20 to 30 percent of in-class activities are connected to the out-of-class environment. Another student suggested that their college studies

should involve extracurricular visits to places where English is spoken. This discussion raised students' curiosity about the impact of the integration of mobile phone technologies and Facebook on connecting in-class learning with external contexts. This was clear from questions that were raised by students during the interview inquiring about their upcoming task.

2. Facebook Observation

It was noticed that students who already had Facebook accounts were more active than those who just signed up for Facebook. Consequently, more active students were scheduled to post their threads before less active students, so that less active students were targeted to learn how to communicate effectively through Facebook by their active counterparts.

The observation of Facebook interaction and uploaded materials indicated that most threads were taken from students own contexts (cities, villages, etc) and contained unique landscapes, cultural folklores and dances, festivals, family gatherings and parties, and even incidents like floods. Moreover, it was clear from comments that the majority of uploaded materials were interesting for most of the group members, while a few threads seemed familiar to the group. Also, there was a rich contextual discussion using language that reflected the out-of-class environment.

As time went on, students started to collaborate on irrelevant casual topics that had nothing to do with the course especially on weekends. Relevant topic threads and discussions were active during the weekdays particularly in the evening or after classes. It was also noticed that students' interaction increased dramatically during mid-term exams and before finals. Students were, at these periods, sharing ideas about their exams, inquiring, and asking for some clarifications from their teacher.

3. Stimulated Recall Sessions

The stimulated recall sessions sought students' evaluation of the first iteration of the learning design. Overall, students appreciated the implementation of mobile phones and Facebook to connect in-class activities with the external context. They also liked the incorporation of contextual norms from their own environments to their learning task. Students also indicated that they even learnt about surrounding places that they were unfamiliar with. In an interviewee's words:

> After [a student] uploaded a video clip about his hometown, I visited it the next day. I had no idea about it [hometown] before, and I did not expect it to be like that. I actually thought [he] fabricated the video clip [laughing] so I decided to go there.

Although the role that mobile phone Facebook played in learning contextualisation, students listed some limitations that they encountered during their learning task. Some of the limitations included the lack of good network coverage especially at remote areas, the interference between learning and non-learning materials on Facebook e.g. ads, and the tendency to use the first language in certain situations. In addition, some students indicated that they were in favour of browsing Facebook from their computers rather than their mobile phones. Students attributed this to the small screen size and small keypads of mobile phones compared to computers. Unlike the fast local internet connections for computers, slow internet connections for mobile phones were also a limitation for some students.

4. Adjustment to the Design

Based on students' reflection on the first iteration of the design, some adjustments were made in the design and then applied in the second iteration. Major adjustments included:

1. Students were free to post their own threads whenever they got something worth sharing. Students in the first iteration were scheduled to a timetable (three students a week).

2. Uploaded materials could be text-based. Materials in the first iteration were only pictures or video clips.

3. Students could use their computers to upload large-size learning materials to Facebook. However, uploaded photos and videos should be captured by mobile phones.

4. Uploaded materials should recognise diversity, differences, and individualities of students. Such issues were less of a focus in the first iteration.

5. Students should look at the linguistic side of the learning materials they want to share. For instance, a student should elaborate on the linguistic content of what he has uploaded given that not everyone in the group was familiar with it. The teacher's role here was to highlight these linguistic elements and to match them effectively to context.

5. Post-Task Focus Group Interview

Another randomly-chosen ten students were interviewed in the final week of the semester. The post-task interview investigated their experiences and perceptions toward the use of mobile Facebook in their learning. The interview also examined students' context-awareness in their language learning experiences and whether they benefited from the process of contextualising their EFL learning via Facebook and mobile phones.

The interviews showed that students valued the implementation of mobile phone Facebook in their learning task. Students, for example, indicated that mobile phone Facebook not only provides them with collaborative tasks in real-world settings, but it also created, for them, meaningful and authentic learning opportunities beyond the classroom. Students also stated that Facebook helped them to become familiar with each other, something that would not have occurred without such an interactive social networking tool. Additionally, a student argued that Facebook provided them with friendly channels to communicate with their teacher, which were not available to them via other learning online tools such as Blackboard.

DISCUSSION

Despite the fact that students in the study were accustomed to latest trends of instructional technology provided by their institution including Blackboard, mobile phones as well as mobile Facebook assisted students more broadly to find ways of learning that fit with their mobile lifestyles and out of class hours. This is the key distinction, as proposed by Kukulska-Hulme (2009), between computer-assisted and mobile-assisted language instruction. Moreover, the utilisation of informal social media such as Facebook increased students' engagement in the learning task, and motivated them to implement contextual elements from their own environment. In addition, the integration of local cultural norms into the learning design assisted students to collaborate with each other in the target language.

Thanks to mobile phone technologies, students developed their own interests and abilities to create learning resources that reflected the learning context and students' own choices. Most importantly, the utilisation of tools that students were already familiar with, i.e., mobile phones and Facebook, played an important role in maintaining a positive sense of community and authentic learning opportunities outside the classroom. Thus, it is important to point out that the implementation of learning tools, that students

are already accustomed to, saves both students' and teachers' time, and does not require additional training. This study, for example, implemented two intensive iterations of a learning design inspired by DBR approach over one semester, where it was hard to dedicate time for training. However, students attended an introductory session during the first week of the semester to ensure that they were all familiar with the functionalities of their mobile phones and/or Facebook.

As far as student-generated content was concerned, the current paper draws out what the learning context offered to students in ways that allowed them to create meaningful learning resources via their daily interaction with the external environment. Student-generated learning content did not only support collaboration and a community of practice among students, but it also fostered their individual creativity and competitiveness. Kukulska-Hulme *et al.* (2007) describe such user-generated activity as mobile-based cultural citizenship activity, in which students involve everyday life situations in their learning and transform that into engaging learning experiences.

The contextualisation of this language learning setting helped students to develop more sophisticated skills beyond the learning task itself. For example, students learnt how to think critically about certain issues and to justify local incidents particularly in the target language. Each student was required to analyse what his classmates uploaded to Facebook and to find strong connections between in-class and out-of-class activities. Above all, students' decision-making skills improved by enabling them to provide critical feedback on the learning design, and allowing them to see the influence of their feedback and reflection on the adjustment made on the design.

The role that mobile learning can play in enhancing contextual and authentic learning practices has been addressed by several researchers (See, e.g., Herrington and Herrington, 2007; Kukulska-Hulme, 2009; 2010; Kukulska-Hulme *et al.* 2007). Arguments outlined by these researchers are supported in the current paper. Mobile phones and mobile Facebook provided EFL students with rich contextual opportunities that extended beyond the classroom. Mobile learning not only stimulated collaboration and interaction between students, but it also enhanced their context-awareness about their surrounding environment. Moreover, students collaborated on interactive learning tasks through which they connected in-class learning activities and language items with the external context and created from their class group a mobile learning community. In other words, students successfully incorporated some outer contextual topics that reflected their own environments into their classroom discussion by the means of mobile social networking.

CONCLUSIONS

This paper reflects on what mobile phones and mobile social networking tools such as Facebook can offer to improve language learning and EFL education. It presents a summary of pedagogical uses of mobile phones and mobile Facebook in creating contextual and authentic language learning settings.

According to Cochrane and Bateman (2010), the process of "immersing students within a social constructivist pedagogical environment can be a new and challenging experience for the students, therefore implementation requires planned staging and scaffolding to support student learning" (p. 12). Hence, a social learning environment using mobile phones and mobile Facebook was adopted. The adoption of a DBR approach was basically aimed at providing flexible learning environments that recognise students' voices and cater for the transformation from a traditional EFL learning condition to a more collaborative and contextual learning experience. It was also intended that students should exploit what already was available to them to facilitate this transformation, i.e., mobile phone technologies and

Facebook. Traditional language learning settings, as Nah (2008) found in his study, provided students with limited in-class input opportunities, whereas students obtained more frequent comprehensible input opportunities using their mobile phones whenever they needed to.

In the current study, students were effectively engaged in two iterations of the learning design inspired by DBR. Students' voices were also crucial in the cycles of design, implementations, analysis, and redesign. Both iterations were refined and students were able to experience every bit of the design adjustment. In each iteration, qualitative data revealed findings about the effectiveness of contextualising language learning facilitated by mobile phones and mobile Facebook. Although several parts of the design remained relatively stable over the two iterations, other parts have changed based on students' feedback.

It seems that future EFL students will lead their mobile learning initiatives by creating their learning content and resources and manipulating their mobile social interaction. However, future mobile language learning designs should consider students who might be unaware of the potential of their mobile phones for learning. According to Dede, Nelson, Ketelhut, Clarke, and Bowman, (2004), an important emphasis of the adoption of DBR is to improve students' academic achievement, motivation, knowledge, and skills. Thus, researchers of mobile language learning should take these fundamental issues into consideration. Future research should also focus on students with special needs and those who are not keen to use their mobile phones and/or their private social networking spaces for learning purposes.

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