Broadening Language Learner Perceptions of "Actual, Proper Study" to Be More Inclusive of Smartphones in Irish Secondary Schools: *"For Like Actual Like Proper Study, and Schoolwork, I Wouldn't Use My Phone at All Really"*

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Abstract

New digital and mobile technologies are appearing at an ever-increasing rate, and there are potentially valuable educational applications of many of these smartphone-mediated resources. In Ireland, although the Department of Education and Skills (DES) has long advocated for a role for technology into the classroom, an educational focus on integrating these new mobile resources into the daily practices of language learners remains the exception rather than the norm. This paper aims to describe the findings of a study conducted with third-level learners of modern languages at an Irish university, which involved surveys, case studies, and a group interview, and which revealed the limited and tangential role that smartphones play in the learning habits of the participants. The paper will also describe how interpretation of the data identified a clear perception among learners of a narrow range of resources and practices that constitute 'actual, proper study', a perception in which there is little space for the kind of spontaneous, multimodal, autonomous learning afforded by smartphones, with learners instead displaying a clear preference for more traditional practices such as writing out lists of verbs, and traditional materials such as grammar books. This paper will argue that firstly, the teaching practices and the lack of focus on smartphones that exist at secondary school levels play a key role in learners' developing these attitudes and perceptions towards language learning, and secondly, that there is a clear need to foster a broader perception of what constitutes language learning that encompasses a balanced approach to smartphone-enhanced language learning. This is important not only to help the students as language learners, but also to develop the digital literacy skills which are increasingly important across all aspects of Irish and global society. The paper concludes by providing a series of steps which teachers can take which will help both to broaden perceptions of what constitutes language learning, and to allow for supervised, structured use of smartphones in the classroom to allow learners develop their learning-related smartphone literacy and wider digital literacy.

Keywords: mobile learning, informal learning, digital literacy

Introduction and Context

Smartphones, for many of us, have indeed become an extension of ourselves— something like a digital appendage. It is that level of interconnection that has made the smartphone such a potential game-changer in education. (Godwin-Jones, 2017, p. 4)

As noted by Burston (2014), if Mobile-Assisted Language Learning (MALL) material designers can avoid merely replicating the mundane behaviourist gap-fill activities that are

reminiscent of early Computer-Assisted Language Learning (CALL), and fully embrace the unique affordances of smartphones as language-learning devices, smartphones can have a valuable role to play in language learning. These affordances include greater flexibility in learning (Grant, 2019), more opportunity for short periods of spontaneous learning (Pegrum, 2014), and the ability to use smartphones in tandem with other devices and resources "to create learning experiences across time and space" (Lai and Zheng, 2018, p. 299). In contrast to laptops and tablet computers, which are the devices of choice in the classroom (Sung et al., 2016), smartphones can have a central role in developing learner agency outside the classroom to regularly access relevant information and construct personalised learning experiences for themselves (Godwin-Jones, 2020).

However, despite the learning affordances of smartphones, and notwithstanding the aforementioned optimism of Robert Godwin-Jones, it remains the case that, while smartphones and social media have become normalised in the everyday lives of our learners outside the classroom, learning via these platforms "has not become normalized or fully integrated into formal language teaching as predicted" (Reinhardt, 2020, p. 235). This paper will firstly briefly outline the history and context of technology and smartphones in Irish education, with a particular focus on the use of smartphones for learning at secondary level, as it is from this formative environment that students arrive at universities. The paper will then describe a study at an Irish university that exemplifies the extent to which the language-learning potential of smartphones remains underexploited, and the devices unintegrated into language classrooms. The paper will finish by offering a series of practical steps designed to make this integration more achievable and palatable for language teachers not just at university but also secondary level, where teaching methods and use of technology, whether innovative or traditional, can shape student learning behaviours (Cosgrove et al., 2014).

History of Technology in Irish Education

Efforts to integrate technology into Irish schools can be traced back as least as far as the 'Schools I.T. 2000' initiative (Department of Education and Science, 2000), the 2001 'Blueprint for the Future of ICT in Irish Education'(National Centre for Technology in Education, 2000) and the 2005 'Broadband for Schools. programme' (Department of Education and Science, 2005). Rollout of high-speed internet began in 2010 and at the time of writing, 100Mbps high speed internet is available at 99.97% of Ireland's 4000 primary and post-primary schools (HEAnet, 2019).

In conjunction with these technological advances have come changes to the curriculum which focus on the roles that the internet and technology can play not only in the classroom but in the lives of young people. Presently, at both primary and secondary level, the emphasis on internet activity is primarily on online safety, and a number of websites and booklets are available with this focus at both primary (HTML Heroes: An Introduction to the Internet, MySelfie and the Wider World) and secondary (Lockers, Be in Ctrl, *#Up2Us*) level, all of which are available for download at Webwise.ie, the DES-funded Irish Internet Safety Awareness Centre (Webwise, n.d.). Overall, there is much greater emphasis at both primary and secondary level on ensuring students are informed as to safe internet and smartphone use, rather than how they can harness the internet and mobile devices as learning resources.

While there is a natural focus on online safety, there have also been changes at DES level aiming to integrate the internet and mobile technologies into teaching and learning practices, and this goal is evident in DES publications. One such example is the Primary School Curriculum (National Council for Curriculum Assessment, 2020, p. i) which "provides children with opportunities to use modern technology to enhance their learning in all subjects", and also states that "the potential of such technology in enriching the child's learning experience is acknowledged in every area of the curriculum" (p. 74). At secondary

level, the current Junior Cycle[1] curriculum contains 24 'Statements of Learning', one of which is that the student "uses technology and digital media tools to learn, communicate, work and think collaboratively and creatively in a responsible and ethical manner" (National Council for Curriculum and Assessment, 2015, p. 12)

Digital Literacy in Irish Education

As well as a focus on the use of technology, there are also curricular changes to address the concepts of critical thinking and digital literacies. The 'Digital Strategy for Schools 2015-2020 Enhancing Teaching Learning and Assessment', launched by the Department of Education and Skills (DES) in October 2015, provided an action plan for integrating ICT into teaching, learning, and assessment practices in schools over five years (Department of Education and Skills, 2015). A more recent DES document, the 'Statement of Strategy 2019-2021', promotes "a learning experience attuned to the current and future needs of learners so that [students] can better navigate a complex world by delivering a step change in the development of critical thinking skills, knowledge, and competences" (Department of Education and Skills, 2019, p. 12). This focus on critical thinking skills in relation to modern technology echoes other documents such as the 'Digital Media Literacy' course for Junior Cycle learners, which aims to develop digital literacy skills and help students learn how to create, collaborate, and communicate effectively and to understand how and when digital technologies can best be used to support these processes, as well as learning how to evaluate and use or discard online content (National Council for Curriculum Assessment, 2016, p. 4)

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[1] The Junior Cycle, three years in duration, is the first stage of the education programme for post-primary education in Ireland, culminating in the Junior Certificate exams, which mark the end of compulsory education in Ireland.

Unbalanced Integration of Technology

At curricular level, there is a clear emphasis on students not only using digital tools as part of their learning activities but also becoming more conscious of the critical and digital literacies which are needed for effective use of these technologies. Nevertheless, there are some issues with this curricular approach. For instance, 'Technology' is used as an umbrella term which can encompass a range of devices and platforms although each of these devices and platforms have different functions. While the word 'technology' appears 12 times throughout the *Statement of Strategy 2019-2021*, the terms 'smartphone' or 'social media' do not appear at all. Yet, as research has shown (Sung et al., 2016), learners perceive different technologies in different ways and as having different roles and values. As the data presented later will show, it is important to recognise that laptops, tablet computers, and smartphones are both used and perceived differently by students, and curricular or classroom approaches to integration of technology must take these differences into account.

Another concern is the uneven focus on technology across Irish schools. As school policy regarding technology, including tablet computers and smartphones, is currently left to individual schools to develop as they see fit, one consequence is that "students' experience of technology at school varies hugely" (Marcus Quinn et al., 2019, p. 767). Even in schools which market themselves as 'tech-driven' or 'iPad schools', there is a lack of research into what these terms really mean and how such technology is actually integrated into teaching and learning practices at these schools (Marcus Quinn et al., 2019).

A final issue regarding ICT in the classroom is that while DES makes reference to 'technology', a majority of research and classroom practice centres on the use of laptops, and the term 'mobile technology' typically describes the use of tablet computers. There has been much less focus on the introduction of smartphones; indeed, a 2018 survey by the Irish Primary Principals' Network reported that in 61% of schools, smartphones are not allowed on

school premises, and in another 38% the devices are accessible for emergency purposes only, leaving only 1% of primary schools in which learning-related use of smartphones is permitted (Irish Primary Principals' Network, 2019). While a small but growing number of secondary schools employ some kind of Bring Your Own Device approach (Marcus-Quinn et al., 2019), smartphone-based classroom activity remains very much the exception rather than the norm.

The lack of focus on smartphones might be explained by research into the cognitive impact of smartphones, which correlates earlier ownership with poorer academic achievement. One study of 8000 second class students reported that those who already owned a smartphone showed significantly lower maths and reading scores compared with non-owners (Shiel et al., 2014). Another longitudinal study tracking the development of children from ages 9 to 13 concluded that "there is a negative association between owning a mobile phone at the age of nine and academic outcomes at thirteen" (Dempsey et al., 2018, p. 10).

Moreover, even students feel they are over-exposed to smartphones. A 2018 survey of 5500 Irish second-level students found that 65% worried that they spent too much time on their smartphone and 41% believe smartphones should be banned from schools (Studyclix, 2018). Brennan and Dempsey (2018) found similar results in their study of Irish third-level students, with a majority of smartphone users reporting being more easily distracted while trying to concentrate in class. In addition, research showed Irish students are concerned about the potential for cyberbullying, with a majority of both primary and secondary school students selecting the 'serious risk' response option (Everri & Park, 2018).

Third-level Research into Smartphone and Language Learning

While the above research might seem to justify ignoring or even banning smartphones from the classroom, such a step does not actually remedy these issues. Rather than being ignored in the classroom, a carefully structured integration of smartphones into classroom

activities may help learners develop the literacy to be more aware and judicious smartphone users in general (Dudeney et al., 2013), and foster a broader perception of learning which views "the classroom as only one mode in a learner's personal learning system" (Godwin-Jones, 2020, p. 8). Such integration already occurs to a limited extent within the university context, with educators exploring and promoting the effective use of smartphones for learning both inside and outside the classroom both in Ireland (Murray et al., 2020) and beyond (Lai & Zheng, 2018; Metruk, 2020). However, research investigating how learners (at any level of education) use their smartphones for independent learning is less common, either inside or outside Ireland, in comparison to studies into smartphones as language-learning devices which focus on short-term formal projects designed and delivered by the teacher (Mullen and Underwood, 2012), even though such rigidly structured, fixed limit, fixed time, teacher-delivered learning has been characterised as merely CALL on a smaller screen (Pegrum, 2014) and their design "seems to defeat the purpose of using mobile technologies at all" (Stockwell, 2008, p. 255).

The lack of literature exploring self-directed use of smartphones by language learners in the Irish context, combined with the lack of explicit focus on smartphones in the Irish second or third-level classroom, means that there is a gap in the research regarding how Irish language-learners perceive and use their smartphones as part of their learning practices. The following section will describe a study which reveals that the current uses of smartphones as language-learning devices by university students are limited and infrequent, and that the participants in question were not effective users of smartphones for learning purposes, thus highlighting the need for such classroom integration at both third and second-level education.

The Research Study

The study was conducted with students of Modern Languages in an Irish university setting. The study aimed to contribute to our understanding of how learners use and perceive their smartphones as language-learning resources by providing insight into the ways in which a cohort of learners used and perceived their smartphones for language-learning purposes. There were 4 research questions:

- If and how do the learners currently use their mobile phones to aid their language learning?

- For what reasons are the learners likely to view a mobile phone as a useful language-learning tool?

- For what reasons are the learners likely to be reluctant to view a mobile phone as a language-learning tool?

- To what extent do the learners view social media as potential language-learning resources?

Methodology

There were three stages to the research methodology. The first stage involved a survey of undergraduate students who were studying at least one modern language as part of their broader studies (See Appendix A for a link to the survey). These students were sent an email inviting them to respond to a survey by administrative staff members within the School of Modern Languages. The survey garnered 84 responses from students who ranged in age from 18-22 and from first year to fourth year.

In the second stage, another cohort of 20 students of Modern Languages were recruited for a 2-week case study, in which they completed reports on their second language-related

encounters on their smartphone. Although the survey had invited respondents to take part in a case study, no respondents had volunteered to do so. Consequently, another email recruiting participants was sent by academic staff members within the School of Modern Languages, and 20 students volunteered to take part. Again, the 20 students included people from all student years, and Table 1 provides a breakdown of the students by gender, year, and subjects studied.

Table 1

Breakdown of Case Study Participants

Code	Gender	Student Year and Subject	Native language	Language(s) studied
P1	F	2nd year: Applied Languages	English	French, Spanish, German
P2	F	1st year: Business with French	English, Irish	French
P3	F	1st year: Business with French	English	French
P4	M	2nd year: applied languages	English, French	French, Spanish, Japanese
P5	F	4th year: Business with German	English	German
P6	F	1st year: Applied languages	English	French, Spanish
P7	F	1st year: European Studies	English	French, Irish
P8	F	2nd year: Applied Languages	English	Spanish, German
P9	F	2nd year: Applied Languages	English	Spanish, German
P10	F	1st year: Business with French	English	French
P11	F	1st year: Arts (with languages)	English	French
P12	F	1st year: Arts (with languages)	English	Irish, French, Spanish
P13	F	4th year: Arts (with languages)	English, Irish	French
P14	F	4th year: Language and culture	Chinese	English, French, Spanish
P15	M	1st year: Arts (with languages)	English	Irish, Spanish
P16	F	4th year: European Studies	English, Tagalog	Spanish, German
P17	F	1st year: Arts (with languages)	English	French
P18	M	1st year: business with French	English	French
P19	F	1st year: Applied Languages	English	French, Spanish
P20	M	1st year: Business with German	English	German

While the survey captured a snapshot of the smartphone uses and perceptions held by a large number of language learners, the case study aimed to complement the survey data by gathering data which offered a deeper, richer description of the actual second-language interactions of language learners over a period of 14 days, and was structured as follows: a master copy of the case study form was created, and then duplicated 20 times, with one copy

for each student. Each student was emailed their individual form every second day, at a time agreed in advance with the researcher, which they would ideally populate seven times across a two-week period. Through this process, the researcher ended up with individual data on each of the 20 participants, all of which could also be combined to generate data on the group as a whole. The case study resulted in 133 completions from a possible 140 (see Appendix B for a link to the case study form).

The final stage of the project was a group interview. All 20 case study participants were invited to the interview, and 7 attended. The interview produced a transcript of 10,897 words which was subjected to thematic analysis before being triangulated with the data from the survey and case study stages. In the context of this study, 'a theme' is something important about the data in the context of research questions and "represents some level of patterned response of meaning within the data set" (Braun and Clarke, 2012, p. 82). The thematic analysis followed the procedure described by Braun and Clarke (2006) as comprising six stages: 1) familiarising yourself with the data; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes; 6) producing the report. This analysis produced the following 11 thematic sets:

- Apps and language learning

- Casual or incidental exposure or learning

- Enjoyability or non-enjoyability of language learning

- Film, video, and language learning

- Formal or real study

- How the case study raised participant awareness

- Music and language learning

- Planned or deliberate study on smartphones

- Production of second languages on smartphones

- Reasons for not producing second languages on smartphones

- Smartphones helping to recognise improvement or progress

The thematic data from the interview was then triangulated with data from both the survey and case study stages to ensure that any findings made or conclusions drawn were grounded in all strands of the data.

Findings

As mentioned above, data identified in any individual strand of the data set was triangulated with the other strands of data, to see whether any particular element was identifiable across all three strands. For instance, while survey data did reveal that a small number of respondents encountered second-language content while playing games on smartphones, this phenomenon was not identified during either the case study or group interview, and thus was not considered a significant data item. Only those phenomena which were clearly present across all three data strands were considered sufficiently robust to emerge as findings. During data analysis, three key findings emerged, which are summarised as follows and afterwards discussed in detail, with reference to their appearance in each of the three data strands:

1. Data from all research strands revealed that the participants held clear perceptions of what constitutes 'actual, proper study' which were limited in scope to traditional materials and practices, and with only infrequent use of smartphones.

2. Data also highlighted that the participants had little experience of, and placed little value on smartphones as language-learning resources, instead perceiving them to be devices for communication, entertainment, and even escaping study.

3. Data from the survey, case study, and interview demonstrated that the participants' positive experiences with smartphones as language-learning resources were limited to dictionary use, occasional use of language-learning apps, and infrequent engagement in 'study-lite' activities, which they perceive as entertainment with a potential learning aspect (such as listening to second-language music).

Finding 1 – "Actual, proper study"

The title of this paper includes a quote from an interview participant who commented that "for like actual like proper study, and schoolwork, I wouldn't use my phone at all really". Participants repeatedly used words like "actual", "proper", "real", "serious" and "formal" to describe a certain concept of study, with a total of 29 references to this concept during the interview. This kind of study was planned, rather than spontaneous, and focused on more traditional elements of study such as vocabulary and grammar, illustrated by participant quotes such as "sitting down" to study grammar and vocabulary, learning off "a sheet of verbs", and "diving into the books". This is exemplified by the following participant describing what language study means to them: "I think it mostly involves grammar and vocab. So like, kind of like sitting down, and if you're learning verbs, and like writing them out, multiple times, if that helps, or reading them out multiple times."

The expression "sit down" or "sitting down" to study was also mentioned repeatedly, and was interpreted to mean that the participants identified these activities as real or proper study activities, and "sitting down" implies taking the activity seriously and arriving at the correct mentality for successful study. One participant commented that while smartphones

were "just for playing around", when she engaged with "proper" learning materials, she "went in with the mentality that […] yeah ok I'm going to do some study now", and such encounters were more likely to be productive as a result. Likewise, another participant noted that for "the formal kind of learning, where you'd be going on to learn, […] you'd always seem to take something away", whereas when second-language content was encountered while idly scrolling through non-dedicated materials such as social media, "I was learning things less often then."

It was also evident from the data that their smartphones have a limited role to play in this form of study in comparison to laptops. Survey data indicated that while the participants spent much more time on their smartphones, it was on their laptops that they did most of their language study, with 67.8% (57/84) of respondents reporting this (compared with 7.1%, (6/84) for smartphones), and the device on which they felt most focused for learning (77.3% (65/84) compared to 3.5% (3/84) for smartphones. This is typified by a participant's quote that "I'd rather to keep like my phone for leisure, and my laptop for actual…work." Overall, the participants held clear and rigid perceptions of what language study is, which involved primarily traditional resources and activities such as those described above, and in which the main device used is overwhelmingly the laptop, with the smartphone being described mainly as "the best way to look up new words."

Finding 2 – The Role of Smartphones as Language-learning Devices

All the participants were smartphone owners, and the data indicated heavy usage patterns, with 75% (63/84) of participants reporting spending at least 3 hours a day on their smartphone, with a further 20.2% (17/84) recording between 1-2 hours daily. Despite this overall usage, smartphones played only a limited and tangential role in the study behaviours

of the participants. Beyond the aforementioned use of the smartphone as a dictionary, there was irregular use of a small range of Language Learning Apps (LLA). 27.3% (23/84) of survey respondents, all of whom are students of modern languages at university, had no LLA on their smartphones, and a further 30.9% (26/84) had only one. In terms of the frequency with which they used these LLA, only 26.1% (22/84) of participants accessed their LLA daily, with 73.8% (62/84) doing so less frequently, including 27.3% (23/84) who had no LLA on their smartphones. Overall, beyond use as a dictionary, use of LLA was neither widespread nor regular among the participants.

The case study investigated the nature and extent of smartphone-mediated encounters with second-language content in more detail. It explored the frequency of their spoken, written, reading, listening, and app-related encounters, asking the participants whether they had had any such encounters in the previous 24 hours, and the data is shown in Table 2.

Table 2

Case Study Section 1: Nature of Encounters with Second-language Content

		Yes I did	No I didn't
Q1	Did you speak in a second language using your smartphone in the past 24 hours?	30.8% (41/133)	69.1% (92/133)
Q2	Did you read in a second language using your smartphone in the past 24 hours?	72.9% (97/133)	27.1% (36/133)
Q3	Did you watch or listen to content in a second language using your smartphone in the past 24 hours?	42.8% (57/133)	57.1% (76/133)
Q4	Did you write/post in a second language using your smartphone in the past 24 hours?	27.8% (37/133)	72.2% (96/133)
Q5	Did you use a language-learning app such as a dictionary app in the past 24 hours?	45.1% (60/133)	54.9% (73/133)

As the data show, only in the case of reading were the participants more likely than not to encounter second-language content. The production of language was much less frequent, with participants speaking a second language on their smartphones only 30.8% of the time (41/133), and producing written second-language content production on the devices only 27.8% of the time (37/133).

The case study also investigated the extent to which these encounters were planned or incidental, and part of study or part of leisure. Data showed that the encounters were primarily linked to their study behaviour (45.1% of the time, 60/133), rather than social or entertainment activities (33.1%, 40/133); by the same margin of 45.1% versus 33.1%, these encounters were more likely to be planned than unplanned.

In total, the 20 case study participants reported 333 instances of second-language encounters or use across the two-week period, through both study-related and non-study-related activities. As Table 3 shows, these study-related instances were more likely to be connected to their university coursework or homework, with comparatively fewer extramural study activities taking place, and use of LLA being particularly limited, with student use of an LLA other than a dictionary representing just 3.9% (13/333) of instances reported.

Table 3

Nature of Study-related Second-Language Encounters

Case Study Q8: In what ways did you encounter your second language while using your smartphone in the past 24 hours? (Please tick all that apply)

While doing homework/coursework for university	19.5% (65/333)
While doing other language study (not related to homework/coursework)	6.9% (23/333)
While using a dictionary	14.7% (49/333)
While using a language-learning app (apart from dictionary)	3.9% (13/333)

As well as study-related second-language encounters, there were also a number of non-study-related encounters, such as entertainment-related and social media-related second-language encounters. Listening to second-language music accounted for 8.1% (27/333) of all instances, watching second-language video content comprised 7.8% (26/333), while second-language web browsing made up 3.9% (13/333). These instances were spread unevenly across the 20 case study participants, with some reporting daily entertainment-related encounters, and others reporting none throughout the case study.

Data for social media-related encounters were similarly unbalanced. Survey data had highlighted that respondents were more likely to encounter second-language content on their smartphones than on other devices, and second-language encounters while engaged in social media activity accounted for 13.8% (46/333) of all instances. However, this exposure to second-language content did not lead to productive engagement with that content. Between all 20 case study participants, public second-language comments on social media represented only 3.6% (12/333) of instances. Instead, there was a slight preference for private rather than public use of second languages, with written communication between friends through social media comprising 6.9% (23/333) of all instances. Interview comments revealed that embarrassment about making mistakes in their target languages, and not having a circle of either native speakers or fellow students of their target languages, were factors behind the low level of second-language production on social media. Overall, participant attitudes to smartphones and social media as potential language-learning resources were exemplified by survey data in which 90.5% (76/84) agreed that *"I use my smartphone to escape study"* and 89.3% (75/84) expressed the same sentiment about social media.

Finding 3 – Study-lite Activities

As outlined in the previous two sections, second-language encounters on smartphones were relatively limited, whether for study, for communication, or for any other purpose, and the encounters that did take place were more likely to be related to the participants' university studies than to extramural study or for social or entertainment purposes. The participants held clear and limited perceptions of what resources and practices 'actual, proper' language study involves, and there was little overlap between those perceptions and the various language-learning affordances of smartphones. However, beyond the concept of 'actual, proper' study, interview data revealed a role for smartphones and social media in a more relaxed blend of study and entertainment.

One participant described how she and her friends use the platform Kahoot!, commenting that "we did that like as a game between friends, we're learning something and it is planned, but there's less pressure to actually buckle down and study." Another participant mentioned listening to French music on her smartphone, which she termed "a positive break from study". Here, listening to music served as a 'study-lite' escape from the tedium of proper study. Such sentiments echo previous research (Demouy et al., 2016, p. 19) which quoted a learner saying that some content can make her "kind of feel [I'm] chilling out, but at the same time [I'm] actually learning as well". There are obvious overlaps here with the concept of Edutainment, although what was evident among participants in this study was a preference for repurposing platforms such as *Youtube* as language-learning resources, rather than using dedicated language-learning platforms. Although this perception of smartphones as a medium for 'study-lite' activities did not receive widespread mention during the study, being less common than the more formal study-related activity described earlier, 'study-lite' activity remains one possible avenue to be explored when integrating smartphones into the learning practices of Irish language students, especially as both the survey and case study data revealed

that the language learners are already frequent and heavy users of their smartphones for the purposes of social media and consumption of online video content.

Discussion

This section discusses the findings in relation to the research questions. The first two questions investigated participants' use of and disposition towards smartphones as language-learning devices:

- If and how do the learners currently use their mobile phones to aid their language learning?
- For what reasons are the learners likely to view a mobile phone as a useful language-learning tool?

The data showed that the participants used their smartphones in a narrow range of ways. Apart from widespread use of the devices as a dictionary to help with their university work, there was limited use of smartphones for other kinds of "actual, proper study", or for use of LLA or other independent study. This limited utilisation of smartphones is perhaps unsurprising given the imbalanced approach to technology highlighted by Marcus-Quinn et al. (2019). There was however, a perception of the devices as having some use for 'study-lite' activities, a less formal and more relaxed form of study using non-traditional materials but which could still have learning benefits, echoing similar findings by Demouy et al. (2016).

The third research question investigated the reasons why learners would be reluctant to view their smartphones as language-learning devices. Similar to Trinder (2017), the data indicated that beyond using smartphones as a dictionary, their perceptions of the device as a tool for communication and entertainment, in conjunction with their perceptions of what

comprises, "actual, proper study", meant that use of smartphones for this kind of study was limited and peripheral, with the device instead being perceived as a way to escape study.

There were similar findings for the fourth research question, which explored the extent to which participants viewed social media as potential language-learning resources. While the participants were aware that social media accounted for a majority of their exposure to second-language content, this exposure did not lead to notable levels of production of their own second-language content on social media. Instead, echoing the findings of Stockwell (2008) whose participants displayed the same 'mentality' towards social media as a private space outside their learning resources, social media was not considered a platform "for serious study" and, similar to smartphones, was valued for its entertainment and socialisation qualities, serving as an escape from their studies.

Based on the findings of the study and an examination of the literature into technology in Irish education, the conclusions drawn are that the Irish education system is not adequately equipping and preparing its students to be effective users of smartphones for learning purposes. Schools are free to make their own decisions on the role of smartphones in the classroom, and for the overwhelming majority, smartphones are either ignored or highlighted as a problematic device. Such a focus, in combination with ignoring the smartphone as a potential tool for learning, fosters a perception of the device among learners which limits the roles smartphones can play in the language-learning practices of their owners. To address this issue, the author suggests some steps which will provide a more balanced approach to the place of smartphones in the curriculum and help to develop learners who are better equipped and informed regarding use of smartphones in general, and as part of their studies.

Integrating Smartphones and Social Media into the Classroom

Bearing in mind that traditional use of technology by teachers in the classroom can result in traditional use of technology by learners also (Cosgrove et al., 2014), this section contains four practical classroom steps which will help learners become more informed and aware users of smartphones and social media. These steps are intended not only for third-level but also secondary-level language learners, where, as mentioned above, use of technology can influence learner behaviours. The steps will also help learners develop a broader, more inclusive perception of learning, and a more important role for smartphones within that perception.

First, it must be acknowledged that a smartphone ownership rate of 100% is inevitable among Irish secondary school students, and that use of the device is something for which they need support and guidance. As it becomes more important for learners to develop skills that help them to effectively navigate through, interact with, and utilise the different facets of the online world, so does "the essential role of the teacher in that process" (Godwin-Jones, 2016, p. 6). While teachers may lack confidence in their own digital literacy to competently assume this role, this author believes it is possible for both teachers and learners to take this journey toward smartphone literacy together, and learn with and from each other along the way. To begin this journey, with appropriate revisions to individual schools' Acceptable Usage Policy regarding smartphones, the following steps are suggested:

1. *Raising awareness:* Encouragement of learners to become more conscious of the amount of time they spend online each day, and what they do during this time, across all devices, but particularly on smartphones. This can be done through installation of apps such as Quality Time (for Android OS) or regular checking of the data provided by Apple OS (Settings > Screen Time > See All Activity). In conjunction with an in-class survey or discussion of their own estimated smartphone usage, the data will help

raise awareness of how well or poorly students can gauge their smartphone usage habits, will help them better understand their existing digital behaviours and preferences, and also understand just how easily time can be spent, and wasted, on their devices.

2. *Dedicated periods of smartphone-mediated learning:* Inclusion of controlled and supervised periods of study for both language learning and other subjects on both smartphones and tablet computers, emphasising the learning value of both. This will both broaden learner perceptions of how learning can take place and what roles devices can play, and also avoid fostering perceptions of the learning value of one device over another, or developing attitudes about what different devices are 'for'. Instead, it will facilitate the development of a more blended perception of technology, in which the smartphone moves towards becoming normalised as a learning device as it is already normalised as part of their daily lives. This may consist of students using a messaging function on their smartphones to practice a target phrase or interaction, or a period of time dedicated to use of a language-learning app such as Duolingo, perhaps followed by a discussion of the merits and limitations of the app.

3. *Smartphones to supplement traditional learning:* As well as longer, deliberate periods of study on smartphones, they could also be used to supplement traditional classroom learning. This may involve using smartphones to briefly check specific facts or the meanings of words in the target language. This will foster learner perceptions of smartphones as having value in different learning situations. Having the smartphone on their desk to be used when necessary while they work on a passage from their textbook, for example, is a simple way to introduce brief instances of smartphone use.

4. *Focus on social media:* Inclusion of learning activities which focus specifically on the role that social media can play as a source of second-language content. One suggestion is creating a class or school page on Facebook, for example, and curating that page to the interest of the class by subscribing to relevant content in the target languages (such as a French football team, a Spanish-language music magazine, a German language-learning social media group). A regular check of these pages in the classroom, and a discussion or evaluation of the new content discovered, can raise learner awareness of the merits of social media as a venue for curating and accessing both authentic second-language content and to see questions posed by fellow language learners.

Conclusion

For much of 2020 and 2021, the education system in Ireland and many parts of the world was forced into remote learning by Covid-19. Increasingly, it seems unlikely that a post-Covid world involves simply "getting back to normal", but that elements of online learning will remain a feature of education and the successful integration of technology into the lives of learners is crucial (Godwin-Jones, 2020). Although the data collected for the study described in this paper pre-dates Covid-19, the insight it provides into how learners use and perceive their different devices offers a timely contribution in this regard.

This study has used the smartphone-related behaviours and attitudes of a cohort of third-level learners in conjunction with existing research into smartphone use among third-level and second-level learners to identify the factors behind the study practices and perceptions determined. Further research which investigates these behaviours and attitudes among secondary students themselves would be most welcome, as would research exploring the ways second-level language teachers use and perceive smartphones as teaching resources.

As mentioned in the introduction, smartphones have not yet become the educational game-changer previously envisioned, nor have they been normalised in the study practices of our learners in the way teachers and academics have hoped. Nevertheless, smartphones are here to stay, in the lives, the minds, and the hands of our students, whose existing usage of their devices is far from optimal. There is a need to raise student awareness of how smartphones can be used and misused, and there is a place in that process for integration into the classroom as a language-learning device. While many studies have called for greater integration of smartphones into classroom practices, the lack of practical guidance provided means the concept is still opaque and unapproachable in the minds of many educators. Naturally, this author recognises that the steps laid out above will not, by themselves, lead to normalisation of smartphones as language-learning devices. Nevertheless, he hopes they may help to make the process a little less vague and a little more achievable, and give teachers the confidence to take that first step towards integration of smartphones into the classroom.

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Appendices:

Link to Appendix A: The survey

Link to Appendix B: The case study form