THE M-LEARNING EXPERIENCE OF LANGUAGE LEARNERS IN INFORMAL SETTINGS

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ABSTRACT

This study is designed to understand the informal language learners' experiences of m-learning applications. The aim is two-folded: (i) to extract the reasons why m-learning applications are preferred and (ii) to explore the user experience of Duolingo m-learning application. We interviewed 18 voluntary Duolingo users. The findings suggest that mobile language learning applications are perceived as complementary tools. They believe that it is impossible to learn a complete language only through the use of these apps. They find them convenient, because they spend tiny periods of their leisure such as coffee breaks at work on these applications. Duolingo is one of the most downloaded apps in the market. The participants like the method the app follows. Step-by-step flow, gamification, immediate feedback, high usability, and effortless use of the app can be considered as the good parts of user experience. Notifications could turn into a burden for some users. For advanced level users, the level of challenges is quite low. However, the flexible features and being almost completely free can contribute to the user experience in a positive manner.

KEYWORDS

UX; m-learning; language learning app; gamification.

1. INTRODUCTION

Throughout the history of instructional media, the integration of technology into education generally did not go beyond formal learning scenarios. The expectations were quite high, but the outcomes were not very different from those of the traditional educational settings consisting of blackboards and textbooks. The advancements of computer technologies offering high interactivity, the accessibility of personal computers, the introduction of graphical user interfaces, the development of Internet, prevalence of wireless technologies, and growing acceptance of mobile devices, especially the smartphones with advanced features made a difference in everyday life. Today, we frequently use online banking, store and share digital documents via clouds, exchange any information, and even learn online. Unlike its antecedents, mobile devices have the advantage of "anytime, anywhere, and anyone" flexibility, which enhances the opportunity for mobile-learning (m-learning).

In its early history, m-learning was directly associated with the mobile devices. Early definitions included device names such as handhelds (Traxler, 2005) or approached more general concepts such as mobile devices/environment (Polsami, 2003; Trifonova, 2003). It is obvious that m-learning is viewed beyond traditional learning, but there is no unique universal definition. As Peters (2007) stated the definition of m-learning is heading towards flexible learning owing to rapid developments. Recently, communication among users within mobile environment (Sharples et al., 2010) and sociocultural potential of those (Kearney et al, 2012) are the focus of these definitions. Despite the variety of definitions, it is seen that people use mobile devices to learn something as well as to communicate, and furthermore it may be bringing about new forms of learning (Khaddage et al., 2016).

The literature of m-learning grows day by day, but there are certain fields of study benefiting the mobility features. Mobile language learning is one of those fields. Some researchers try to contribute the theoretical issues (Stockwell & Hubbard, 2013), whereas some of them design and develop their own m-learning applications (Wu, 2015). One of the recent studies, Liu, Hwang, Kuo, and Li (2014) developed an innovative

language learning material with smartphone and QR code integration. In this way, people were learning fitness related words as they engage in reading the materials in a fitness center. Another example is the use of handhelds to improve listening and vocabulary skills in language learning. In their study, Hsu et al. (2013) provided students with different caption options as they watch videos. Although students' vocabulary learning results were different across groups, no differences were observed in terms of listening skills. In its early history, the integration of mobile devices was challenging considering limited screen size, virtual keyboard usage, and power capacity or even audiovisual quality, which is crucial for language learning (Chinnery, 2006). Today, people are getting used to be proficient in mobile device usage and multimedia quality is quite high. That can be the reason why Mobile Applications for Language Learning (MALL) are popular recently with the increased positive effects on learning (Flores, 2015; Ketyi, 2016). The success of these apps can be sometimes attributed to gamification features, the inclusion of game-like elements in a design, which is not game-like at all (Deterding et al., 2011). Thereby, the motivation is preserved at a high level.

In application stores of different platforms, the number of MALL is considerably high as well as the number of downloads. Not all of them provide m-learning experience; some of them just serve as a translator or a dictionary. However, such popular applications as Duolingo offer users simple m-learning experiences with gamification (Flores, 2015), and thus have millions of downloads. There are many others in the market. For example, Busu, Babbel, and Italki have millions of users or Mondly has 100,000 users. They are generally free of charge but offer in-app purchases.

In this study, we are going to explore the m-learning experiences of Duolingo users. It is a very popular application having 50 million users and has versions in different languages. There are studies including many MALL, but this study is designed to have insights of user experiences in a specific MALL. The following research questions will be utilized: (RQ-1) Why do the participants prefer m-learning applications?; (RQ-2) What are the user experiences of Duolingo m-learning application?

2. METHOD

In this study, we designed a single-case study (Yin, 2009). The unit of analysis consists of Duolingo users. We deliberately choose a group of adult language learners having m-learning experience on Duolingo mobile application. 18 users accepted our invitation for the interview. They use at least one language learning application in addition to other apps. The mostly studied language is English (N=13), then German (N=4), Spanish (N=3), and finally Italian (N=1). Their occupations of participants were: student (N=4), teacher (N=4), engineer (N=2), accountant (N=2), civil servant (N=2), ship-broker (N=2), interpreter (N=1), and graphic designer (N=1). We collected data through semi-structured individual interviews lasting about 10-15 minutes. The questions were shaped to have insight of users' experiences with Duolingo. The questions were categorized into three: (i) demographics, (ii) usage patterns of m-learning app, (iii) perceived advantages and problems of Duolingo app. We recorded transcribed, and then coded the interviews. The content analysis was performed in the light of research questions with the help of literature. The themes and categories were discussed among researchers, thus received its final form. We both used direct quotations of users and frequencies.

3. FINDINGS

The collected data were analyzed and the themes and categories were extracted. In this section, the findings will be summarized in line with the research questions. Table 1 summarizes the sample coding.

Table 1. Coding Scheme.

Reasons for MALL (RQ1)	UX
Perceptions	**Positive**
Complete tool	*Effectiveness*
Not enough to learn a language	Ad-free
Complementary tool	Step-by-step (smoothness)
Repetition	*Efficiency*
Practice (Vocabulary; Grammar)	Free
Life-long Learning	Rich examples (vocabulary; grammar; pronunciation)
Self-improvement	
Career	Feedback (immediate; summary of performance)
Convenience	Flexible (Shortcuts; customization)
Flexible	*Satisfaction*
Time (shorter periods)	Design (simple/friendly; high-quality visuals)
Location	Gamification (entertaining; Interesting; helpful notifications)
Home (before bed; while watching TV; at dinner)	**Negative**
Commute (avoiding boredom)	*Restrictions*
Work (Coffee/lunch breaks)	Technical (Internet connection; headphones; screen size; battery; system bugs)
	Affective (Timeless notifications; decreasing levels)

3.1 Why M-learning Apps?

The participants reported frequent use of mobile language learning apps. In addition to Duolingo, the popular m-learning apps were identified as follows: Busuu, Memrise, Mondle, HelloTalk, Toeic Game, English Central and others. They all have and use dictionary apps frequently.

In order to understand the reasons why users download and use m-learning apps, we asked a few questions. First of all, all participants (N=18) stated that using such applications is not enough on its own to completely learn a foreign language. According to them, those can serve as complementary tools (N=10) for the purposes of repetition (N=15), vocabulary learning (N=9), and basic grammar practice (N=6). The participants all have life-long learning purposes, and therefore self-improvement (N=8) is crucial for them. They believe that learning a language can create new opportunities for them in terms of their career (N=10).

In its basic definitions, m-learning includes such terms as anytime and anywhere. The analyzed interview data indicate similar structure. In other words, one of the main reasons why m-learning language apps are preferred is becase they are convenient to use. Some of the participants (N=4) do not have time for a formal language education, but using such apps is possible since they do not demand long attention periods (N=2). The analysis showed that the participants use m-learning apps everyday (N=16) as long as they have free time (N=16). Unlike traditional PC-based ones, m-learning apps enhance the context. The participants emphasized how convenient the m-learning apps due to the usage anywhere (N=16). They use them at home (N=7) before going to bed (N=6). Instead of reading a book, they practice with apps. They also use them while watching TV (N=3) and having dinner (N=4). The majority of the participants (N=11) use the apps during morning/evening commutes in order to avoid boredom. For the same reason, they also complete a few levels during their coffee/meal breaks at work (N=4).

3.2 User Experience (UX) of Duolingo Users

Duolingo offers wide range of exercises in a gamification manner, which seems to be attracting many users. In this study, except for 2 participants, all of them reflected positive feelings about the app. Moreover, they expressed their satisfaction through their many statements. For example, they admitted that they learn

something but in an entertaining (*N*=12) and interesting (*N*=2) way. Being free of charge (*N*=8) and having no embedded advertisements (*N*=3) are the positive sides of the app, according to users.

The method of Duolingo consists of many features that users appreciate. The participants enjoy the step-by-step flow of the app (*N*=10). Each step comprises of small pieces of information. The overall aim of this app is to enable learners moving forward in a smooth way with repetitions, which attracts the participants' attention (*N*=15). In addition to vocabulary (*N*=9) and basic grammar (*N*=6) practices, the app offers a rich pronunciation (*N*=11) practice, which was perceived as a valuable feature by users. One of the most powerful features of the app is immediate feedback and performance summary (*N*=13), especially during the pronunciation exercises. Earning points as you gain skills enriches the flow of app (*N*=4), so that some of the participants defined Duolingo as a game (*N*=7).

In terms of design features, participants agreed that the interface is simple and usable (*N*=12). According to them, the quality of visuals are high (*N*=8). One of the important points in user experience is the flexibility of the system. The participants remarked the value of available shortcuts and customizations (*N*=4). For example, slowing down the pronunciation, skipping the exercises requiring the use of microphone, and moving to the next level with a simple test rather than completing the whole lesson were all mentioned shortcuts in this study.

Like many other apps, Duolingo sends notifications when the user skips the daily practice. Although the aim is to motivate people to spend time for a little practice, this may not always serve this purpose. For example, 2 participants reflected that they had to delete the app due to timeless reminders. Because, according to them, notifications made them feel guilty. They could not manage to use the app due to lack of time. On the other hand, 11 participants were affected in a positive way. The notifications served as either the regulators of their performance (*N*=11) or motivators to start studying (*N*=4). Some of the participants had neutral attitude (*N*=3) because they already can regulate their own study habits.

The general user experience of Duolingo seems quite positive, but there are some problems that users face in real settings. The app requires Internet connection (*N*=4), which is a restriction according to some users. Moreover, for listening and pronunciation exercises one needs headphones within crowded places, and therefore it limits the usage (*N*=2). Small screen sizes (*N*=2) and high demand of battery (*N*=1) are the other bad experiences reported by our participants. The software is not without bugs, therefore the users sometimes experience and have to leave the system especially during the recording of pronunciation exercises (*N*=3).

The comments of participants revealed the affective dimension of the experience. Its gamification approach seems to appeal the target audience (*N*=3), but sometimes can be time consuming (*N*=3). Some of the participants found the reward/punishment discouraging (*N*=7).

4. CONCLUSION

The body of m-learning literature is growing rapidly in the last decade. In this case study, we focused on user experiences of Duolingo, the mobile language learning application having 50 million users. We interviewed with 18 voluntary Duolingo users. First, we tried to understand the reasons why they prefer m-learning applications and then explored the user experiences of Duolingo. The findings suggest that our participants find m-learning apps convenient, which is included in the definitions of m-learning in the literature (Kearney et al, 2012). They do not have time to participate in a formal leaning environment. Instead, they find using such apps more convenient because they already have those bits of time that are useless otherwise. However, they are all aware that one cannot learn a language via m-learning apps without previous experience. They should be integrated into formal classes to practice (Chen, 2013).

In user experience, effective and efficient use of the app is very important in addition to the satisfaction. If people perceive the ease of use then the frequency and the probability of the good experience may occur (Hsia, 2016). The majority of the participants were very positive about the interface and the overall experience. Duolingo supports multiple types of practices ranging from vocabulary to pronunciation. Such a rich environment can increase the flow of the usage. Gikas and Grant (2013) suggest that the quick access, situated learning, and various learning options are the advantageous parts of m-learning. Practicing vocabulary, grammar, speaking, and listening with repetition were seen crucial according to the participants. Duolingo offers an extensive series of practice, which may appeal the users, so that they continue to use it. Such apps can be used not only informally out of the school, but also during the formal learning period to

support the user (Steel & Levy, 2013). Although the aim of the notifications is to encourage users to log in the system, for some participants those notifications were the main reason why they leave the system eventually. At this point, the designers should carefully analyze the needs of the stakeholders (Stockwell & Hubbard, 2013). Recently, adaptive learning environments are on the spot. For such popular m-learning apps, adaptive features should be embedded in the future.

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