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# User Acceptance on Mobile Apps as an Effective Medium to Learn Kadazandusun Language

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### Abstract

The popularity of mobile applications (mobile apps) is undeniable where it allows people to perform several tasks through the use of smartphones, tablets or corresponding devices. Regardless of the great benefits in terms of innovation, the fast and nonstop growth of the mobile market has caused in some division of the platforms that support mobile device as an ideal platform for language learning applications for dominant languages such as English, Spanish and French in a fun and interactive devices. However, studies have yet to be conducted on the use of mobile technology in learning Kadazandusun language and demand a new study on how mobile technology such as mobile apps can help in preserving the language. Therefore, this conceptual paper discusses the user acceptance of the potentiality of mobile apps as an effective medium to learn Kadazandusun language, guided by the Technology Acceptance Model (TAM). It is proposed that the users' acceptance of using mobile apps in learning Kadazandusun language is influenced with their perceived usefulness of the mobile apps and their perceived ease of mobile apps use, which in turn influence their attitude towards mobile app usage and behavioral intention to use. Additional variables to the model includes content richness, user satisfaction, and perceived playfulness. Direction for future research is also presented.

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Keywords: Mobile apps; Kadazandusun language; user satisfaction; content richness; technology acceptance model; perceived playfulness

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## 1. Introduction

The use of technology for language learning has long been represented through the documentation of endangered languages and material development (Hinton, 2001; Penfield et al., 2006). New technology developments such as virtual worlds, mobile technology, and mobile applications (apps) has engaged to increased interest into how these new developments may be effectively used for language learning projects (Kim et al., 2008; Godwin-Jones, 2011). Prior studies have been conducted on the use of mobile technology for learning more dominant languages such as English, Spanish and French (Kim et al., 2008; Martinez et al., 2010; Thornton & Houser, 2005). However, studies have yet to be conducted on the use of mobile technology in learning Kadazandusun language. Indeed, no empirical evidence of user acceptance on mobile apps as an effective medium to learn Kadazandusun language. Therefore, this conceptual paper discusses the user acceptance of the potentiality of mobile apps as an effective medium to learn Kadazandusun language, guided by the Technology Acceptance Model (TAM). It is proposed that the users' acceptance of using mobile apps in learning Kadazandusun language is influenced with their perceived usefulness of the mobile apps and their perceived ease of mobile apps use, which in turn influence their attitude towards mobile app usage and behavioural intention to use. Additional variables to the model includes content richness, user satisfaction, and perceived playfulness.

The main significance of this study is to contribute to the limited literature on the use of mobile technology for language learning particularly in learning Kadazandusun language. Besides, it also significantly help the Kadazandusun communities to address their language issues through mobile technology. This study will premise in the opinion that technology can be utilized as an additional tool for language learners to learn language especially in Kadazandusun language, in general.

#### 2. Kadazandusun language

Kadazandusun language is a language that is classified in the group of Malayo - polynesian in Austronesian (Lobel, 2013). The Kadazandusun language is related to the form of language standardized by the Kadazandusun Cultural Association of Sabah and is spoken by the Kadazan and Dusun community in Sabah about 750,000 people (Logijin, 2009). Kadazandusun language teaching and learning in primary school has started in Sabah since 1997 and in secondary schools in 2006 and UMS is the first university offered Kadazandusun language as an elective subject and followed by UPSI in 2010 (Bernama, 2013). Previously, some efforts had been made to preserve the Kadazandusun language includes the making of a trilingual Kadazan Dusun–Malay–English dictionary (Lasimbang & Kinajil, 2000). A Kadazandusun Language Foundation (KLF) also produced the first CD-ROM called "Learning Kadazandusun" volume one on year 2000 (Lasimbang, 2004). This CD-ROM application is reasonably beneficial especially to a non-speaker. One application related and used Kadazandusun language is *Sundait* developed by 1 Trillion Likes. This mobile apps is more to answer riddles and not focusing on learning Kadazandusun language. A few apps that focuses on Kadazandusun language elarning such as Kadazandusun Flashcards and Learning Kadazan language only). However, the user acceptance on potentiality of using mobile apps in learning Kadazandusun language is not discovered yet.

#### 3. Mobile apps for learning language

Mobile apps is a computer program which is designed to run on mobile devices. There are three different types of mobile apps which is native apps, web apps and hybrid apps (Budiu, 2013). In the modernized era, smartphones offer the greatest potential for such invisible integration of technological hardware into language learning. These devices are technologically more to standard mobile phones, running on advanced operating systems such as iOS (Apple), Android (Google) and Symbian (Nokia) which allow for the use of high-resolution touch-screen interfaces and smartphone-specific applications. Testing the capabilities of several of these apps for different languages, Nooriafshar (2012) stated that there is an abundance of powerful, useful and effective language learning apps available on the market today. Producing a mobile version of the intended language learning will mean that the project can be even more accessible to users with limited access to desktop computers, while still maintaining the

free nature of the product. With the introduction of the iTunes App Store in 2008, a large number of applications were developed for the iPhone, from games and utilities to instant messaging and word processing (Godwin-Jones, 2008). Prior research by Godwin Jones (2008) noted that only few apps for language learning had been released, including dictionaries, phrase books, and flash cards where the popularity of these few language reference and practice apps resulted from the simplified presentation needed for mobile phones.

The extensive use of smartphones has brought several mobile applications to language learners, but discussion about its serious acceptance has not been settled yet within the field. A study had been conducted of an in-depth review of 87 ESL mobile apps (Kim & Kwon, 2012) found that ESL apps is effective as it provide a personal and learner-centred learning opportunity with ubiquitously accessible and flexible practices. The advantages of the mobile devices included personal, situated, authentic, spontaneous, informal, and continuous access (Kukulska-Hulme, 2009). Even if the widely spread usage of mobile devices is a relatively new wonders, there has already been a lot of studies focusing on the combination of mobile phones and language learning (Basoglu and Akdemir, 2010; Stockwell, 2007; Thornton and Houser, 2005). Many of these reports show a very positive effect from involving mobile devices in language learning. Another Turkish study compared digital flashcards on a mobile phone with traditional flashcards on paper and results showed that the ones who had used the mobile application had reached better results than the ones who used traditional methods (Basoglu and Akdemir, 2010). Many studies and projects have been conducted related to this area, from the use of mobile phones for quiz delivery and vocabulary practice to the use of smartphones and language applications that incorporate flashcards and phrasebooks (Godwin-Jones, 2011; Kim et al., 2008; Martinez et al., 2010). With the arrival of smartphone technologies, mobile devices have become much more powerful and multipurpose computing environments.

#### 4. Mobile apps as an effective medium to learn Kadazandusun language

The Technology Acceptance Model (TAM) developed by Davis et al. (1989) assessed the influence of four internal variables upon the actual usage of the technology. The internal variables in the original TAM were: perceived ease of use, perceived usefulness, attitude toward use, and behavioural intention to use (see Figure 1).



Fig. 1: Technology acceptance model (Davis et al., 1989)

TAM assumes that human behavioural intention is a result of a cognitive process by which a decision is made (Drucker, 2006; Hughes and Ooms, 2004; Venkatesh et al., 2003). This model is applied in this study since it reflects the environment of the mobile apps usage in the related context. Hence, it is proposed that the users' acceptance of using mobile apps in learning Kadazandusun language is influenced with their perceived usefulness of the mobile apps and their perceived ease of mobile apps use, which in turn influence their attitude towards mobile app usage and behavioural intention to use. Additional variables to the model includes content richness, user satisfaction, and perceived playfulness.

#### 4.1 Content richness

Content richness is operationally defined as the plenty of resources that users can access to enhance their activity on particular technology. Present study observes content as a new potential antecedent of and perceived usefulness. The item measurement of content richness involves three dimensions: relevance, timeliness, and sufficiency (Chang and Tung, 2008; Jung et al., 2009). In this study, the researcher accept the relevance and sufficiency definition but with the exception of credibility and timeliness. The researcher believes that, in the case of mobile app for language learning, credibility and also timelines is not practical in an individual's perceptive understanding of content. Several studies have showed that a higher perception of the content richness offered by a system leads to a higher perception of the usefulness of the system such as content quality (Chen and Lan, 2014; Lee, 2006) and information quality (Bargshady et al., 2015; Park et al., 2012), which are closely related to the content richness were found to be major predictors of perceived usefulness. Young and Lehto (2013) indicated that content richness is one of the significant predictor of perceived usefulness. While in another recent study indicates that attitudes to mobile apps as well as information and services quality (Noh and Lee, 2015). It reveals that the content quality is also one of the most influencing factor to the mobile apps acceptance (Lin and Chen, 2015). Mobile apps for learning Kadazandusun language seemingly propose high perceptions of rich and new sources content. Collectively, it is expected that the degree to which users perceive that mobile apps of learning Kadazandusun language content will influence its perceived usefulness.

#### 4.2 User satisfaction

User satisfaction is the degree to which users are satisfied and pleased with their prior use of an information system (Szymanski and Hise, 2000). A review of educational literature explains that satisfaction occurs when individuals are confident that a clear understanding of learning is achieved and their learning results meet or exceed their perception of expected outcomes (Hui et al., 2008; Johnson et al., 2000). Previous studies have observed user satisfaction as an important factor that affects the success and usage of the information system and most influential predictor of individual impacts such as user loyalty and intention (Zhao et al., 2012). The satisfaction intention suggests that the higher and lower user satisfaction measured the more or less likely it is that the user will intend to use the system. The standard version of the TAM does not deliberate the influence of user satisfaction on the acceptance of an information system. In continuance of this issue, the present study modifies the TAM by endeavoring to add user satisfaction into the construct's circle of concern.

#### 4.3 Perceived playfulness

Playfulness was defined as the reason or belief formed by an individual's personal experience with the environment (Moon and Kim, 2001). Cheong and Park (2005) prove that perceived playfulness helps predict people's intention to use mobile Internet. Agarwal and Karahanna (2000) added cognitive absorption, playfulness and self-efficacy based on TAM model while Moon and Kim (2001) stated perceived fun, playfulness, and enjoyment are all examples of intrinsic motivation related to technology acceptance. A recent study regarded playfulness as a positive influential factor of users' technological acceptance (Huda and Zainuddin, 2015; Pai and Yeh, 2014; Trisha and Li, 2014). The present study examines the significance of perceived playfulness as a predictor variable for the behavioral intention to use mobile app in learning Kadazandusun language. Therefore this study assumed that fundamental motivation in the form of perceived playfulness would have a significant impact on intention to use mobile app to learn Kadazandusun language.

In accordance to the above reasoning, the following hypotheses are posited and the proposed conceptual framework is illustrated in Figure 2.

H1: Content richness of the mobile apps positively influences users' perceived usefulness of mobile apps in learning Kadazandusun language.

H2: Perceived usefulness of the mobile apps positively influences users' satisfaction of mobile apps in learning Kadazandusun language.

H3: Perceived ease of use of the mobile apps positively influences users' perceived usefulness of mobile apps in

learning Kadazandusun language.

H4: Perceived usefulness of the mobile apps positively influences users' attitude towards use mobile apps in learning Kadazandusun language.

H5: Users' satisfaction of the mobile apps positively influences their attitudes towards use mobile apps in learning Kadazandusun language.

H6: Perceived ease of use of the mobile apps positively influences users' attitude towards use of mobile apps in learning Kadazandusun language.

H7: Attitude towards use of the mobile apps positively influences uses' behavioural intention to use mobile apps in learning Kadazandusun language.

H8: Perceived playfulness of the mobile apps positively influences users' behavioural intention to use mobile apps in learning Kadazandusun language.



Fig.2: Proposed conceptual framework

# 5. Methodology

Respondents to be engaged from 200 Universiti Malaysia Sabah students and 100 University College Sabah Foundation students by utilizing a convenience sampling method. The self-administered questionnaires to be collected over a period of two weeks. Measurement of items to be measured on a five-point Likert scale, stretching from 1 (strongly disagree) to 5 (strongly agree). Data to be analyzed using the structural equation modelling approach via Analysis of Moment Structure (AMOS) computer program version 21.0.

#### 6. Conclusion

This conceptual paper discussed the user acceptance of the potentiality of mobile apps as an effective medium to learn Kadazandusun language, guided by the Technology Acceptance Model. It is proposed that the users' acceptance of using mobile apps in learning Kadazandusun language is influenced with their perceived usefulness of the mobile apps and their perceived ease of mobile apps use, which in turn influence their attitude towards mobile app usage and behavioural intention to use. Additional variables to the model included content richness, user satisfaction, and perceived playfulness. The proposed conceptual framework could be used to implement mobile apps for language learning. Future research is recommended to empirically test the proposed conceptual model via multivariate data analysis using the partial least squares (PLS) method, which is a variance-based technique for the analysis of structural equation models via SmartPLS computer program version 3.0.

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