Perceptions of mobile language learning in Australia: How ready are learners to study on the move?

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The increased availability of mobile devices in recent years has brought about a noticeable increase in the number of people who carry mobile phones or similar mobile devices. The high penetration rate of mobile devices, particularly mobile phones, has led researchers to consider them as a potentially powerful tool in language learning, with a number of studies being conducted over the past few years (e.g., Chen & Chung, 2008; Stockwell, 2008). Perceptions of mobile learning have generally been positive, but there has also been evidence of resistance to their use, mainly as a result of the difficulties in input, the small size of the screen, and the fact that many learners do not view them as a learning tool (Stockwell, 2008). The degree to which a technology is acceptable in language learning is linked to their uses in non-educational settings (see Kennedy & Levy, 2008), meaning that an understanding of how learners use their mobile phones for private uses might shed light on how best to determine their educational uses. In order to get an idea of how learners use their phones in their daily lives and their perceptions of using their phones for learning purposes, two detailed surveys were administered to learners at a university in Australia (n=182 and n=158). The results are discussed in terms of how learners perceive mobile phones as learning tools, and how these uses relate to their everyday activity with their phones. Suggestions for task selection and design are also provided.

Introduction

The ongoing advancement of technology has contributed to the development of the quality of mobile devices in many countries. The evolution of the quality of mobile **165**

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technologies has affected learners' learning styles and teaching methods in educational environments where more mobile devices have been applied. The portability of mobile devices is believed to bring new methods that can shape learning styles and pedagogies which could become more personalised and allow learners to learn on the move (Ros i Solé, Calic, & Neijmann, 2010). In the past several years, many researchers have investigated the use and effectiveness of mobile devices in various educational contexts, for instance, the use of iPods for the shaping of the use of technology at the university in the future (e.g. Belanger, 2005), and the use of mobile phones for delivering course materials and bulletin boards (e.g., Motiwalla, 2007) and for second language learning (e.g. Chen & Chung, 2008; Chen, Hsieh, & Kinshuk, 2008; Stockwell, 2008). As can be seen in a number of publications in recent years, mobile language learning has continued to attract the interest of several researchers. The following sections discuss how mobile learning has emerged in educational environments, how mobile learning has affected language learning research in particular, and conclude with recent issues which led to the main objectives of two phases in the study.

The emergence of MALL (Mobile Assisted Language Learning)

In the early 2000s, there was some hesitation towards the adoption of mobile devices, largely due to the fact that educators had little knowledge of the best way to use them in diverse learning contexts (Kukulska-Hulme & Shield, 2008). Since the 2000s, the number of mobile devices available has significantly increased and mobile devices have widely penetrated into everyday life. The use of mobile devices has become noticeably more popular in the field of second language learning and more research has been conducted to enrich educators' knowledge of mobile language learning and to widen mobile language learning (Kukulska-Hulme, 2009; Kukulska-Hulme & Bull, 2009; Stockwell, 2010). The use of mobile devices is expected to have considerable potential for the achievement of individual learning goals and needs, the enhancement of retention, and the provision of more opportunities to learn outside class (Kukulska-Hulme, 2009). In mobile learning, the term "mobility" is often defined as moving without boundaries or time constraints, where learners can access content at any time from any location (Motiwalla, 2007; Chen & Chung, 2008; Kukulska-Hulme, 2009). This mobility of mobile devices is believed to support sustainable learning (Hsu, 2012) as mobile devices allow second language learners to keep recordings and access any recorded resources wherever they are and whenever they like, for example, when they are travelling (Kukulska-Hulme & Bull, 2009). Additionally, keeping the records of input and easy access to them can support the learners to improve their language awareness and understanding of language features (Kukulska-Hulme & Bull, 2009). Previous studies about the understanding of what mobility is have resulted in a greater interest among many researchers and more research into both the affordances and implementation of learning materials tailored for mobile devices.

There have been a number of studies, for instance, about the use of mobile phones (e.g., Motiwalla, 2007; Stockwell, 2008, 2010; Hsu, 2012), MP3 players (e.g., Ros i Solé, Calic, & Neijmann, 2010), PDAs (personal digital assistants) (e.g., Chen & Chung, 2008) and iPod touch (e.g., Oberg & Daniels, 2012), in various educational disciplines (Kukulska-Hulme & Shield, 2008). They have suggested how a particular mobile device could be utilised to provide the course materials, how effective it has been for language development, and how learners behaved while using it for learning. Motiwalla (2007) described two categories of mechanisms in mobile learning, namely, the push and pull mechanisms, which were derived

from the ideas of the mobility of the devices and of e-learning. The two mechanisms include several key functions of mobile devices which could be applied in mobile learning to provide personalised content and to support collaborative learning and learners' interaction with peers. Tools to achieve the functions described above were, for example, Short Message Service (**SMS**), alerts, Wireless Markup Language (**WML**) websites, and bulletin boards with chat forums. Motiwalla's study applied an application tailored to mobile phones which provided course materials and bulletin boards with a chat function. Motiwalla argued that the use of pedagogies with a well-balanced combination of the two mechanisms would support both interactive and collaborative learning and effectively deliver the content. However, Motiwalla also noted that most learners felt it was difficult to navigate through pages, and had problems with reading and typing because of the size of screen and keypad. In another study, Ros i Solé, Calic and Neijmann (2010) investigated whether **MP**3 players/ recorders play a role in learners' practices and daily lives based on the learners' experience in social and private learning contexts. Their study shows that the use of the device helped learners in noticing their mistakes and features of the language by listening to what their peers recorded and by discussing what they recorded with their peers which resulted in the development of social interaction skills. Previous research findings have firmly advocated for the use of mobile devices in terms of the development of noticing and communication skills, which have also dominated ideas in conventional language learning settings.

Among various personal mobile devices, the use of mobile phones, in particular, has been discussed in the field of language learning because mobile phones have widely and deeply penetrated our lives. Further, this situation has resulted in the change of our lifestyles and also learning styles and methods outside class. Specifically, the penetration of mobile phones among young people and their significant advancement have noticeably increased many researchers' interests towards the use of mobile phones for language learning (e.g., Kennedy & Levy, 2008; Stockwell, 2008, 2010; Hsu, 2012). This phenomenon has contributed to the rapid growth of the field of Mobile Assisted Language Learning (**MALL**) (Kukulska-Hulme & Shield, 2008). **MALL** is considered to be a new way of language learning which allows learners to learn using personal mobile devices outside the class (Wang & Higgins, 2006; Kukulska-Hulme, 2009; Kukulska-Hulme & Bull, 2009). Also, **MALL** is considered to potentially provide a context where learning styles are individualised, realistic and autonomous (Kukulska-Hulme, 2009). Research in the field of **MALL** has been defined as either content-based or design-based research. The former concentrates on the development and evaluation of learning activities and materials, whilst the latter focuses on identifying key issues in the development of materials specifically tailored for mobile devices (Kukulska-Hulme & Shield, 2008; Kukulska-Hulme, 2009). In **MALL**, at this point, the former is more evident as researchers tend to concentrate on the evaluation of the system/application and of exercises delivered to learners in a way where the teacher is still able to maintain some degree of control. Because of the focus on mobility, portability and accessibility of mobile devices as opposed to the potential drawbacks, research has predominantly shown **MALL** in a positive light, with lesser consideration given to its limitations.

The use of mobile phones for language learning

Mobile phones are seen more often than other personal mobile devices in recent research in the field of **MALL** (Kukulska-Hulme & Shield, 2008; Stockwell, 2010). People carry their mobile phones every day and mobile phones are a primary communication device, thus **167**

communication means of mobile phones, such as e-mails or **SMS** (e.g., Wang & Higgins, 2006), were most likely to be utilised in mobile learning. For instance, mobile phones were utilised for exchanging e-mails among learners to teach targeted structures (e.g., Kiernan & Aizawa, 2004), browsing the Internet (Taylor & Gitsaki, 2003), sending **SMS** messages as reminders of what learners learnt in the class (e.g., Kennedy & Levy, 2008), delivering tasks using **MMS** (Multimedia Messaging System) or 3**G** communication (e.g., Hsu, 2012) and online vocabulary learning activities (e.g., Stockwell, 2007, 2008, 2010). Research into the use of mobile phones has concentrated on "the affordances of the device, the skills and attitudes of the learner and the environmental constraints of learning through a mobile platform" (Stockwell, 2010). Stockwell (2010) describes the **FRAME** model (Framework for the Rational Analysis of Mobile Education) proposed by Koole (2009, as cited in Stockwell, 2010). The **FRAME** model addresses the characteristics of mobile phones which need to be assessed, and the consideration of learners' feelings, skills and knowledge of the use of mobile phones, and applies this model to language learning contexts. A good deal of previous research seems to follow this model – if generally indirectly – and such research tends to be quite technology-centred, investigating whether the device could be effectively used to deliver content and support learning.

These investigations into the affordances of mobile phones have shown both positive and negative aspects. For example, as having been discussed above, the positive aspects include easy access to resources in mobile phones on the move, social interaction between teachers and learners or peers without either time or place constraints. On the other hand, the negative aspects include the small size of the screen, frustration with typing using the keypad, greater acceptance of mobile phones as a personal entertainment tool rather than as a learning tool, difficulties in concentrating in daily commute, the cost issue, limited types of learning activities, and the issue of signal reception (Wang & Higgins, 2006; Motiwalla, 2007; Kukulska-Hulme & Shield, 2008; Stockwell, 2010; Hsu, 2012). Motiwalla's (2007) study showed, for instance, that participants in the study did not like the small-sized screen, time-consuming typing, slow speeds of connection and somewhat slow response of the device to their requests, and low quality of visual materials. Similarly, little experience of using mobile phones for learning and the functional limitations of mobile phones identified thus far were likely to contribute to a lack of motivation for mobile learning among learners (Wang & Higgins, 2006). Additionally, learners did not feel that mobile phones were a learning tool and they were easily distracted by what was around them, which affected to their motivation to work on learning activities on mobile phones (Wang & Higgins, 2006; Stockwell, 2008; Hsu, 2012). Whether mobile devices can be accepted by learners is linked to how they use mobile devices in private life (Kennedy & Levy, 2008), and quality of mobile devices that learners use. Stockwell (2012) stated that learners' experience of a particular technology use in everyday life is likely to influence their expectation for the quality of a technology used for language learning in class. Further, how close the quality of the technology is to another used in everyday life can affect their acceptance of the particular technology. Therefore, the understanding of social and cultural trends can allow researchers and practitioners to bring about more effective learning and teaching through this tool (Kukulska-Hulme, 2009; Stockwell, 2012). Given that mobile phones are principally used in the private context rather than in a formal context, it is important to investigate learners' private uses in their everyday lives.

Although considering how mobile devices change learning styles is significant (Kukulska-Hulme, 2009), this idea has not been clearly identified thus far. It can be essential to be

aware of the relationship existing between types of mobile devices and activities that can be used. It is also important to enrich the understanding of what is most important to be learnt in both class and private learning settings, and how what is learnt in both contexts can be linked to the other. Understanding this can help to determine how to naturally apply mobile phones in the learning context, which allows learners to be positive about the use of mobile phones as a learning tool (e.g., Stockwell, 2010). Thereafter, this can significantly contribute to a sustainable use of mobile learning in naturalistic settings. Nonetheless, few studies have shown convincing evidence of learners' perceptions of the use of mobile phones for language learning, or their use of mobile phones for private, educational and language learning purposes in everyday life thus far. Hence, the current study was conducted to deal with these issues. The study took place in two independent surveys. Survey 1 was conducted in 2010 with Survey 2 carried out as a follow-up in 2012 to deal with changes in technology that were evident, as well as to deal with limitations that were later evident on completion of Survey 1. The following sections details the method and research questions posed in both surveys.

Survey 1

Method

Survey 1 dealt with the following research questions, and it mainly focused on the use of mobile phones.
1. For what non-learning purposes do learners regularly use their mobile phones?
2. Have learners ever used their mobile phones for educational purposes?
3. Have learners ever used their mobile phones for language learning?
4. How do they perceive using mobile phones for language learning in the future?

Participants and procedures. In the study, participants were both Australian and international learners (n=182) who studied in various courses at the School of Languages and Linguistics at Griffith University, Australia in 2010. They were in either the first year or second year of their bachelor's degree at the university. The survey was designed to take approximately 10 minutes to fill in. Their participation was entirely voluntary and it was administered anonymously to the participants during class time throughout the year to achieve a sufficient sample size in the study. It included no questions linking individual personal identification to protect their privacy in the study.

Data collection. The survey was designed by the research team to investigate the use of mobile phones in everyday life for non-educational, educational and language learning purposes, and learners' perception of the use of mobile phones for language learning in the future. It consisted of different types of questions, such as "Yes" or "No" questions and several open questions asking details of learners' mobile phones, learners' previous experience of the use of mobile phones and their attitude about the use of mobile phones for learning in the future. It included only 11 questions in order to cover essential points to answer the research questions addressed above, and still ensure a higher response rate on the survey. Also, it was designed to minimise the burden on the participants of completing it in a limited amount of time during class. The study was only concerned with aggregate results, not

with individual results gathered by the survey. All results collected through the survey were analysed as descriptive statistics, and they are presented in the following section.

Results

Results gathered through the survey are presented using cumulative percentages of the participants' responses to all questions included in the survey. All results were described in terms of the ownership of mobile phones and their details, the use of mobile phones for non-educational, educational and language learning purposes and, their perception of mobile language learning in the future.

The ownership and details of mobile phones. The results indicated that all learners (100%) owned their mobile phones. They primarily used mobile phones with 3G network (74.0%) rather than with 2G network (15.5%), and some of them used both networks (1.7%). The most used carrier for their mobile phones was the 3 Phone company which has merged with Vodafone (100 learners) followed by Optus (48 learners). These are major phone carriers in Australia and were considered to be popular among learners. In Australia, mobile phones are categorised into two types, either prepaid mobile phones or plan-based mobile phones. Plan-based mobile phones are basically on a 24 months contract with a selected carrier and the plan value can be selected depending on additional values. At the time, for example, the 3 Phone primarily offered mobile phones with a plan for a 24-month contract. All plans offered by the carrier ranged from $19 to $80, with additional values. As more than half of the learners used the carrier, the greatest percentage of them (68.2 %) indicated they used a plan for 24 months, such as a cap plan or a business plan, and about one third (31.6%) indicated they used prepaid mobile phones.

In terms of types of payments for their prepaid recharges or plans, half of the learners did not specify the cost of their plan, and the other half indicated they used a plan valued between $19 and $49. For the cost of prepaid mobile phones, the minimum cost was $1 per month. In general, recharge values are between $30 and $100. Most of the prepaid recharges came with additional values without a contract with the carrier, but no learners specified a cost for their prepaid mobiles as values of the recharges can be varied depending on how much they use their mobile phones in everyday life. Any additional values for both prepaid recharges and plans include data usage, phone calls or sending **SMS** to people who had their mobile phone with the same carrier. In addition to the results described above, all data were analysed into three different groups based on types of networks, namely 2G network, 3G network or either network as shown in Tables 1, 2 and 3 below. The greatest percentage of the learners indicated that they did not have experience in using their mobile phones for either educational or language learning purposes. Also, they showed negative attitudes about the use of mobile phones for language learning in the future among the three groups.

Table 1: A group of learners who use 2G

	Yes	**No**	**No answer**
For educational purposes	17.9%	75.0%	7.1%
For language learning	32.1%	60.7%	7.1%
Want to use	35.7%	57.1%	7.1%

Table 2: A group of learners who use 3G

	Yes	No	Not sure	No answer
For educational purposes	21.6%	76.9%	0.0%	0.7%
For language learning	27.6%	71.6%	0.0%	0.7%
Want to use	34.3%	60.4%	4.5%	0.7%

Table 3: A group of learners who did not specify network types

	Yes	No
For educational purposes	10.5%	94.7%
For language learning	15.8%	89.5%
Want to use	26.3%	78.9%

Private use of mobile phones. The survey included a question asking about the use of their mobile phones for non-educational purposes in everyday life. These were making calls, sending **SMS** messages, checking and sending e-mails, using Skype or messengers, checking social networking websites, news, weather information and traffic information. Table 4 below illustrates the response rate of the learners who used their mobile phones for such purposes.

Table 4: The use of mobile phones for non-educational purposes

	Yes	No
Making calls	97.4%	2.6%
Sending SMS message	90.8%	9.2%
Checking e-mails	35.9%	64.1%
Facebook/Twitter	35.2%	64.8%
Weather information	30.7%	69.3%
News	29.0%	71.0%
Sending e-mails	27.3%	72.7%
Skype/messengers	21.1%	78.9%
Traffic information	14.9%	85.1%

Despite the fact that all learners owned their mobile phones, there were learners who did not use their mobile phones for making calls (2.6%) or sending **SMS** messages (9.2%). These findings were not expected and they are one important consideration in the study. It is simply assumed that if people have a mobile phone, they use their mobile phone for making calls and sending **SMS** messages as both purposes are general communication tools because almost no mobile phones have embedded e-mail systems in Australia.

As opposed to the results for phone calls and sending **SMS**s, the results revealed a relatively similar ratio for other purposes as Table 4 illustrates. Regarding sending and checking e-mails, more learners used their mobile phones for checking e-mails (35.9%) than for sending e-mails (27.3%), which is another important consideration. Analogously, 35.2% used their mobile phones for checking social networking websites, such as Facebook or Twitter, **171**

and 29.0% used their mobile phones for checking news. Similarly to these results, mobile phones were used for checking weather information (21.1%), Skype or messengers (21.1%), such as **MSN**, Yahoo or G-mail and checking traffic information (14.9%).

The question also took into consideration whether they used their mobile phones for any other non-educational purposes. Table 5 below details other purposes that they used their mobile phones for. The greatest response from them was the use of mobile phones for playing games and as multimedia devices. In terms of the use of mobile phones as multimedia devices, they indicated they used their mobile phones to take photos, record videos, listen to music or watch videos. In the table, **QQ** is a free instant messaging computer program developed in China and it includes other features, for instance, games, virtual pets, blogs, and ringtone downloads. When this 23.5% is added to the result of the use of mobile phones for messengers, it indicates that about half of the learners used their mobile phones for some type of messenger or Skype. Also, it indicated that 20.8% of 182 learners used mobile phones for checking traffic information when the 5.9% who check bus timetables are added to the result for checking traffic information. 5.9% of them responded *Other* in Table 5, indicating they used an iPad instead of their mobile phones.

Table 5: Other purposes

Purposes	Response rate
Playing games and as multimedia devices	29.4%
QQ (messenger)	23.5%
Check bank account (net banking)	17.6%
As a phone book	5.9%
As PDA and calendar	5.9%
As GPS	5.9%
Check bus timetable	5.9%
Other	5.9%

Learners' previous experience of mobile phone use for learning. The survey included additional questions asking about the learners' previous experience of using their mobile phones for both educational and language learning purposes. This language learning included any second languages which the learners were studying as a subject or outside class in everyday life. Figure 1 shows that only 20.7% had had previous experience of the use of their mobile phones for educational purposes. Table 6 shows a majority of the respondents used their mobile phones for checking a dictionary or translator (55.9%) or information related to their university studies (26.5%). In the results, meeting and discussion means that they used their mobile phones to discuss their group assignments, or to arrange a meeting over the phone rather than sending **SMS**. Similarly, Figure 2 shows that 27.4% had used their mobile phones for language learning and most of them used their mobile phones for checking a dictionary or translator (61.4%) and listening practice (13.6%) as shown in Table 7. As 29.4% had previously used their mobile phones as multimedia devices, it can be understood that the percentage for listening was the second greatest result. As shown in Table 7, there were 2.3% who used their mobile phones in a second language, which was an interesting discovery about how they used mobile phones to learn the language.
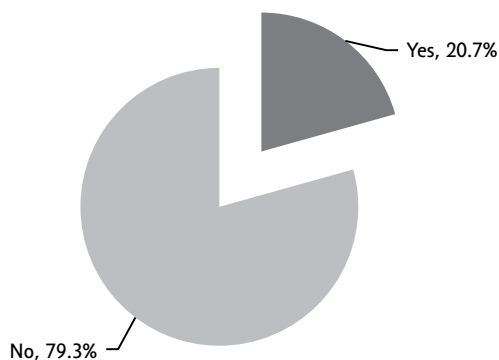
Figure 1. Have you ever used your mobile phone for educational purposes?
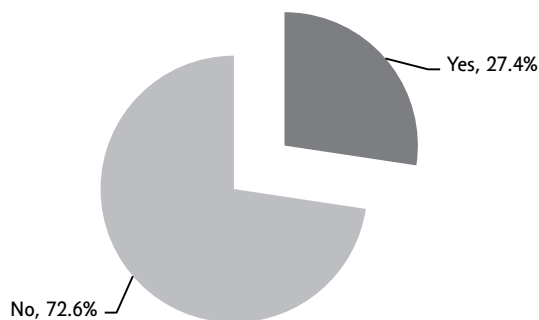
Figure 2. Have you ever used your mobile phone for language learning?

Table 6: Details of the use of mobile phones for educational purposes

Purposes	Response rate
A dictionary/ translator	55.9%
For courses at the university	26.5%
Meeting and discussion	14.7%
Reading	2.9%

Table 7: Details of the use of mobile phones for language learning

Purposes	Response rate
A dictionary/ translator	61.4%
Listening	13.6%
Vocabulary list	4.5%
SMS in second language	4.5%
Reading	2.3%
Use a phone in second language	2.3%

Learners' perceptions of the use of mobile phones in the future. Following the questions about their previous experience, another question was included to determine whether learners would like to use their mobile phones for language learning in the future. Figure 3 below shows that only 0.6% of the learners were not sure whether they would like to use their mobile phones for such a purpose in the future. Whilst 64.4% indicated a clear negative attitude, only 35.5% indicated a clear positive attitude. These results are another significant consideration in the study. As can be seen in Table 8 below, there were relatively similar responses about the purposes that they used their mobile phones for when compared with the details of the purposes listed in Table 7 above.
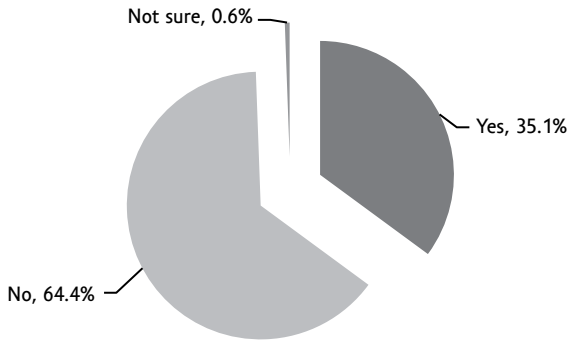
Not sure, 0.6%

Yes, 35.1%

No, 64.4%

Figure 3. Would you like to use your mobile phone for language learning?

Table 8: Details of the use of mobile phones for language learning

Purposes	Response rate
Dictionary and translation	50.0%
Talking in English on a phone	7.1%
SMS to receive words	7.1%
Flash cards	4.8%
Listening	2.4%
Other comments	28.6%

Regarding other comments in Table 8, one learner noted that the student's mobile phone did not have functions like an iPhone, so the learner preferred using the mobile phone in the offline mode. Three learners commented that they preferred it to be cost friendly (e.g. free or low cost), where only downloading was charged.

Limitations of Survey 1

While there were interesting observations that could be made from the data, the study in Survey 1 was not without limitations. The survey did not make it clear enough as to which mobile devices were used by the learners, such as whether smart phones or standard mobile phones were used and whether they owned other personal mobile devices, such as tablet **174** computers. This was predominantly because smart phones were not widely used among

university students when the study was conducted in 2010, but it was thought that to some degree views of emerging technologies would be evident in discussions of the use of mobile phones for language learning in the future. The survey also did not go into detail regarding which language skills learners would like to develop through their mobile devices. This question was omitted in an attempt to keep the survey brief for a higher return rate but, ultimately, it became apparent that this information would have been useful.

Survey 2

Method

In Survey 2, the survey designed in Survey 1 was redesigned in order to deal with the limitations found. The subsequent sections illustrate research questions posed in this phase, participants and procedures, and results and discussion of the new survey conducted in this phase. This phase posed the following additional research questions which took into consideration the use of tablet computers in everyday life.
- For what non-learning purposes do learners regularly use their tablet computers?
- Have learners ever used their tablet computers for educational purposes?
- Have learners ever used their tablet computers for language learning?
- How do they perceive using their tablet computers for language learning in the future?

Participants and Procedures: In Survey 2, participants were both Australian and international learners (n=158) who were studying in various courses at the same university as in Survey 1 but in 2012. They were in the first year, second year or third year of their bachelor's degree at the university. The survey contained more questions than the previous survey and it was designed to take approximately 15 minutes to fill in. Their participation was entirely voluntary and it was administered anonymously to the participants during or after the class time in the second half of the semester to achieve a sufficient sample size in the study. It included no questions linking individual personal identification to protect their privacy in the study.

Data collection. The survey used in Survey 2 took into consideration the use of smart phones and tablet computers which had been omitted in the previous survey as well as standard mobile phones. It was made up of a total of 13 questions asking which mobile devices the learners owned with additional information about the particular purposes they used their mobile devices for in everyday life including educational and language learning purposes, and whether they are willing to use their mobile phones and tablet computers for language learning in the future.

Results

Similar to Survey 1, all results collected through the survey are presented using a cumulative percentage or the cumulative number of the participants' responses to all questions included in the survey. Results are illustrated in the following subsections in terms of the ownership of mobile devices and details of mobile phones, private use of both mobile

phones and tablet computers, the use of these devices for both education and language learning purposes and their attitude about mobile language learning in the future.

The ownership of mobile devices and details. The survey included a couple of questions asking which mobile devices learners owned and details of their mobile devices. As Figure 4 illustrates, 79.7% of the learners owned smart phones while only 12.0% owned standard mobile phones. Also, 7.0% owned both types of mobile phones. However, there were 1.3% who did not own any mobile phones at all which is not an expected discovery and a significant consideration in the study.
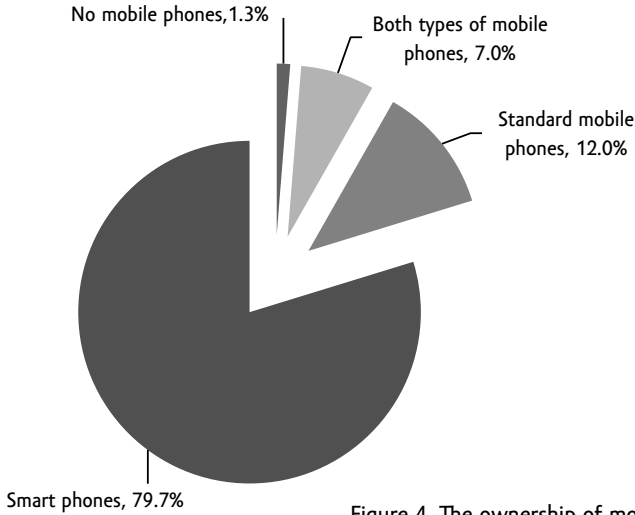

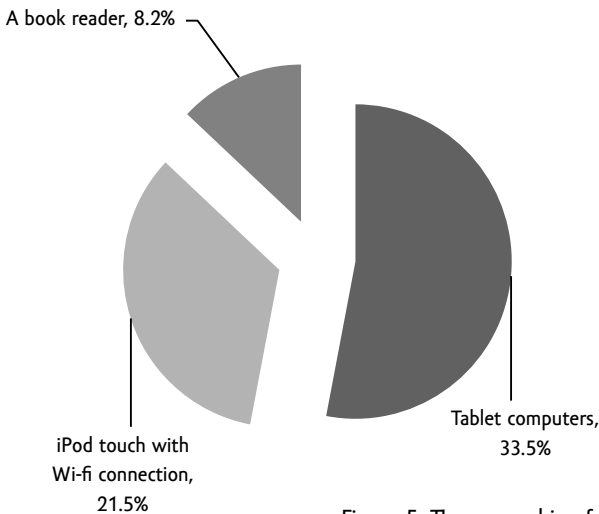Figure 4. The ownership of mobile phones

Figure 5. The ownership of other mobile devices

Additionally, the results showed that about one third of the learners owned a tablet computer such as an iPad or a Galaxy note, while just 21.5% owned an iPod touch with Wi-Fi connection and 8.2% owned a book reader such as Kindle as presented in Figure 5. The 1.3% that appear in Figure 2 indicated that they owned a tablet computer, an iPod touch or a book reader. This finding is also a significant consideration in the study. Regarding the types of Internet connections, Figure 6 below illustrates the most used connection was Wi-Fi only (71.6%), followed by a plan-based broadband (9.0%) and prepaid mobile broadband (4.5%) among the respondents (n=67) to the question in the survey. Also, there were 1.5% indicating the use of both broadband and Wi-Fi connections. Although there were 13.4% with no response, most of the learners who owned a tablet computer or more than one mobile device prefer the Wi-Fi connection to any type of broadband which involves extra costs for using their mobile phones.
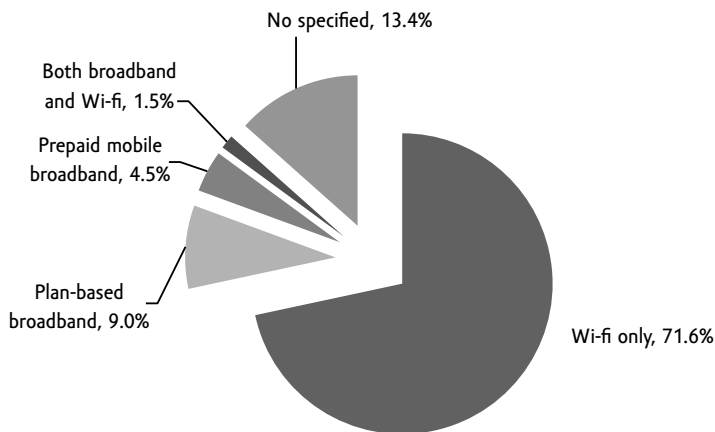

Figure 6. Types of connections

Figure 7 below presents the types of mobile phones which the learners used. The greatest percentage of the learners used plan-based mobile phones on contract with their selected carrier (72.8%), followed by prepaid mobile phones (24.7%) and both prepaid and plan-based mobile phones (0.6%). With regards to the payments, about half of the learners who used prepaid mobile phones paid for recharges valued between $20 and $30 (9.5%). Among the learners who used plan-based mobile phones, most payments were valued either between $40 and $50 (18.4%) or $50 and $60 (18.4%), followed by $20 and $30 (12.0%).
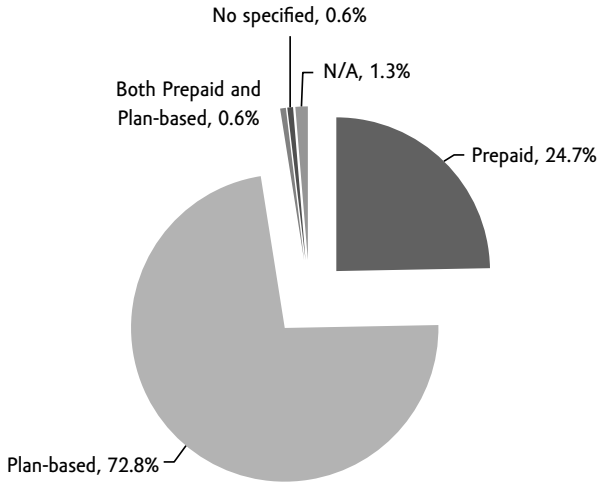
Figure 7. Types of mobile phones

Private use of mobile phones. The survey results show how learners used their mobile phones for non-educational purposes listed in the question. The results included the use of their mobile phones for making calls, sending **SMS** messages, sending and checking e-mails, using messenger applications and Skype or messengers, and checking traffic information, news, weather and social network websites such as Facebook or Twitter as Table 9 below illustrates.

Table 9: The use of mobile phones for non-educational purposes

	Yes	**No**	**N/A**
Making calls	94.9%	3.8%	1.3%
Sending SMS	87.3%	11.4%	1.3%
Checking e-mails	70.3%	28.5%	1.3%
Facebook/Twitter	67.7%	31.0%	1.3%
Sending e-mails	55.1%	43.7%	1.3%
Weather information	53.8%	44.9%	1.3%
News	44.3%	54.4%	1.3%
Messenger apps	38.6%	60.1%	1.3%
Skype/messengers	32.9%	65.8%	1.3%
Traffic information	27.2%	71.5%	1.3%

There were the 1.3% of learners who did not use their mobile phones for such purposes listed in Figure 12 since they did not own any mobile phones at all. Also, although learners owned their mobile phones (98.7%), not all of them used their mobile phones for such purposes in everyday life. There were learners who did not use their mobile phones for making calls (3.8%) and for sending **SMS** messages (11.4%). The results for sending and checking e-mails

178 show a greater percentage of learners who used their mobile phone for checking e-mails

compared with the percentage of learners who used it for sending e-mails. This result can be related to which types of mobile phones they owned. Besides these purposes, the question also took into consideration the use of their mobile phones for messenger applications and either Skype or messengers. The results revealed that a relatively similar percentage of the learners used their mobile phones for such purposes in everyday life.

Additionally, the question included the use of mobile phones for checking traffic information, news, weather and social networking websites such as Facebook and Twitter. For these purposes, the smallest percentage of the learners (27.2%) indicated they used their mobile phones for checking traffic information, whilst the greatest percentage of them (67.7%) indicated they used their mobile phones for checking social networking websites. Almost half of the learners are more likely to use their mobile phones for checking weather than checking news in everyday life.

Besides the listed purposes, the survey included a question asking about the use of their mobile phones for other personal purposes. These were listening to music, playing games, watching videos and browsing online shopping websites. Also, they were used for a variety of mobile applications, for instance, a bank application which allows people to easily manage their bank account and entertainment applications like Podcasts which contains thousands of free audio or videos podcasts or SoundHound which enables them to instantly discover different music. Moreover, as more mobile phones are embedded with more functions in them, mobile phones were used for notes or as cameras in their daily life.

Learners' experience of using mobile phones for learning. The results show whether the learners had had previous experience of using their mobile phones for both educational and language learning purposes and how they used their mobile phones for such purposes in their daily life. Interestingly, it reveals almost the same percentage of the learners had had previous experience of using them for educational purposes (70.9%) and language learning purposes (70.3%) as shown in Figures 8 and 9, respectively.
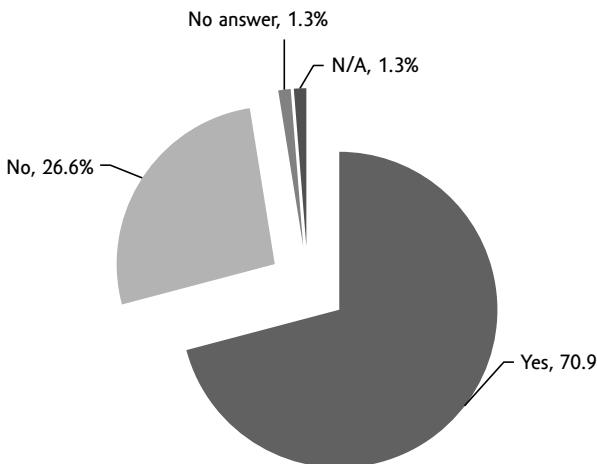

Figure 8. Experience in using mobile phones for educational purpose

No response, 1.3%

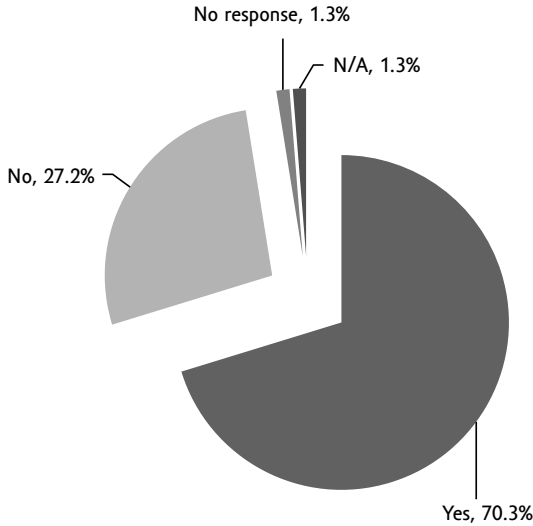N/A, 1.3%

No, 27.2%

Yes, 70.3%

Figure 9. Experience in using mobile phones for language learning

Tables 10 and 11 below list which purposes these learners used their mobile phones for. For educational purposes, the results show the greatest usage was for checking the university websites to obtain information and materials related to their courses (29.4%), followed by using applications or the online services of a dictionary or translator (17.5%), searching for articles or journals (14.2%), accessing university applications or language learning applications (10.0%) and so on. As can be seen in Figure 4, more learners owned smart phones, and their mobile phones seemed to allow them to not only check or search online, but also read digital documents, work on their assignments, and keep notes and course materials in their mobile phones.

Table 10: Details of the use of mobile phones for educational purpose

Purposes	Response rate
To check the university website	29.4%
To use a dictionary/translator	17.5%
To search articles or journals for research	14.2%
To use the university application	10.0%
To use language learning applications	8.3%
To read course materials	
To search online learning materials	4.2%
To keep course materials and notes	
To work on assignments	1.7%
To use the language learning help online	
To discuss assignments with group members	0.8%
To record and watch videos of the class	

Table 11: Details of the use of mobile phones for language learning

Purposes	Response rate
To use a dictionary/translator	56.3%
To use language learning apps	22.7%
To listen to audio materials	6.7%
To use character recognition for learning calligraphy	5.0%
To use other types of learning materials	4.2%
To communicate with friends who studied the language To play games for vocabulary learning	1.7%
To keep a vocabulary list To use a keyboard for spelling practice	0.8%

For the language learning purposes, Table 11 shows the greatest usage was for an application or online service of a dictionary or translator (56.3%), followed by language learning applications (22.7%), audio materials (6.7%), and character recognition (5.0%), which can be the main purposes of its use in language learning. An interesting finding was that learners used their mobile phone keyboards for spelling practice (0.8%).

Learners' perception of the use of mobile phones in the future. The survey included additional questions asking whether learners would like to use their mobile phones for language learning in the future. Figure 10 shows the number of learners who did not respond (12.0%). This result can indicate that they were not sure if they would like to use their devices for such a purpose in the future even though they have previously used their devices for such a purpose in their daily life. Likewise, 19.6 showed a clear negative attitude about the use of their devices for such a purpose while 67.1% should a clear positive attitude about it.
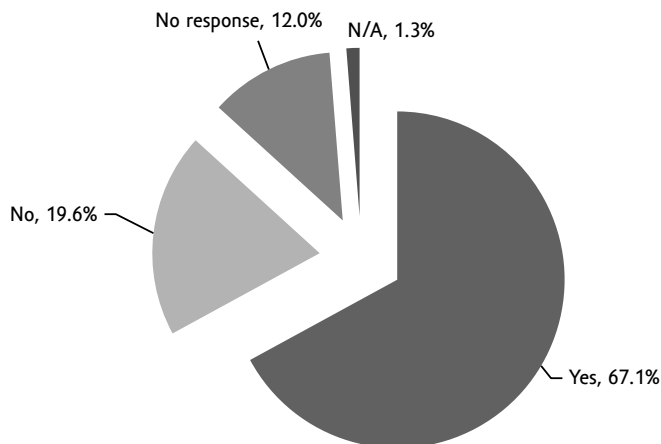

Figure 10. Would you like to use a mobile phone for language learning in the future?

Additionally, the question asked how they would like to use their devices for such a purpose in the future. They indicated they would like to use their devices for reference resources, audio materials, character recognition, an interesting translation application, exercises or applications to improve their vocabulary and grammar knowledge, writing, spelling and listening skills in general.

Private use of tablet computers: The survey used in Survey 2 included additional questions asking their experience of the use of their tablet computers for non-educational purpose. It included a question asking about the same purposes which were investigated for the use of mobile phones except for making calls and sending **SMS** messages. Table 12 shows all response rates for all purposes listed in the question.

Table 12: The use of tablet computers for non-educational purposes

	Yes	No
Sending e-mails	71.6%	28.4%
Checking e-mails	70.1%	29.9%
Facebook/Twitter	64.2%	35.8%
News	61.2%	38.8%
Skype/messengers	34.3%	65.7%
Weather information	34.3%	65.7%
Messenger apps	28.4%	71.6%
Traffic information	16.4%	83.6%

As can be seen, there is not much difference between the use of tablet computers for sending e-mails (71.6%) and checking e-mails (70.1%). This is another significant discovery in Survey 2. Also, these activities are considered to most frequently occur when they used their tablet computers. The second most frequent activity is for checking social networking websites, such as Facebook or Twitter (64.2%), followed by checking news (61.2%), checking weather and using Skype or messengers (34.3%), using messenger applications (28.4%) and checking traffic information (16.4%) which was the least frequent activity among the learners. Additionally, their devices were used for watching movies or videos, reading or playing games according to the learners' responses.

Learners' previous experience of using tablet computers for learning: The survey also included additional questions asking whether the learners had ever used their tablet computers for educational and language learning purposes. As shown in Figures 11 and 12, 65.7% of the respondents have used their devices for educational purpose whilst just 52.2% of them have used their devices for language learning.
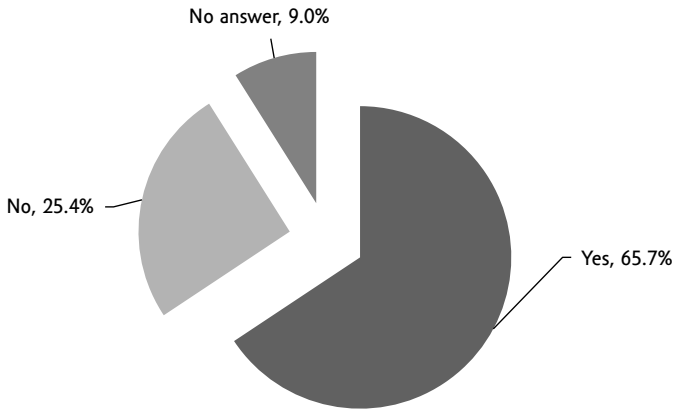
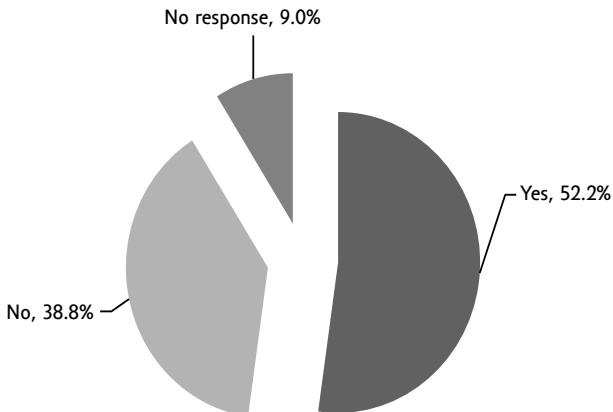Figure 11. Experience in using tablet computers for educational purposes

Figure 12. Experience in using tablet computers for language learning

For educational purposes, the results showed that the most frequent use was to work on assignments and research (41.1%), followed by reading news, E-books, articles or lecture notes (21.7%), accessing the university website (15.2%), taking notes in class and listening to class audio materials (4.3%). In addition to these purposes, some respondents indicated they used their devices for keeping course materials to carry to their classes (2.2%), watching videos of lectures (2.2%) and recording lecturers (2.2%). On the other hand, for language learning purposes, the most frequent use was utilising an application or online service of a dictionary or translator (33.3%), followed by watching videos or movies in a second language (20.8%), using language learning applications (20.8%) and accessing to language learning websites (12.5%). Although it was the least occurring response, 4.2% indicated they used a keyboard to type in a second language for learning.

Learners' perceptions of the use of tablet computers in the future: There was an interesting discovery in terms of learners' perception of the use of their tablet computers for language learning in the future. 55.2% indicated a clear positive attitude about the use of their devices for such a purpose in the future. This result was almost the same percentage of the learners who indicated they have had previous experience of their purpose for such a purpose as Figure 13 illustrates. Moreover, there were some learners indicating a clear negative attitude (31.3%) or no responses (13.4%). These findings are another significance to be considered in the study.
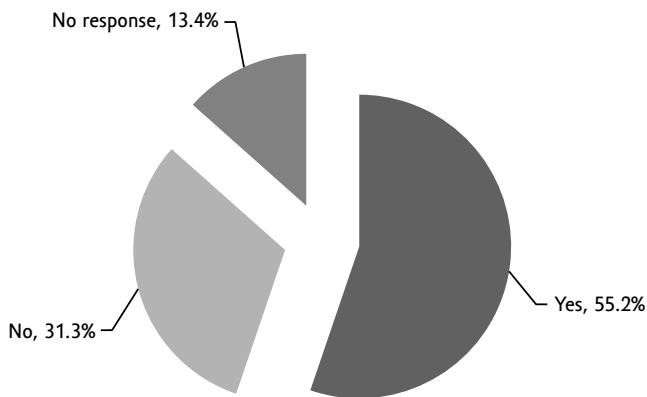

Figure 13. Would you like to use your tablet computer for language learning in the future?

For such a purpose, they indicated that they would like to use their devices for language learning applications, checking a dictionary or translator and watching videos or movies, accessing a website to check and download materials and for interactive learning among learners. According to the results about their previous experience, they had already been using their devices for such purposes. Therefore, it is possible to say that they would feel comfortable with their devices for what they already do in their daily life.

Limitations of Survey 2

Whilst there were significant discoveries derived from the survey results, the study conducted in Survey 2 was not also without limitations. The study focuses were to attempt to investigate additionally the use of tablet computers for non-educational, educational and language learning purposes, and the learners' perception of the use of both mobile phones and tablet computers for language learning in the future. Consequently, the survey excluded a particular question related to an exploration about which language skills the learners would like to develop through their mobile devices. The survey results have given a brief idea about how they used their mobile devices to improve which language skill. Further, they indicated which language skills they would like to use their mobile devices to develop if they would use their mobile devices for language learning in the future. However, a question related to the development of language skills was still required to search for

184 factual evidence which would have been practically useful. Meanwhile, since there are

more learners who used language learning applications on their mobile phones, details of information about the applications would have been useful to determine which language skill they actually used it to improve outside the class.

Discussion

Survey 1

As opposed to previous studies, the study in Survey 1 attempted to investigate the use of mobile phones for non-educational, educational and language learning purposes, and learners' perception of the use of their mobile phones for language learning in the future. Through the survey results, it is possible to determine a relationship between non-educational uses and educational uses which enables evidence to be drawn about the appropriateness and acceptance of mobile language learning in the future. The survey results are categorised according to the ownership of mobile phones with details, learners' experience of the use of their mobile phones for non-educational, educational and language learning purposes, and their perception of mobile language learning. The responses to the research questions addressed in Survey 1 are discussed below.

The ownership and details of mobile phones. According to the survey results, all learners owned mobile phones with either 2G or 3G networks or both networks. There was not much difference in the percentages of responses among different types of networks in terms of the use of mobile phones for educational and language learning purposes and learners' attitudes about the use of mobile phones for language learning purposes in the future. Thus, types of networks are unlikely to affect the use of mobile phones for such purposes in everyday life. Similarly, types of carriers seem not to have a strong relationship with the use of mobile phones for such purposes. All carriers in Australia offered relatively similar mobile phones and types of prepaid recharges and plans. Thus, their experience of the use of their mobile phones in everyday life can be more linked with how much they paid for their plans or prepaid recharges. However, many learners did not specify how much they were paying for prepaid recharges or plans for their mobile phones. Thus, it is difficult to say that there was a strong relationship between how much they paid for plans or prepaid recharges and their use of mobile phones in their daily life.

Private uses of mobile phones. The survey results reveal that not all learners used their mobile phones for making calls and sending SMS messages although all learners owned mobile phones. These facts are not expected findings in the study. However, the learners' comments about other ways of using mobile phones might explain why there were some learners who did not use their mobile phones for such purposes. Some learners indicated that they used iPads instead of their mobile phones, and they used their mobile phones as a phone book and for Skype or messengers which allowed people to easily communicate with their friends or family and call at lower costs. From these findings we can infer some learners might prefer communication by text rather than talking as sometimes it is difficult to hear voices over the mobile phones because of the issues of signal reception. Also, in general, making calls through a mobile phone carrier is known to be expensive in Australia. So, it can be understood that learners find an alternative device or way to communicate with other people in a convenient way. Currently, more personal mobile devices **185**

are available, thus it might be essential to further investigate whether learners use an alternative device even though they own their mobile phones, and which purposes they use these for in everyday life.

The results for sending and checking e-mails show that more learners used their mobile phones for checking e-mails (35.9%) than sending e-mails (27.3%). From this result we can infer learners are not likely to use their mobile phones when input is required. Also, they might prefer using computers to write e-mails as it is easy to type and check what they write in the e-mails on a big sized screen. Likewise, it is possible to consider that their mobile phones could have no Internet connection to be able to check their online e-mail accounts. Similarly to the result for sending e-mails, only 21.1% used their mobile phones for messengers or Skype in everyday life. It is possible to consider that most of their mobile phones could not run mobile versions of such chatting software. Alternatively, this result can also confirm that most of the learners are unlikely to use their mobile phones for an activity which requires typing on the devices.

Similarly, there were only 35.2% who used their mobile phones for checking social networking websites although social networking, such as Facebook or Twitter, is quite popular around the world. Likewise, 30.7% used their mobile phones for checking weather and only 29.0% used their mobile phones for checking the news. In general, web pages for social networking, weather and news information provide a large amount of information, videos and graphic images which result in such slow loading time on their mobile phones. Hence, unless they had mobile phones with a big-sized screen or they wished to check those websites, not many learners generally wanted to use their mobile phones for such purposes. Also, they probably preferred computers, which give them little frustration for reading text compared to their mobile phones. From these findings we can get the idea that if mobile phones can provide an appropriate amount of information which fits and is readable on a small size of screen, the use of mobile phones can be more acceptable for retrieving information.

Moreover, the least use of their mobile phones was for checking traffic information (20.8%). Traffic information included bus timetables because the bus was the main form of transport for the learners, unless they owned a car. For instance, in Australia, the government organization, TransLink, provides all public transport services in Queensland where the university is. They offer only their website for searching for information on computers and mobile phones but do not distribute an application for mobile phones. In this case, the learners have to access the web pages with Internet connection. The results of such a purpose can imply that the majority of learners may not have had Internet connection with their mobile phones, or they utilized alternative devices like a computer, which provides a faster loading speed, to check such information. Alternatively, they probably carried printed bus time tables with them. Additionally, some learners used their mobile phones as a **PDA**, calendar, or **GPS**, and to check their bank account. From these results, mobile phones can be considered to affect their lifestyle and to be a necessary item for them to organise their private life in a more convenient way.

Learners used their mobile phones most regularly for making calls and sending **SMS** followed by checking e-mails, social networking, weather information, news, sending e-mails, using Skype or messengers and checking traffic information which was the least frequent use among them. The survey results show a relatively similar percentage for such purposes apart from making calls and sending **SMS**. We can say that they are likely to use their

mobile phones for collecting or checking information rather than typing text. Furthermore,

other uses of their mobile phones may depend on the type of mobile phones, for example, standard mobile phones or smart phones. This would be useful information and a relationship between ownership of different types of mobile phones and the use of mobile phones needs to be further investigated.

Learners' previous experience of mobile phone use for learning. Unlike previous studies, the study attempted to investigate learners' previous experience of the use of their mobile phones for educational and language learning purposes. The survey results show a clear indication that only 20.7% have used their mobile phones for educational purposes. They mainly used their mobile phones for referencing resources like a dictionary or materials related to their studies and reading online. Analogously, just 27.4% have had previous experience of the use of their mobile phones for language learning. For such a purpose, they mainly used their mobile phones for checking a dictionary or translator or listening to audio files. Through the results, it can be seen that most of the learners showed a lack of motivation to use their mobile phones for such purposes. It is possible to consider that most of their mobile phones did not have a number of functions and a bigger sized screen like smart phones available at the time. The minimum functions of mobile phones can keep learners from using them for learning in everyday life. Therefore, what type of mobile phone they own can greatly influence how they use it for such purposes in everyday life, which needs to be further investigated.

Learners' perception of the use of mobile phones in the future. The survey results reveal learners' clear perception towards the use of mobile phones for language learning in the future. Surprisingly, there were only 0.6% of the learners who were not sure if they would like to use it, and 35.1% showed a clear positive attitude although most of them had had no previous experience of the use of their mobile phones for such a purpose (72.6%). Additionally, the 35.1% indicated they would like to mainly use mobile phones for checking a dictionary or translator, which they had been doing already according to their previous experience. Other learners commented that their mobile phones did not have the same functions as smart phones, such as the iPhone, and they did not like online usage. They also commented that they might try to use applications if their mobile phones could handle them. Besides these comments, 7.1% of the learners indicated positive attitudes toward the use of a mobile phone in the future if it is free or low cost, for example, only a fee connected with downloading files.

Summary. To conclude, learners in Australia regularly used their mobile phones for making calls and sending SMS messages. In comparison, they were less likely to daily use their mobile phones for other non-educational purposes. Also, they were unlikely to use their mobile phones when typing was required. Furthermore, many learners had no previous experience of the use of their mobile phones for educational and language learning in the future. Also, most of the learners showed a clear negative attitude about the use of mobile phones for language learning in the future. The study shows that features of mobile phones, such as screen size and keyboard, the limited functions of mobile phones and costs can be a hindrance to learners' acceptance of mobile language learning. Also, there can be a lack of motivation for its use for such a purpose in the future.

Survey 2

Survey 2 was administered to investigate the use of mobile phones and tablet computers for non-educational, educational and language learning purposes and learners' attitude about the use of these mobile devices for language learning in the future and to make up for shortcomings that were present in Survey 1. The survey results are discussed in terms of the ownership of mobile devices, their experience of using their own devices and their attitude to mobile language learning.

The ownership of mobile devices. As more smart phones have become available during the last two years, it can be understood that most learners owned smart phones compared to a standard mobile phones. Also, there was a small percentage of them who owned the standard mobile phones. In contrast, there was the surprising finding that 1.3% of learners did not own a mobile phone although they owned a tablet computer, an iPod touch or a book reader. According to the results, the 1.3% indicated they used e-mails, messenger applications, Skype or messengers such as **MSN**, Yahoo and G-mail on their mobile devices rather than making calls and sending **SMS** messages. These findings can explain why they did not own their mobile phones.

In addition to mobile phones, more mobile devices have become available over the last few years. The survey results show overall 63.3% of the learners owned a tablet computer such as an iPad and Galaxy notes, iPod touch with Wi-Fi connection or a book reader such as a Kindle produced by Amazon which is embedded with Wi-Fi connection. Having these mobile devices allows learners to work on any tasks or activities which can be difficult to do with their mobile phones for non-educational, educational and language learning purposes. Also, particularly, key features of a tablet computer, such as bigger sizes of both screen and keyboard, better quality of screen resolution and easier access to resources or the Internet possibly attract the learners and ease their frustration in managing any activities related to their studies.

In relation to the ownership of mobile devices, most learners used plan-based mobile phones which are on contract with their carriers. This result can be explained by considering the fact that almost all smart phones are offered with the contract for 24 months from any carrier in Australia. Moreover, in terms of payments for their plans or prepaid recharges, most of them used plans that charged between $40 and $50 or between $50 and $60 and their prepaid recharges were valued between $20 and $30 according to the survey results. In Australia, as people upgrade their plan, they can receive more money value for standard national calls with limited time and **SMS** and a larger amount of data. Also, they can receive unlimited standard national **SMS** and unlimited voice calls to the same carrier's mobile phones. Likewise, some plans include unlimited access to major social networking websites, such as Facebook, Twitter, LinkedIn, eBay, which is an online shopping website, regardless of how much they pay for their plans. Similarly, prepaid recharges also include the money value, certain amount of data for usage and unlimited calls and text to Australian numbers during certain periods of the day. Alternatively, there are prepaid recharges including unlimited calls and text to the same carrier's mobile phones and unlimited access to those social networking websites. Based on the information mentioned here through the survey results, the cost of payments for their plan or their recharge with additional values is considered to be linked to the use of mobile phones in everyday life.

Private use of mobile devices. The survey attempted to investigate how the learners used their mobile phones and tablet computers for daily life. When considering the learners' use of mobile phones, 3.8% did not use their mobile phones for making calls and 11.4% did not use their mobile phones for sending SMS messages. The significant discovery is that these percentages were greater than the percentages of learners who did not use their mobile phones for such purposes given in Table 4 in Survey 1. This can imply that more learners are likely to find alternative ways to communicate with people rather than making calls or sending SMS messages. Analogously, the results show the percentage for sending and checking e-mails has increased by 28.0% and 34.4%, respectively, when these results were compared with the results in Table 4 in Survey 1. These high increases for the purposes can be because many learners owned smart phones which allow them to link with their private or student e-mail accounts. For such purposes, among the learners who owned tablet computers, the percentage using their mobile devices for sending e-mails was slightly larger than the one of using them for checking e-mails according to the results, but there was no significant difference. However, the percentage sending e-mails on their tablet computers increased by 16.5% compared with the result for learners' mobile phone use for such purposes given in Table 9. Thus, it is possible to say that learners prefer tablet computers for sending e-mails to mobile phones as they can feel more comfortable reading and writing messages on the larger screen of the tablet computers.

In terms of the use of messengers, 38.6% of the learners used any messenger application currently available, and 32.9% of them used Skype or online messengers on their mobile phones. For instance, a variety of messenger applications have been produced as more smart phones have become available. As most learners owned smart phones, it can be understood that more learners used their mobile phones for such a purpose, which increased by 11.8% compared with the results for Skype or messengers listed in Table 4. The use of these communication tools can be considered as an alternative way for the learners who did not use their mobile phones for making calls or sending SMS messages. For the learners who owned tablet computers, just 28.4% used their tablet computers for messenger applications, which decreased by 10.2%. Also, 34.4% used them for Skype or messengers, which increased by 1.4% compared with the results for mobile phones in Table 9. There was no significant difference among these results, but it can be said that if they were already using any applications or software on their mobile phones, they were likely to use similar products on their tablet computers.

Additionally, there were interesting discoveries about the use of mobile devices for checking social networking sites, news, weather information and traffic information. For checking social networking websites, 67.7% of the learners used their mobile phones, which increased by 32.5% compared with the result for such a purpose listed in Table 4 in Survey 1. Nowadays, a particular application for easy access to these social networking sites is being noticeably used by smart phone users, and this might have led to the increase of the percentage of learners who used them for such a purpose. Also, 64.2% used their tablet computers, which were the third highest number in the overall results, for checking news, 44.3% used their mobile phones for such a purpose, which increased by 15.3% compared with the results in Table 4 in Survey 1. Also, 61.2% used their tablet computers for such a purpose, which was the fourth highest number among the overall results in Survey 2. For checking weather, 53.8% used their mobile phones for such a purpose which increased by 23.1% compared to the results in Table 4 in Survey 1. However, only 34.3% used their tablet computers for such a purpose which was the third lowest number among the overall results **189**

for the use of tablet computers. Lastly, for traffic information, 27.2% used their mobile phones for such a purpose, which increased by 12.3% compared to the result described in Figure 4 in Survey 1. 16.4% used their tablet computers for such a purpose. Through the survey results, if they used their mobile phones for the purposes mentioned here, they are most likely to use their tablet computers for the same purposes.

Overall, the percentages of the learners who used their mobile phones for those purposes appeared to be larger than the others found through the survey conducted in Survey 1. In particular, the use of smart phones has noticeably changed the learners' life styles and their learning styles and methods in and outside the class during the last few years. As other purposes noted by them, their mobile phones were used for playing a variety of games, watching videos such as YouTube, using banking applications and reading. It is clearly seen that smart phones can give more opportunities to manage the learners' daily activities. Similarly, their tablet computers were likely to be used for watching videos or movies, reading and playing games in everyday life. How they used their mobile phones can be linked with the use of their tablet computers. Also, their tablet computers were used for any daily activities which involved typing and checking any webpages with a large amount of information, such as social networking sites and news. For instance, social networking or business applications enable easy access to their account pages on their mobile phones, but the embedded functions in the applications can be still limited compared with the webpage version displayed on computers. People still need to use computers to manage other tasks which are not available in the applications. The tablet computers enable them to do almost the same activities as what they usually do on the computers, thus if they regularly used their mobile phones for any purposes, it can be predicted that they also used their tablet computers for similar purposes.

Learners' previous experience of using mobile devices for learning. The survey results show learners' previous experience of the use of their mobile phones and tablet computers for educational and language learning purposes. Overall, the results indicate most learners have used their mobile phones or tablet computers for such purposes. The percentage of those who used their mobile devices for educational purposes increased by 50.2%, and the others who used their mobile devices for language learning increased by 42.9% when compared with the results illustrated in Figures 1 and 2 in Survey 1. Smart phones enable them easy access to the Internet to retrieve necessary information or use a number of applications related to learning. Besides, the university has produced its own applications for students to be able to easily access all student services on their smart phones. As the results show, many learners used their mobile phones for searching resources for the research or their assignments, using the university application and second language learning applications as well as using dictionaries or translators as applications or online. These discoveries were significantly different from the results about how learners used their mobile devices for such a purpose found in Survey 1. It can be noticeably determined that their own mobile phones have amplified how the learners used their mobile phones for such purposes in or outside class. For instance, as they used their mobile phones for listening to music, playing games and watching videos or movies in their private life, there were also learners who also used their mobile phones for watching videos, such as the class recording and videos in second languages, listening to audio materials and playing games for vocabulary learning. Besides, there was a large number of the learners indicating that they used their tablet **190** computers for both educational and language learning purposes. The results revealed the

use of their tablet computers for learning activities, such as writing essays, taking notes, reading lecture notes and recording lectures. Further, they used their tablet computers for watching videos or movies and playing games for language learning as they did in their private life. Accordingly, their tablet computers also seemed to greatly supplement their learning in and outside class and enable them to effectively manage their learning tasks without accessing computers.

Consequently, these findings can indicate that private use of both mobile phones and tablet computers is linked to how they used these mobile devices for learning. Equally, the learners' experience of using these mobile devices is considered to be linked to how much they are willing to use them for language learning in the future.

Learners' perception of the use of mobile devices for learning in the future. According to the survey results, the learners showed a clearly positive attitude toward using their mobile phones for language learning in the future. On the one hand, the percentage of learners who indicated "yes" to the question increased by 32.0% compared with the results represented in Figure 1 in Survey 1, which is another significant finding in the study. 70.3% of the learners had had previous experience of the use of their mobile phones for such a purpose, and 67.1% indicate a clear positive attitude about the use of the device for such a purpose in the future. From this result we can infer most learners had strong motivation to use their mobile phones for learning through their previous experience. There were some comments from them about the use of mobile phones in the future. For instance, it is more convenient and gives access to resources whenever they want, and it is easy and quick to learn what they want. In addition, they commented referencing and audio resources were most useful as they would like to use their mobile phones for learning vocabulary, practising listening, spelling and grammar by using language learning applications. Moreover, some learners commented they would use their mobile phones for such a purpose if they own smart phones in the future. Thus, in particular, the use of smart phones seemed to attract them to the use of their mobile phones for language learning in the future, too.

In comparison, the ratio of the learners who indicated "yes" for using mobile phones in the future decreased by 3.2% compared with those who had had previous experience in using their mobile phones as shown in Figure 26. However, there was a 3.0% increase in those who would like to use their tablet computers for language learning in the future compared to the results related to their previous experience of its use. As the learners commented that they would rather use the tablet computer because the mobile phone was too small, they might prefer the tablet computer to the mobile phone if they need to work on tasks for learning.

There were of course learners who did not respond or who indicated their negative attitude by responding with a "No" to the use of either mobile phones or tablet computers for language learning in the future. It can be considered that these learners might have had no previous experience of using either mobile devices for such a purpose and they had no idea how they would be able to use their mobile devices for such a purpose in the future. To encourage learners to use their mobile devices for such a purpose, it may be necessary to introduce appropriate guidance on mobile learning and materials tailored to their own mobile devices if teachers intend to offer the type of learning in the class in the future.

Summary. Overall, most learners owned smart phones rather than standard mobile phones. Compared to the results indicated in Survey 1, there was a decline of the number of learners **191**

for used their mobile phones for making calls or sending **SMS** messages. In contrast, there was a great increase of the number of the learners who used their mobile device for other non-educational purposes. It is obvious that smart phones seem to have influenced learners' experience of the use of the mobile device. The use of smart phones has also affected their experience for educational and language learning. The key finding was the use of mobile applications for their university studies or language learning on their mobile phones. Through the survey results, learners would like to use their mobile devices for activities similar to what they had already done for language learning in the future. Most learners showed a clear preference for the use of language learning applications, audio files and so forth which can be included in their existing payment plans or prepaid phone charges, with learners tending to limit their Internet usage according to their plans or prepaid recharges. If they used more data than the limit, they could be charged a huge amount of money for additional costs. To prevent any additional costs for their usage, one possible way is to provide learning materials or resources though Wi-Fi connection on their mobile devices.

Implications

Implications for teaching

Research findings in the two studies conducted in Survey 1 and Survey 2 can suggest potential implications for teaching based on the results about the use of mobile phones and tablet computers for non-educational, educational and language learning purposes and learners' perception of mobile language learning. Firstly, learners are prepared to use their mobile phones or tablet computers for gaining information, but they would like to use their tablet computers if they own them when input is required. Secondly, the research findings present a clear correlation between the use of mobile devices for non-educational purpose and the use of the devices for both educational and language learning purposes. Thirdly, there was a statistical correlation between their previous experience of using their mobile devices and their attitude about the use of their mobile devices for language learning in the future. Lastly, in order to broaden the use of mobile phones as well as tablet computers for learning purposes in the future, it can be suggested that teachers need to gain an idea of non-learning purposes and bring them to learning purposes in class.

Overall, there was a clear negative perception of using mobile phones for language learning in the future based on the findings in Survey 1. Yet, there was a great increase in the number of learners who would like to use their mobile phones for such a purpose in the future through the discoveries in Survey 2. Of the two studies, a greater variety of activities that the learners carried out in everyday life appeared in the study in Survey 2 compared with the one in Survey 1. In Survey 2, it was determined that the majority of learners owned smart phones. The use of smart phones seems to have given learners a positive perception of the use of mobile phones for learning purposes. In addition, using their mobile phones in everyday life has also extended the learners' learning styles. However, there are still learners who owned standard mobile phones with no internet connection or only simple tools except for the internet connection. Those learners possibly have lesser motivation to use their mobile phones for language learning compared to the others who owned smart phones. Further, regardless of which types of mobile phones they owned, learners with little experience of the use of their mobile phones for such a purpose can show a negative feeling to the use of the mobile devices for such a purpose in the future. Thus, to offer mobile

language learning in class, coping with barriers and a lack of motivation among those learners is considered to be crucial for teachers. For instance, teachers can provide a guide about how learners can use mobile phones for learning, which can result in an increase of motivation among learners with negative attitudes. The findings, through the results of activities that learners have previously carried out on mobile phones, are expected to provide teachers with a general idea of how to achieve a design of appropriate mobile learning content for their own mobile phones. For example, learning materials containing an appropriate amount of information which can be readable even on the small-sized screen of mobile phones might be effective for learners. Alternatively, activities which may be largely unrelated to the screen – such as listening activities – can also be a way of alleviating the problem of screen size. Additionally, cost issues are thought to be a little problem if learning activities are easily accessed through Wi-Fi connection which can utilise only the free data included in the plans or prepaid recharge. If there are limits, however, providing audio contents, such as language mp3 files or small video files, through SMS reduces the cost for downloading directly from the Internet. It is also important for teachers to explore input methods that are more suited to the mobile interface, where typing is kept to a minimum.

In general, it can take time for learners to become familiar with learning through any technology. Likewise, even though they carry their mobile phones every day, not all learners are familiar with every function of their mobile phones. In saying this however, designing materials that are similar to what they regularly do in everyday life might allow learners to accept mobile learning a little more naturally and curtail their negative perceptions.

Implications for research

Through consideration of the limitations in the two studies in the two phases, there is still an issue which requires further investigation. The survey used in the two studies needs to be modified in order to obtain more detailed information about which skills learners would like to develop through learning activities on their mobile phones as well as tablet computers, along with their preferences of these mobile devices. While this question was excluded in the two studies, knowing which particular skills learners wish to use their mobile devices to improve can make it easier for software designers to cater to learner needs. Such findings can be expected to provide some ideas of what mobile devices can be applied to which learning purposes, and the specific language learning skills they feel comfortable acquiring through these devices.

As the last point, it is necessary to consider the differences between university-developed and commercially developed applications for language learning. Do learners perceive differences between the two and, if so, what are their preferences? Investigating this from the learners' perspective can be expected to help both teachers and designers to develop learning tools for mobile devices in the future that capture the best of both elements.

Conclusion

In the current two studies, learners in Australia generally showed positive attitude to the use of their mobile phones as well as tablet computers for language learning. The penetration of smart phones, for instance, has probably enriched their learning on their mobile phones by giving more choices of activities. Several key issues addressed in the previous research, such as the difficulty of typing and browsing information, seemed to have been **193**

reduces by using smart phones. Another issue, for instance, the cost issue, we can expect to be dealt with by providing learning materials or activities through Wi-fi connections since more current mobile phones are embedded with it.

As can be seen by the number of studies on learning, particularly using mobile phones which have appeared recently, the use of mobile phones can be considered to be a trend in language learning. Although there was an increase in the percentage of learners with a positive perception of their use for language learning in the future, there were also learners with negative or unsure perceptions of such a purpose. Thus, it is considered that there needs to be a change in their negative perception before widespread usage will be seen. This being the case, educators who expect learners to engage in using their mobile phones for learning need to carefully consider how learners use them in their personal lives, and the extent to which this can be extended to learning purposes as well. Only through taking these steps could we expect that educators will be able to widen the acceptance of learning to the ultimate use of mobile phones for learning purposes. Rather than artificial settings, educators need to seek settings where mobile language learning can be accepted naturally by the learners in the future, in spite of the negative views that they may hold on using their mobile phones for learning.

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