

Eighteen Years After the iPhone's Introduction: Is the University Second Language Classroom a Smartphone Zone?

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This paper will explore to what degree the smartphone has altered the learning process for university language learners in the 18 years since the iPhone was first introduced in 2007. Focusing on one national university in Japan, I will provide an examination on how smartphone usage in an educational environment has evolved in the intervening decade and a half. Using data compiled in 2012 and 2024, the results show that smartphone usage has exploded to a level of almost universal ownership within Hiroshima University. The two surveys indicate that smartphone ownership and usage amongst the student body has outstripped national and global trends. Yet, at the same time, there are concerns associated with mobile device usage and engagement with mobile technology and knowledge. The recent advancements in Artificial Intelligence (A.I.) know-how, provide a real threat to the learning process – particularly within second language acquisition. The ability of educators, and institutions, to monitor and control such software platforms that can be easily accessed via mobile devices is a potentially significant hurdle to the smooth process of educational learning.

This paper will primarily focus on two surveys conducted by the author in 2012 and 2024 at Hiroshima University which aimed to examine and monitor smartphone usage in an English language learning context. In 2012, this was purely an individual pursuit, but in 2021 I also received incredible support from Dr Kateryna Nykytchenko of the Kyiv National Linguistic University as part of a wider longitudinal study into university mobile usage in Japan and Ukraine. Back in 2012, a paper published by the author titled ‘M-Learning at a Japanese University: Limitations and Opportunities’ (Selwood, 2012) showed that smartphone usage amongst the student body was still in its infancy. Amongst language educators at the university, mobile device usage was even more restricted – limited to a mere handful. Six years after the first iPhone, the smartphone revolution had yet to permeate Hiroshima University. Yet, in the same year that paper was published, American software businessman Marc Andreessen declared, “The smartphone revolution is under-hyped, more people have access to phones than access to running water” (Kelly, 2019). Twelve years later in 2024, there could be no doubting the global breadth of the smartphone revolution – the results from the 2024 survey conducted by the author reflect the global pattern of extremely high smartphone ownership and usage. Approaching the middle of the 21st century’s third decade, Hiroshima University was awash with mobile devices and the invasion of smartphones and tablets was almost complete. The student and educator population had not just embraced the smartphone revolution, they had become willing participants in it. Yet, the question remained: Did the high number of smartphones translate into increased usage in the learning environment?

BACKGROUND

This section will provide a background into the rapid growth of mobile devices and the mobile Internet, both globally and specifically to Japan. This is done to provide context for the research data to be presented later in the paper. Worldwide numbers relating to smartphones and the mobile Internet are staggering. Even supposedly less economically developed countries have massively increased both the number of devices in use and the percentage of those that are used to access the mobile Internet. However, focusing on Japan, issues remain relating to the cost of new devices, monthly data plans, and access to free Wi-Fi hotspots.

On January 9th 2007, Steve Jobs, the co-founder and CEO of Apple, walked onto the stage at Macworld 2007 in San Francisco and introduced the company's newest gadget – the iPhone. That announcement began a process that changed the world, especially in relation to how humans interact with each other. The significance of the launch of the first iPhone cannot be underestimated; the first massively popular smartphone has joined the list of technological inventions such as the telephone, radio, pager, and home computer that have revolutionised the way humans communicate. In 2018, just eleven years after Macworld 2007, it was hailed as “the best-selling gadget ever created: It’s probably the most influential one too” (Wired.com, 2018). The iPhone was not the world’s first smartphone, which was the now defunct IBM Simon – introduced in 1992. In comparison, thanks through iPhone and the mobile software developed to run on it, the world has integrated smartphones into daily life.

2012 was a pivotal year in the development of the smartphone. It was the year of the London Summer Olympic Games and the European Football Championships in Poland and Ukraine – major global sporting tournaments that introduced accompanying smartphone apps for the first time. It was also, significantly and historically, the last year that feature phones outsold smartphones globally. By the end of 2013, of the 1.8 billion mobile phones sold, 968 million were smartphones (Techcrunch, 2024). By 2016 there were approximately 3.67 billion smartphones in use, which by 2021 had increased to just over 6 billion devices – an increase of 74% in just five years. In 2024 the estimated total number of smartphones is 7.21 billion, which is an increase of 15% since 2016 (Exploding Topics, 2024). When compared to a 2024 United Nations’ study that estimated the world population at 8.16 billion (Ritchie & Rodes-Guirao, 2024), that equates to 88% of the world owning a smartphone. However, that is a slight exaggeration of the statistics because it is not uncommon for an individual to have more than one device. Yet, the figures are still staggering and represent how the world has embraced smartphone technology since the iPhone was first released.

Concentrating just on Japan, the numbers relating to smartphone ownership outstrip most other countries around the world. In 2024, Japan had the seventh-highest percentage of smartphone ownership in the world, with an estimated total number of users at 97.44 million, equating to 79% of the population (What’s the Big Data, 2024). The contrast from 2012 also aligns with global trends, in that the intervening years have seen a doubling of the number of smartphones owned nationally. In May 2012, 49 million smartphones were in use in Japan, around 30% of its total population (Dentsu, 2024). The numbers, both globally and in Japan, indicate the way mobile devices have evolved from a quirky gadget to a staple of human daily life.

Mobile devices are one half of the modern ‘digital mobile world;’ the other necessary component is smooth access to the mobile Internet from mobile devices. In short, smartphones need either Wi-Fi or data

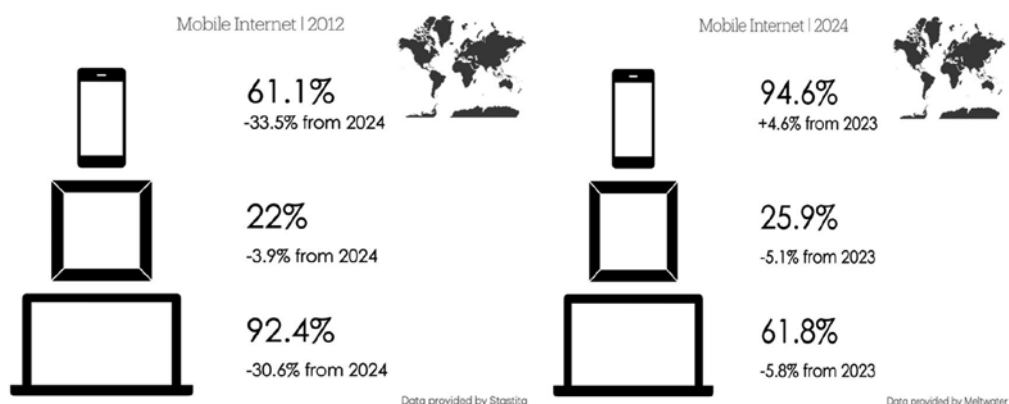


FIGURE 1. Devices Used by Internet Users Worldwide to Access the Internet in 2012 and 2024

plans, both of which can be expensive. Without easy, relatively cheap, and continuous access to the Internet, mobile devices would have failed to evolve into the technological phenomenon that they have become. Similar to the number of mobile devices in worldwide ownership, the numbers relating to mobile Internet access are staggering, as Figure 1 (Statista, 2024; Data Reportal, 2024) demonstrates.

The figure indicates the symbiotic relationship that smartphones and the mobile Internet have. The most significant change between 2012 and 2024 is in mobile Internet access, via smartphone which increased by 33.5%, whilst in the same period desktop access decreased by nearly 31%. Interestingly, access via tablets, such as the iPad or Microsoft Surface, has remained largely similar. The world owns almost as many smartphones as there are people, and almost everyone uses them to access the Internet.

There is another factor with smartphones and the mobile Internet that cannot be ignored – cost. Both the hardware, the mobile device itself and access to the Internet, can be costly. The iPhone 16 released in late 2024 has an entry price of ¥124,800 (€949), although cheaper products such as the Xiaomi Redmi 14C are sold for approximately ¥21,800 (€135). However, cheaper devices' specifications are greatly limited in comparison with higher-end models such as the iPhone. Additionally, unlimited monthly data plans in Japan usually range between ¥7,000 and ¥9,000, with basic and more limited plans costing around 50% less (Light Pocket, 2014). This cost places an added burden on those with lower incomes, which usually includes university students. Most of the mobile phone companies in Japan do offer some form of student discount, yet the problem remains that data packages are expensive. Additionally, free Wi-Fi spots are common across the country, especially in hotels, cafes, universities, public transport, museums, libraries and shopping centres. Yet, due to a vast number of people logging on at the same time, access speed can be slow, with any large downloads unlikely to succeed. Easy, affordable and convenient Internet access is necessary for maximum use of a smartphone.

A problem that currently exists is that Japan lags behind the rest of the world, especially its Asian neighbours, when it comes to free Wi-Fi access. There are an estimated 500 million free Wi-Fi hotspots worldwide in 2024 (VPN Mentor, 2024). Yet in Japan there are only approximately 19,000, which to put into context, is around 2,000 fewer free Wi-Fi hotspots than can be located in Mexico City alone (World Crunch, 2024), which has a population of 8.3 million. Japanese universities usually provide their students, educators,

and visitors with access to free Wi-Fi. The university used in this research is included in those institutions that allow free access to the mobile Internet. Yet, the numbers nationally are a concern. 19,000 is 0.0038% of all free worldwide Wi-Fi spots, yet the country's population is 123 million (114.7 million more than Mexico City), which out of a total global population of 8.1 billion is 2.5%. Put simply, Japan is underperforming in its distribution of free Wi-Fi spots.

Japan is at the forefront of both smartphone ownership and mobile Internet access, but it does trail a long way behind in free Wi-Fi hotspots. The last 12 years have witnessed the continued evolution of the world to a point where both mobile devices and mobile Internet is at saturation point. There is limited growth left in mobile Internet usage and smartphone ownership. Since 2012, the world has become increasingly digitalised, and almost entirely mobile – of device, access and knowledge. Yet, as the rest of this paper will examine, in educational terms at the university level, in Japan there remains a reluctance to fully engage with learning via mobile devices and utilising mobile technology. In this article, a smartphone zone in education in an area in which such phones are being actively used for learning purposes.

METHODS

The research presented in this paper was conducted via two surveys, the first in the autumn of 2012 and the second in the summer of 2024 at Hiroshima University. The questionnaires, their distribution, and the examination of the data were conducted by the author. Although these surveys are only a brief snapshot of the broader topic, they provide a narrative that can be used for future and wider research.

The Positive Points of Surveys

The research utilised surveys as the key component for data collection because, as Newcomer and Triplett (2004), Connelly (2002), and Buschle, Reiter and Bethmann (2022) explain, using surveys for data collection has many benefits for academic endeavour. Six key areas are highlighted as to the benefits of using surveys:

1. Cost-effective
2. Convenient
3. Anonymous
4. Easy to create and deliver
5. Quick response time
6. Effective remote data collection

The above six factors all influenced the author's usage of the survey format as a research tool in 2012 and 2024. However, the way the surveys were completed by the participants did change between the years. The 2012 survey was printed, distributed within a classroom, and completed via handwritten answers. In comparison, the 2024 survey was an online form with the data being input digitally. Both surveys were cost-effective in that there were no additional purchases required by either the creator (author) or the participants (students) to complete the survey. Both surveys were convenient to complete as the mandatory answers required were a combination of multiple choice or answers requiring no more than a few words, although the

distribution of paper surveys, and the explanation of the online version, did require a modicum of explanation time. The former also required distribution and then physical collection of the survey forms. Both surveys were conducted anonymously with the hope that this would create an environment to allow for more honest responses. Finally, the remaining key elements can be distilled into one overall analysis. The 2024 survey, conducted online, was much easier and quicker to create, administrate, collect, and analyse as the data could be processed digitally. In comparison, the 2012 survey had to be read individually and repeatedly in order to garner the necessary information. This resulted in a much more time-consuming approach that also was more likely to involve human error.

The Negative Points of Surveys

Surveys were selected as the best data collection method because of the convenience of distribution and analysis. Yet, as Rao (1975), Marsh (1979), and Buzzard (2019) explain, there are five main areas of concern relating to survey use:

1. Bias: Response / Sampling / Acquiescence / Social desirability
2. Questioning: Vague or Open-ended
3. Lack of required respondents
4. Survey fatigue
5. Technical issues

In relation to the first point, the surveys were designed to avoid such bias as much as possible by not using leading questions. Yet, it must be accepted, that even unwittingly or subconsciously, such bias can emerge either through the questions or from the responses. Even though both surveys were conducted anonymously, there might always be the fear or desire of a respondent to reply in a certain way because they feel it is what is expected from them. The second concern was mitigated by the survey being simplified as much as possible in both questioning and response. Short answers may also help with the third point – the lack of respondents. Although short answers may limit detailed data analysis, long questions or the need for long answers may reduce the number of total respondents, especially when a second language is being used.

The fourth area of concern – survey fatigue – did not emerge as an issue during either the 2012 or 2024 surveys. The author inquired as to how many educational surveys the respondents had completed in the previous 6 months. The answer was mostly none, with a few students having completed one other survey. Another potential issue was not truly a factor in 2012 due to the format of the survey but could have been an issue in 2024. Device malfunction, lack of Internet access, or the survey software not working could have derailed and skewed the collected data. Yet, no such problems were reported to the author.

One final potential issue that was not highlighted amongst the five common ones listed above but could be a hindrance is linguistic misunderstandings. The survey was written originally in English, but all the questions had a Japanese translation to aid understanding. The respondents were also encouraged to write answers in Japanese if they felt more comfortable doing so. This approach, it was hoped, would limit potential misunderstanding through mistranslation of the questions.

The 2012 and 2024 Surveys

As highlighted earlier in this section, the major difference between the two surveys was the format of interaction of the respondents. The 2012 survey was a single sheet of A4 paper, printed, distributed and collected by the author over a period of 21 days in the autumn of 2012. It was a laborious process to collate the data, and on occasion the handwriting of some respondents made their answers impossible to decipher. Yet of the 520 surveys handed out, the response rate was 94%. The collation of the response data was time-consuming, as each sheet had to be scrutinised individually and the data tabulated.

The 2024 survey, in comparison to 2012, was much faster to analyse due to the digitisation of the format. The participants in the survey consisted of students enrolled in the author's courses at Hiroshima University using the software platform Google Forms, which allowed for responses to be collated and examined in a much quicker time period. Students were given time both during class and for seven days after to complete the online survey. However, there was some degree of 'training' that was needed to make sure that respondents understood the technology. In keeping with the theme of the research, the form was also designed to be utilised on a mobile device. The responses to the two surveys will be presented in the results and discussion section of this paper, but in advance of that analysis, there were two other key differences that will be highlighted. Firstly, the 2024 survey included non-English translations of some questions and secondly the total number of surveys made and received were less than in 2012. The 2024 survey received 337 completed responses – 81% from a total of 415, which is 13% lower than 2012.

The last aspect that needs to be identified is the make-up of the respondents involved. On both occasions, the Japanese respondents were participants in a compulsory first-year English language course at Hiroshima University. Finally, the ages and English language abilities of the students were broadly similar in both surveys. They were concentrated in the 18–20 range, whilst their language level ranged between B1 to B2 in the CEFR standard, with the occasional student possessing higher English ability. One final key difference between 2012 and 2024 was the latter did not ask for the gender of the respondent. This was to comply with university regulations relating to the privacy of the students. It also seemed an irrelevant detail for the research.

In addition to the main surveys, a small survey on teachers' views was undertaken in 2024. The participants were selected opportunistically and consisted of foreign language teachers at Hiroshima University.

Main Research Questions

The research questions drawn from the survey questionnaire that are addressed in this article fall into two categories:

1. What are students' perceptions of smartphone use in language learning?
2. What are students' and instructors' concerns about smartphone use in language learning?

RESULTS AND DISCUSSION

This section will display the results from the two surveys conducted in 2012 and 2024. The questions, answers, and data shown below are pertinent to the area focused on in this research. However, there were other questions that are not included below because they are not relevant to this paper's theme.

Ownership of Smartphones

TABLE 1. Smartphone Ownership 2012 vs 2024

| Year | Feature Phone Ownership | Smartphone Ownership | Number |
|------|-------------------------|----------------------|--------|
| 2012 | 69% [$n = 338$] | 31% [$n = 152$] | 490 |
| 2024 | 0% [$n = 0$] | 100% [$n = 337$] | 337 |

Overall, the results suggest that smartphones amongst the university student body have replicated trends globally – their ownership and usage have exploded since 2012. In fact, the university student body overperforms in comparison, as there was 100% ownership of smartphones in the 2024 survey. In contrast to 2012, when smartphone ownership was just over 30%, it was a digital world where feature phones held the majority.

Students' Perceptions of Smartphone Use in Language Learning

TABLE 2. Q1: Do You Use Your Smartphone in Class for Studying?

| Year | Yes | No | Number |
|------|-------------------|-------------------|--------|
| 2012 | 53% [$n = 260$] | 47% [$n = 230$] | 490 |
| 2024 | 96% [$n = 324$] | 4% [$n = 313$] | 337 |

The next significant change was highlighted in Question 1, which asked about rules of smartphone usage during class. In 2012, students responded that only one or two instructors allowed them to be used. However, in 2024 the answers indicated that smartphone use was now the norm. Clearly, as with any device, monitoring and rules need to be in place to create parameters that allow for the smartphone to be a useful tool rather than a frustrating distraction. Yet, the data show that smartphone usage in the classroom is now tolerated and even encouraged in a manner that it was not 12 years earlier.

Question 1 also shows the evolution of smartphones as a language learning tool. In 2012, only 53% of students answered that they used their mobile devices as part of their university learning process. In contrast, by 2024 this percentage had reached near universal proportions. Only 4% of respondents, or 13 students, answered that they chose not to do so. This figure suggests that there may have been some misunderstanding on the part of the respondents, as the course conducted by the author had several activities that could only be conducted via a smartphone device. Perhaps, they were answering that they did not use their smartphones in all their courses – but this is speculative.

TABLE 3. Q2: What do You Use Your Smartphone for in Class When Studying?

| Year 2012 | | Number 490 |
|-------------------|-----|----------------|
| Internet | 99% | <i>n</i> = 485 |
| Dictionary | 95% | <i>n</i> = 466 |
| Audio / Listening | 49% | <i>n</i> = 240 |
| Note taking | 13% | <i>n</i> = 64 |
| eTextbooks | 2% | <i>n</i> = 10 |

| Year 2024 | | Number 337 |
|-------------------|------|----------------|
| Internet | 100% | <i>n</i> = 337 |
| Note Taking | 84% | <i>n</i> = 249 |
| Dictionary | 74% | <i>n</i> = 283 |
| Audio / Listening | 68% | <i>n</i> = 229 |
| eTextbooks | 25% | <i>n</i> = 84 |

Question 2 was a direct continuation from the issues raised in Question 1 by inquiring as to the different purposes for smartphone use within the classroom. Perhaps the biggest surprise was the drop in smartphone usage as a conduit for using dictionaries, although as software platforms such as DeepL and Google Translate are easily accessible on the Internet via Internet browsers, this possibly provides some explanation. The other findings can be seen as a natural response to the increase in the use of mobile devices – particularly the use of digitised textbooks and note taking apps.

TABLE 4. Q3: What do You Use Your Smartphone for Outside of the Classroom?

| Year 2012 | | Number 490 |
|-----------------------|-----|----------------|
| Texting | 45% | <i>n</i> = 219 |
| Internet | 44% | <i>n</i> = 217 |
| Calls | 39% | <i>n</i> = 193 |
| Games | 34% | <i>n</i> = 168 |
| Homework | 30% | <i>n</i> = 148 |
| Listening to Podcasts | 29% | <i>n</i> = 146 |
| Music | 28% | <i>n</i> = 144 |
| Social Media | 15% | <i>n</i> = 76 |

| Year 2024 | | Number 337 |
|-----------------|------|----------------|
| Zoom | 91% | <i>n</i> = 307 |
| Microsoft Teams | 88% | <i>n</i> = 296 |
| Learning Apps | 60% | <i>n</i> = 204 |
| Podcasts | 54% | <i>n</i> = 183 |
| Videos | 52% | <i>n</i> = 178 |
| Games | 29% | <i>n</i> = 98 |
| TikTok | 25% | <i>n</i> = 83 |
| Twitter | 7% | <i>n</i> = 22 |
| Facebook | 0.6% | <i>n</i> = 2 |

Question 3 asked respondents about their smartphone use in an external non-classroom environment. The biggest contrast between 2012 and 2024 was the inclusion of a new technology that had become widespread during the COVID pandemic years – videoconferencing platforms. Neither Teams nor Zoom existed in 2012 but had by 2024 become an integral part of educational interaction flowing from the pandemic years when instructors and students had to grapple with lockdowns. Additionally, the changing landscape of social media saw the rise of short video distribution apps such as TikTok, whereas surprisingly, respondents also indicated that listening to music on their mobile devices was less popular in 2024 compared to 2012. Upon inquiring as to why, respondents expanded by including ‘listening to music’ as part of the video / social media categories. The author also felt that the high percentage of respondents indicating that ‘learning apps’ were an essential aspect of the external learning environment included dictionary, translating, and A.I. apps in this category.

TABLE 5. Q4: Do You Consider a Smartphone to Be a Convenient Tool for Language Learning? Why?

| Year 2012 | Number 490 |
|----------------------------------|---------------|
| Yes | 62% [n = 304] |
| No | 27% [n = 132] |
| Maybe | 11% [n = 54] |
| Reasons given for answer. | |
| My own device | 80% [n = 392] |
| Portable | 91% [n = 446] |
| Multipurpose | 43% [n = 211] |
| Year 2024 | Number 337 |
| Yes | 73% [n = 358] |
| No | 16% [n = 78] |
| Maybe | 11% [n = 54] |
| Reasons given for answer. | |
| My own device | 94% [n = 460] |
| Portable | 86% [n = 421] |
| Multipurpose | 72% [n = 353] |

Question 4 investigated students’ attitudes towards the use of smartphones in the classroom. An observation needs to be made at this juncture – respondents’ acquiescence may be a factor in these results. The intervening twelve years showed only an 11% increase in respondents’ positivity towards smartphones as a ‘convenient language learning tool.’ The results for this question remained similar in both years; the biggest change was a reflection on the evolution of the device itself – the multipurpose options that smartphones provide. The transformation from mere communication gadgets to portable computers that merely have a communication aspect is reflected in the responses in this section.

Instructors' Policies on Smartphone Use in the Classroom

Question 5 and Question 6 turned the focus away from students and towards instructors – and their attitudes relating to smartphone usage. In 2012 only 17 surveys were completed, and that number rose by just four by 2024.

TABLE 6. Q5: Do You Allow Your Students to Use Mobile Devices / Smartphones in Classroom?

| Year | Yes | No | Number |
|------|-----------------------|---------------------|--------|
| 2012 | 90% [<i>n</i> = 15] | 10% [<i>n</i> = 2] | 17 |
| 2024 | 100% [<i>n</i> = 21] | 0% [<i>n</i> = 0] | 21 |

Question 5 showed an incredibly similar answer, 90% in 2012 to 100% in 2024 who allowed students to utilise their smartphones in the classroom during classes / lectures.

TABLE 7. Q6: What Mobile Phone / Smartphone Usage Do You Allow in the Classroom?

| Year 2012 | | Number 17 | |
|-------------------|-----|------------------|--|
| Internet | 72% | [<i>n</i> = 12] | |
| Dictionary | 63% | [<i>n</i> = 11] | |
| Audio / Listening | 67% | [<i>n</i> = 12] | |
| Note taking | 25% | [<i>n</i> = 4] | |
| eTextbooks | 9% | [<i>n</i> = 1] | |

| Year 2024 | | Number 21 | |
|-------------------|-----|------------------|--|
| Internet | 87% | [<i>n</i> = 18] | |
| Dictionary | 98% | [<i>n</i> = 20] | |
| Audio / Listening | 85% | [<i>n</i> = 18] | |
| Note taking | 62% | [<i>n</i> = 13] | |
| eTextbooks | 41% | [<i>n</i> = 9] | |

Question 6 aimed to delve deeper into the type of usage allowed. The first reaction to the data in this question is an interesting contrast to the findings indicated in Question 4 relating to dictionary use. In 2024, instructors indicated that 20 from 21 instructors allowed dictionary usage, but in contrast, when students answered the same question about instructor allowances, it was 74%. The reason for this is most likely to be because students had instructors who were not included in the instructor survey. The remaining answers in this section generally complied with the student responses from Question 5 – although eTextbook usage was 39% higher in this section. The other important difference between the two survey times was instructors' allowing of audio content – a huge 62% increase from 2012 to 2024. Again, this reflected the evolution of the smartphone, where audio content and software allowed for a much wider scope of use than in 2012.

Students' and Instructors' Concerns about Smartphone Use in Language Learning

The final section of the survey was where respondents were asked to provide feedback relating to any concerns they might have regarding smartphone usage in an educational environment. Concerns raised in

2012 that had largely dissipated by 2024 included technical and pedagogical matters. The biggest concern that crossed the two surveys and continues to be a larger anxiety for continued digitisation of the world is privacy. These concerns were exacerbated by the global pandemic in which educational interaction was moved from the physical to the digital environment. The other major concern that has developed since the 2012 survey is the expansion and ease of use of Artificial Intelligence software. The world is still in the early stages of grappling with the extent of what A.I. can achieve, especially in education. Content created, not by a student, but by a program will become harder to monitor and identify. Smartphones, with their universal presence amongst the student body will become an easy conduit for such A.I. programs – the challenge that awaits educational institutions is how to counter it.

TABLE 8. Q7: What Concerns Do You Have Relating to Mobile Device / Smartphone Usage as a Study Tool?

| Year 2012 | | Number 152 |
|---|--|--|
| <ul style="list-style-type: none"> • Size • Synchronisation • Battery life • Internet access • Operating systems | <ul style="list-style-type: none"> • Monitoring • Study environment • Self-discipline • Motivation • Really a tool? | <ul style="list-style-type: none"> • Fixed study locations • Study time performed in ‘chunks’ • Classroom comforts • Smartphones = not study • Privacy • Distracting |
| Year 2024 | | Number 337 |
| <ul style="list-style-type: none"> • Natural language processing tool driven by A.I. technology • Fashion accessory • Keeping up with the teacher • Expensive • Digital fatigue • Another pandemic • Privacy | | |

CONCLUSION

This paper began by asking to what extent smartphones have affected second language learners at universities. The growth in smartphone ownership, and usage worldwide, has exploded in the twelve years between the two surveys conducted by the author and included in this paper. The university that the author undertook the two surveys at outstripped both national and global figures in relation to smartphone usage and ownership. By 2024, all students who participated in the survey owned a smartphone. Although they were largely aged 18–20, the vast majority of them were already on their second, third, or in some cases, fourth model. Smartphones are an integral aspect of daily life; their transformation from merely gadgets that allowed the user to call, text, or surf the Internet to devices that allow for a vast array of complex activities, provides both advantages and disadvantages for the user. Within the classroom, smartphones provide a useful and relatively inexpensive opportunity for instructors and institutions to exploit. In the majority of cases, students already own smartphones before they begin their university life – thus any cost for purchase is not incurred by the university. Yet, this does place demands on educational institutions to provide the necessary tools for smartphones to be utilised fully, such as free and strong Wi-Fi hotspots and a plentiful number of charging ports. This, naturally, comes at a cost to the institution, but as both are necessary for a

modern university to function, they cannot be regarded as an additional or luxurious expense. Students are now Gen Z, those born between 1997 and 2012, which means they have lived almost their entire lives with smartphones. In 2024, a failure to incorporate mobile technology to reflect this reality would be a failure of any instructor or educational institution's care of purpose.

The two surveys provide a snapshot of how the world and the classroom has changed from 2012 to 2024. The next generation of students – Gen Alpha – will come of university age in a world that is almost entirely digitalised – from streaming of music, films, TV, sports, and books, through learning via hybrid educational formats such as the HyFlex model. These surveys have indicated not just how integral smartphones have become outside of the classroom, but also how they are still under-utilised within a learning environment. Further challenges will emerge if another survey by the author is conducted in 2036, although currently the battle over how A.I. will infiltrate and distort learning seems the most immediate. In 2024 the classroom *is* a smartphone zone, yet it remains one that has yet to fully embrace and integrate mobile devices, technology and knowledge.

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ABSTRACT

Eighteen Years After the iPhone's Introduction: Is the University Second Language Classroom a Smartphone Zone?

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This paper presents an analysis of two surveys, conducted twelve years apart at Hiroshima University in Japan, that aimed to investigate and monitor smartphone usage amongst the study body. The two surveys, the first conducted in 2012 and the second in 2024, indicated that smartphones are now owned by almost the entire student body. However, when it comes to usage of such mobile devices as a key conduit of the (language) learning process, although progress reflects both national and global trends, there remains some hesitation as to fully integrating smartphones. The two surveys do not aim to provide definitive conclusions regarding university smartphone usage, as this would be impossible with a limited sample size. Yet, the results cannot be discounted, as they provide a valuable snapshot as to how smartphones are being used as a language learning tool. The one conclusion that the data do indicate beyond doubt, is that mobile devices such as smartphones are a daily presence that if harnessed, provide a valuable opportunity for educators.

要 旨

日本の大学における語学学習授業でのスマートフォン利用に関する調査

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本稿では、広島大学で12年ぶりに実施された、調査対象者のスマートフォン利用状況を調査・モニターすることを目的とした2つの調査について分析を行う。2012年と2024年に実施された2回の調査では、スマートフォンの所有率がほぼ全学生に達したことが示された。しかし、このようなモバイル機器を（言語）学習プロセスの重要な導線として利用する場合、国内および世界的な傾向を反映して進歩はしているものの、スマートフォンを完全に統合することにはためらいが残る。この2つの調査は、大学のスマートフォン利用について決定的な結論を出すことを目的としていない。しかし、この結果は、スマートフォンが言語学習ツールとしてどのように使われているか、また使われていないかについての貴重なスナップショットを提供するものであり、否定することはできない。このデータが示す疑いようのないひとつの結論は、スマートフォンなどのモバイルデバイスは日常的な存在であり、それを活用すれば、日本の教育者や学習者にとって貴重な機会を提供できるということである。