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# A Study on Applying Mobile Assisted Language Use for Korean University EFL Students

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The aim of this study was to reveal the extent of mobile assisted language use (MALU) in a Korean university and the resulting second language learning enhancement potential. A small-scale quantitative study was conducted on participants' use of electronic devices in their first (L1) and second (L2) languages in both academic and non-academic settings. A total of 47 male and female students voluntarily answered a self-report questionnaire, which was administered online via *Facebook.* Aimed at gauging learner perceptions of the extent to which L2 usage facilitates conscious and sub-conscious language learning in varying contexts, the questionnaire items consisted of close-ended questions and statements requiring responses. The results of this study indicated that MALU is occasioned by much non-academic electronic device usage, particularly with respect to smartphones, and furthers L2 understanding. The findings maysupport the contention that conceptualization of contemporary smartphone-based learning through the computer-centered apparatus inherited from CALL is redundant. Accordingly, this paper posits that potential language learning enhancement facilitated by digital device usage is best understood using MALU models. Results reveal widespread non-academic English language interaction, indicating a need for significant shifts in traditional theory and pedagogy, such that informal and sub-conscious learning of this sort can be both better understood, and facilitated in teaching contexts.

**[Computer assisted language learning (CALL)/Mobile assisted language use (MALU)/ Korean EFL Students]**

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## I. INTRODUCTION

Since the inception of Computer Assisted Language Learning(CALL) in the 1950s, technology use has proliferated in formal language learning processes. In the contemporary digital era, where smartphones and unprecedented internet connectivity have become widespread, both language exposure and learning potential have undergone a revolution. CALL is a vast discipline that resists simple definition. Since its theoretical establishment, it has undergone and continues to undergo transformations; such is the nature of modern technology. Broadly, CALL is "any process in which a learner uses a computer and, as a result, improves his or her language" (Beatty, 2010, p.7). CALL pertains to the intentional language learning goals pursued via a computer. In addition to CALL, the widespread introduction of mobile devices over the past few decades has allowed flexible access to language learning material outside of classroom parameters, leading to the development of mobile assisted language learning (MALL) theory (Chinnery, 2006; Chen, Chang& Wang, 2008; Chong, 2003; Chu, Hwang, Huang& Wu, 2008; Yang, 2004). CALL and MALL presuppose language learning is formal and conscious. Problems for both theories arise in today's portable and inter-connected world, where exposure to English as an L2 is changing. Smartphones and other mobile devices have enabled informal and sub-conscious exposure to the English language outside of conventional educational practices. This modern phenomenon demands an educational theory capable of embracing these advances in online information exchange and a dynamic and wholly contemporary response sensitive to the current trends in smartphone usage. However, traditional institutional educational practices can challenge Korean universities ability to embrace the intensity and amount of smartphone-based internet use currently seen outside of the academic environment. Therefore, a theoretical frame work that will embrace and maximize the learning potential of mobile devices needs to be identified. Recently, mobile assisted language use (MALU) has been proposed by Jarvis & Achilleos (2013).It acknowledges the potential for language learning to occur through exposure and use of an L2 in informal and non-academic settings. It focuses on 'use' rather than 'learning.' This investigation concerns Korean university undergraduates in a country where smartphone saturation among 18 to 24 year olds is at 97.7% ('Smartphone adoption', 2013). The advanced technological landscape in South Korea can be regarded as indicative of the ways that electronic devices are now affecting EFL education; it may also signify potential forthcoming L2 learning trends in other emerging digital nations. 983 million smartphones were sold in 2013 and analysts predict that there will be more mobile devices than people on the planet by 2017 ('Mobile phone sales' 2013).Given the rapid and widespread uptake of handheld

devices, the purpose of this investigation is to study the effects of non-academics mart phone use on language learning. Hence, this study investigates how Korean undergraduate students perceive computers and smartphones as an integral part of their English learning, in order to ascertain the feasibility of applying MALU as a model of ELL for Korean university students. Specific research questions are as follows:

1. How are electronic devices used by L2 learners academically and non-academically?
2. How much do they use English (L2) when using computers and smartphones?
3. To what degree do the students believe computers and smartphones aid their formal academic learning of English?
4. In terms of learning English, what are the students' perceptions of computer and smartphone usage in non-academic settings?

## II. LITERATURE REVIEW

### 1. The Historical Development of Digital Language Learning

The literature discussed in this study is a synthesis of recent studies conducted on CALL and MALL for the purpose of revisiting their relationship to Krashen's *acquisition-learning distinction* (1982), which is widely regarded as indicative of how language learning take place cognitively. Language retention is subconscious and happens naturally, whereas learning is considered conscious and resulting from formal instruction (Krashen, 1982, p.10). CALL and MALL can sufficiently account for explicit, conscious language learning under this distinction. However, problems emerge for CALL and MALL in today's post-modern technological era; English language learning may now occur both consciously and sub-consciously via electronic devices. Contemporary technology usage has blurred the line between formal and informal learning. For many learners of English today, exposure to the language has evolved, with the potential for sub-conscious learning to take place via interaction with the language for entertainment and social purposes; for example, through consuming L2 multimedia and online networking. In order to comprehend language learning in this post-modern era, there is a clear need to re-evaluate CALL and MALL with this technological revolution in mind. The first CALL programs appeared in the 1950s and have permeated L2 learning environments with a greater degree ever since (Fotos & Brown, 2004). Given the sheer diversity of CALL material currently available, defining it is increasingly problematic. Therefore, it would be a complicated

task to succinctly define CALL without descending into vague terminology (Beatty, 2010).However; CALL is usually compartmentalised as relating to formal learning environments as students consciously acquire language via a computer. With the introduction of electronic handheld devices, learning can now take place outside of the formal classroom environment. Therefore, it would be prudent to examine the extent to which recent technological advances and the widespread usage of portable electronic devices have impacted the convergence of formal and informal language learning. Learners' mobile-based L2 interaction differs significantly from usage of desktop computers (Alexander, 2004). This modern learning phenomenon is beyond the explanatory efficacy of CALL, which fails to account for the language learning effects of mobile-based learning. In response to CALL's inability to accommodate the potential of learning language - sub-consciously and informally via mobile devices, the theory of MALL was proffered. The advantage of MALL is that learners are not required to sit at computers in a classroom to access learning materials. In this respect, MALL is the ideal solution to the language learning barriers of time and place-contextualising mobile learning in the 21$^{st}$century. However, MALL still presupposes that language is purposely learned as part of a specific educational goal. A theoretical complexity arises for MALL when learning occurs informally and sub-consciously through exposure to the L2 via a mobile device.

## 2. The Present and Future of Digital Language Learning

The language learning landscape has been changed by technology. Provided that students are not dependent on desktop computers for learning and possess a mobile device, both conscious and sub-conscious language learning can take place. It can be said that language learning has entered a new paradigm, with mobile learning adding a modern dimension to L2 learning; learners are now being exposed to English in a variety of ways outside of the classroom via smartphone use. For example, via different forms of English language multimedia, by reading and writing in the L2 on social media sites, when sending emails and messages, or simply navigating around the web. Yet, the parameters of mobile learning are unclear. Theories of mobile learning are volatile; therefore demanding that current interpretations are made unambiguous(Kukulska-Hulme, 2009). It would appear that definitions of mobile learning are not universally established - but are context dependent. In the Korean context, whilst research purports the benefits of MALL, unexplored facets of smartphone usage presents the theory with fundamental concerns. A limitation of MALL apps is that, "Despite good quality and quantity of input, their application and use are mostly based on a structural and cognitive focus" (Kim & Kwon, 2012, p.54).

This again raises the concern that MALL does not account for the absorption of the L2 through non-academic smartphone use. A series of studies conducted on the adaptation of smartphones as L2 learning technology at Seoul National University by Kim, Altmann & Ilon (2012), found students reporting that media apps not specifically designed for formal instruction acted as significant supplementary learning tools (Kim et al., 2012). Their subsequent study noted, "Whereas only a few years ago, learning has been considered the strict domain of classroom, textbooks and the library, students now readily consider a subway map, camera and access to *YouTube* video as learning tools and access to Web search tools and online media as important support for a rich learning environment" (Kim et al., 2013, p.15). These observations allude to the notion that sub-conscious learning occurs beyond the current definitions of MALL.A further critique of MALL is that it is susceptible to the same issue as CALL, being that it does not account for informal language learning. For this reason, MALU was proposed as a viable alternative as it can accommodate the potential for mobile learning to also occur via exposure to the L2 in non-formal settings as shown in the following:

> We define MALU as non-native speakers using of a variety of mobile devices in order to access and/or communicate information on an anywhere/anytime basis and for a range of social and/or academic purposes in an L2 (Jarvis & Achilleos, 2013, p.9).

MALU acts as an umbrella term for all forms of electronic language learning, encompassing CALL and MALL; alongside informal L2 learning via a mobile device, where the specific goal of usage may not be language learning itself. As revealed in the introduction, virtually every young South Korean EFL student owns a smart phone along with the access to the fastest internet in the world. It would therefore seem appropriate to examine South Korean EFL students' electronic language learning in terms of MALU.

## III. METHODOLOGY

A quantitative self-report questionnaire based on the one implemented in Jarvis and Achilleos (2013) seminal MALU study was designed in order to gather data. Its specific psychometric purpose was to elicit the participants' opinions about the effects of technology and the internet has on their English language learning. This was achieved by asking a set of close-ended questions and responses to a series of statements. A pilot version was produced and subsequently adjusted to reduce the

number of questions whilst maintaining focus on the aims of the study. This process took place through consultations with colleagues, who suggested that if the questionnaire was too long, there may be fewer voluntary participants. The questionnaire was translated into Korean to ensure the participants would fully understand the items. This was undertaken by a bilingual Korean university professor, ensuring no meaning was lost from the original English version. To increase voluntary participation, the questionnaire was distributed electronically via *Facebook* - where the vast majority of students maintain active accounts.

The participants were Korean university students aged 20-26 majoring in English Language Education. They were not formally selected, rather, all students in the Department were informed of the study and invited to assist by completing the questionnaire. A total of 47 students took part in the study. 25 were female and 22 were male. To ensure full completion of the questionnaire, it could only be electronically submitted once all the questions had been answered. No outliers or inconsistent answering was found in any of the submissions. Ethical principles proposed by Dornyei (2003) were observed throughout the data gathering process to protect the participants' privacy and anonymity.

## IV. RESULTS AND DISCUSSION

In order to disseminate data, the results will be discussed in relation to the research questions of this study.

### 1. How are Electronic Devices Used by L2 Learners Academically and Non-Academically?

As shown in Table 1, only34% of respondents use a desktop computer and only 32% (32% of 34%) of those use a desktop on a daily basis. The use of laptops is far more prevalent, with 74% of participants reporting using one with 64% of that total operating them on a daily basis.

**TABLE 1**
**Use of Devices and the Frequency of Use**

| Devices | Frequency of use | | | |
|---|---|---|---|---|
| | Daily(%) | Up to 4 times a week(%) | 2-3 times a week(%) | Hardly ever(%) |
| Desktop Computer: Yes (34%)No (66%) | 32 | 17 | 36 | 15 |
| Laptop: Yes (74%)No (26%) | 64 | 11 | 19 | 6 |
| **Smartphone: Yes (100%) No (0%)** | **100** | 0 | 0 | 0 |

The results here indicate that the portable nature of laptops makes them more practical for students than desktops. Every participant reported owning a smart phone, which they use daily. Based on the South Korean smartphone usage statistics, these results met expectations. The data here shows the trend that electronic device portability is positively correlated with usage. All of the participants agreed that computers, smartphones and the internet are essential to their everyday life, and that they use more than one internet application simultaneously. This shows how deeply entrenched technology is in their lives and that online multi-tasking is prevalent. Table 2 shows the use of devices for non-academic use and academic use. In terms of using the internet for non-academic use, 58% use their smartphone on a regular basis, with 25% using a laptop and 17% using a desktop. For using internet for academic use, the percentage of students using laptop is the highest followed by using desktop computers. The percentage of the students using smartphone is the lowest(17%). Here, we can notice that Korean students use smartphone more frequently for non-academic use rather than academic use.

**TABLE 2**
**Comparison of Device Usage for Non-academic and Academic Use**

| | Desktop (%) | Laptop (%) | **Smartphone (%)** |
|---|---|---|---|
| Non-academic use | 17 | 25 | **58** |
| Academic use | 23 | 60 | **17** |

Table 3 shows that, for accessing social network sites, the vast majority of participants (94%) use their smartphone, and for entertainment purposes, 49% of

participants would use their smartphones, whilst 28% use a desktop and 23% a laptop. These results show that the majority of internet use for socializing and entertainment is conducted via a smartphone.

**TABLE 3**
**Device Utilized to Access the Internet for Non-academic Use**

| | Desktop(%) | Laptop(%) | **Smartphone**(%) |
|---|---|---|---|
| Social Networking | 1 | 5 | **94** |
| Entertainment | 28 | 23 | **49** |

As table 4 illustrates that for academic use of the internet, in terms of online dictionary use, 85% of participants use a smartphone as opposed to a desktop (6%) or a laptop (9%)highlighting that the device portability and convenience increases usage.Forinternet for study, laptop usage is the most great (60%). This implies that students are in a predictable academic environment during formal, online language learning, whereas personal web browsing may occur in multiple situations and locations.

**TABLE 4**
**Devices Utilized to Access the Internet for Academic Use**

| | Desktop(%) | Laptop(%) | **Smartphone**(%) |
|---|---|---|---|
| Internet for study | 23 | 60 | **17** |
| Online Dictionary | 6 | 9 | **85** |

## 2. How Much Do They Use English When Using Computers and Smartphones?

All Korean smartphones support both Korean and English so under normal day-to-day operation, Hangul is used. This would make sense in a mono-lingual society, where English is learned as a foreign language. In terms of generally communicating via the internet, only 28% sometimes use English. 51% of participants only send emails using Korean, while 49% reported that they would use Korean and some English (Table 5). The patterns of Korean/English usage here might depend on necessity; if communicating with a fellow Korean via the internet, there is no need to use English.

**TABLE 5**
**Comparison of L1 and L2 Device Usage and for Internet Access**

| | Korean only (%) | English only (%) | Korean and English (%) |
|---|---|---|---|
| Operation ofdevice | 100 | 0 | 0 |
| General internet communication | 72 | 0 | 28 |
| Emails | 51 | 0 | 49 |
| English practice or exercises | 13 | 17 | 32 |

Interestingly, 13% of participants would do so using only Korean, 32% utilizing Korean and some English, and only 17% in English only. Korean websites designed for English language learning (ELL) sometimes require code-switching in user responses, whilst the mindset of the participants during formal language learning activities could also be said to explain the greater fluctuation of Korean/English usage, when compared to non-academic internet usage.

## 3. To What Degree Do The Students Believe Computers and Smartphones Aid Their Formal Academic Learning of English?

**TABLE 6**
**Learner Perceptions of Academic L2 Device Use**

| | Agree (%) | Disagree (%) |
|---|---|---|
| Via a smartphone, they have more chances of using English in a greater variety of ways | 85 | 15 |
| Using technologies in English helps their language learning | 96 | 4 |

85% of respondents believe that via a smartphone, they have more chances of using English in a greater variety of ways, as compared to using a desktop or a laptop. Table 4shows that 96% of participants stated that they use their smartphone's English dictionary regularly. This data suggests that portability and convenience are features of smartphones that assist both conscious and sub-conscious language learning. The overwhelming majority (96%) agrees using technologies in English facilitates their L2 learning. However, in additional question, only 23% of respondents reported that websites designed for ELL are more helpful in terms of L2 learning, as opposed to generally accessing the internet in English. The results indicate that smartphones have a positive effect on L2 learning, but not necessarily consciously, via websites specifically for the purpose of ELL.

### 4. In Terms of Learning English, What Are The Students' Perceptions of Computer and Smartphone Usage in Non-Academic Settings?

77% of participants believe that accessing the internet using the English language without a specific academic goal in mind is more beneficial for learning as compared to ELL websites.85% of participants also agree that they have a greater chance of using English in a variety of ways via a smartphone compared to using either a desktop or laptop.

**TABLE 7**
**Lerner Perception of Non-Academic L2 Device Use**

| | Agree (%) | Disagree (%) |
|---|---|---|
| Non-academic L2 internet use is more beneficial for language learning compared to ELL websites | 77 | 33 |
| Smartphones provide more opportunities for L2 use than desktops or laptops | 85 | 15 |

Another noteworthy point is that only around a third of all participants believe specific ELL websites are not as effective for learning as compared to non-academic internet browsing in English. This disparity between non-specific English usage online and participating in conscious web-based ELL activities is an intriguing one; there are indications that conscious, formal language learning is less effective than sub-conscious learning when undertaken via the internet on an electronic device.

## V. CONCLUSION

The results presented here provide a measure of the perceptions and patterns of academic and informal use of English via smartphones and other electronic devices in the South Korean university context. It was uncovered that when utilizing technology for social purposes, Korean was used much more frequently than English. In comparison to academic internet usage, English was employed more than Korean. Regardless of the amount English was used for non-academic or academic purposes did not, in itself, confirm nor diminish the notion that its usage might affect L2 learning on asub-conscious level. The results mean that English can be applied to varying degrees in a multitude of non-academic situations. Additionally, English can be more frequently for non-academic purposes, as a result of smartphone availability. Also, all participants unequivocally reported that technology facilitates their language

learning. They also deem that English usage in non-academic purposes is more beneficial than specific ELL websites. These findings do not render CALL or MALL obsolete, as it was found that in certain academic situations desktops and laptops have perceived advantages over smartphones. However, it is clear that technology is an integral part of the learners' daily lives and study habits. In terms of the effect MALU has on university students, the results of this study indicate that MALU is present in non-academic uses of electronic devices, particularly with smartphones. As a theory of second language learning (SLA), it can accommodate CALL and MALL. MALU, unlike CALL or MALL, acknowledges the potential for sub-conscious language learning to occur via smartphones–which may increase our understanding of SLA in both formal and informal environments. The overall degree and scope of non-academic L2 learning in this study is difficult to quantify. Nevertheless, it is clear from the participants' responses that L2 smartphone use for non-academic purposes facilitates SLA. Further research into the effects of MALU is required, particularly in the South Korean context. As suggestively remarked, "(…) it is essential to understand how second languages are acquired in general if we are to understand how they are acquired in a particular context" (Gass & Selinker, 2008, p.392). To remain relevant, SLA research needs to emulate the speed at which changes occur in this fast-paced digital world. Currently, the wider academic community does not formally recognize the non-academic language learning potential hand-held devices give students. Out of a duty to deliver the best tuition to our learners, we must continue to explore the possibilities of MALU academically and theoretically. Currently, there is virtually no understanding on this issue, and educators are unsure how to implement MALU into practice. Therefore, more research is needed to better understand the ways in which our learners interact with electronic devices, and in doing so, subconsciously acquire the English language. If someone asks, "*To improve Korean EFL students' English skills, what will be more helpful theory of instruction - Computer Assisted Language Learning or Mobile Assisted Language Use?"* The answer may be, in today' subiquitous society, Mobile Assisted Language Use will be more effective instructional tool.

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**Examples in: English**
**Applicable Languages: English**
**Applicable Levels: Secondary**

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