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UNIVERSITY EFL STUDENTS' PERCEPTIONS OF SMARTPHONE-ASSISTED LANGUAGE LEARNING

Abstract. Digital technologies exert a powerful impact on all human activity, including education. It appears that mobile learning occupies an influential role in the realms of contemporary language education due to its ubiquity, availability, and increasing popularity. The smartphone, being at the center of attention due to its increasing popularity and availability, represents a new, exciting, and innovative tool for L2 learning. This study aims to contribute to this area by examining the exploitation of smartphones for the purposes of English language learning and practice. A total of 108 research participants (n = 108) from the Czech Republic and Slovak Republic were involved in the study. Their task was to indicate their level of agreement by completing a Likert-scale questionnaire, which consisted of statements about exploiting smartphones for practicing and improving English. The research results demonstrate that overall, the students displayed high and very high levels of agreement with the majority of statements, but were neutral towards several questionnaire items. Moreover, 33 independent sample t-tests revealed that on the whole, no statistically significant differences between the Czech and Slovak students were identified. It can be concluded that students use smartphones to develop various language systems and skills, though to varying degrees, while it is the skill of speaking that is the least practiced and developed skill. Other findings involve the underuse of language learning apps, or participants expressing neutrality about preferring smartphones to laptops or computers. Finally, it is emphasized that further research in this area is urgently needed since this field still appears to be somewhat underexplored as smartphones, their features, and apps are continuously evolving.

Keywords: EFL learner; smartphone-assisted language learning; English language learning; English skills and systems.

1. INTRODUCTION

Rapid technological and scientific advancements and innovations have had a dramatic impact on all spheres of human activity [1], [2], including education [3], [4], [5], [6], [7]. In this day and age, it is particularly mobile technology that plays a vital part in our everyday lives as smartphones, tablets, and other mobile devices have become increasingly widespread, gaining substantial influence [8]. Thus, MALL (mobile-assisted language learning) is regarded as a fast-growing area that is constantly being developed, taking on increasing importance, also in the realms of language education [9].

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Smartphones appear to be at the top of m-learning, demonstrating the potential to facilitate the process of language learning [10], [11]. In connection with this, [12, p. 61] states that "Today, the smartphone is the latest invention in mobile technology which has gained popularity and attention of academia". [13] illustrated the importance of smartphones in the teaching and learning process by proposing a relatively new acronym, SPALL, which stands for smartphone-assisted language learning.

Nonetheless, there seem to exist numerous questions concerning the implementation of MALL into the teaching and learning process. Issues with MALL frequently involve restricted audio-visual contact, small screen and keyboard, limited message length, data storage, limited battery life, etc. [14], [15]. It is also not clear to what extent this technology ought to be employed both inside and outside foreign language classes so that the teaching and learning process is facilitated. Further, it is also a question of preparedness of both learners and teachers for its effective use along with connectivity, security, and privacy issues, which appear to be underexplored. A special category is formed by the potential of smart devices to distract language learners and the possibility they offer concerning speculative behavior during examinations, for instance [16], [17].

Many questions remain to be explored in this exciting and relatively new area of language teaching and learning, especially when it comes to smartphones. Therefore, this article attempts to provide one step forward in examining the perceptions and attitudes of EFL students towards exploiting smartphones for the purposes of English language learning and practice. The following research questions arise for the present study:

1. What are university EFL students' general perceptions of using smartphones for learning and practicing English?
2. What are university EFL students' perceptions of using smartphones for practicing and improving particular language skills and systems?
3. Is there a statistically significant difference between the Czech and Slovak research participants?

2. THE THEORETICAL BACKGROUNDS

In particular, smartphones seem to have captured extra attention regarding MALL due to a number of reasons. It has computer-like features and functionality [18], which means that language learners are carrying minicomputers in their pockets around the clock. Such fusion of mobility (portability), computer-like capability (e.g., allowing its users to install third-party applications), and ubiquity has turned smartphones into particularly powerful and readily available smart devices on the market [19]. It is also the better connectivity options that make smartphones far more superior to standard cellular phones. The popularity of these smart devices along with the amount of smartphone owners and users has recently increased dramatically [20]. In connection with this, [21] maintains that there are approximately 6.92 billion smartphone users in the world, accounting for 86.29% of the global population (as of 2023), while nearly 60% of the website traffic was generated by mobile devices, as of 2022 [21]. It is predicted that these figures will grow every year [22], and that smartphones will become an indispensable part of language learning. The following pattern is also reflected in the area of education as in this day and age, the smartphone is the latest invention concerning mobile learning that is enjoying popularity in academia [12].

Perceptions and attitudes of EFL learners towards the use of smartphones for the purposes of language learning and practice have been investigated by a plethora of researchers. While within most of the studies, the perceptions appear to be positive, it should be emphasized that there also exist a number of drawbacks that both teachers and learners need to overcome.

[12] aimed to explore Mandarin undergraduate students' perceptions of smartphones and smartphone apps (applications) in terms of their effectiveness, usability, and satisfaction. The research results indicated that respondents' language performance was influenced positively. Further, the learners were engaging and satisfied, demonstrating a willingness to continue using smartphones within their studies. [23] sought to investigate university students' perception of using a mobile app that concentrated on learning new English vocabulary and phrases. On the whole, it was concluded that the participants agreed on the positive aspects of the smartphone app.

The study of Mohamed and Halim [24] aimed at exploring EFL students' and teachers' perceptions and attitudes regarding smartphone-based learning, concentrating also on the potential challenges. Overall, the perceptions of both instructors and learners were positive. However, some drawbacks were identified as well. For instance, students may get distracted while using smartphones in the class, or it may be the case of the high price of smartphones, which may complicate matters. As for the teachers, it was revealed that they are in need for possessing better skills so that they could address other problems related to the use of smartphones in the teaching and learning process, such as learners' distraction, Internet connectivity issues, or shortage of smartphone language learning activities. In a similar way, [25] attempted to evaluate Japanese university students' perceptions of using smartphones in an EFL classroom. It was revealed that the majority of students enjoyed using smartphones in the classroom, and they also expressed positive attitudes to using apps such as Quizlet or Kahoot. Nevertheless, it should be also mentioned that the apps were perceived as somewhat less effective by the students in relation to building other language skills, suggesting the need to combine the smartphone-based language learning with "standard" language learning approach in EFL settings.

It was also [26] who aimed to examine university undergraduates' attitudes towards smartphones in learning. The students perceived smartphones as useful and easy to use, but most of them demonstrated neutral attitudes towards the effects of smartphones on their learning. Metruk's findings [27] as regards smartphones in EFL settings revealed that the research participants, Slovak university EFL learners, demonstrated moderately positive attitudes towards the utilization of smartphones in the process of EFL learning. However, some issues were also identified, namely the inability to adequately plan one's language learning, general underuse of smartphone apps, or difficulties with practicing speaking skills. [28] also attempted to assess Bangladeshi university students' readiness for smartphone use. The findings indicate that their level of readiness was high. However, students faced several challenges, including a "lack of authentic materials, audio-visual aids, an environment for oral practice, large class sizes, and traditional teaching methods" [28, p. 148].

[29] investigated how Thai university students perceive the benefits of smartphones for the purposes of learning English and how they utilize these smart devices to improve their English skills. It was revealed that the respondents perceive smartphones positively. However, the results showed that learners practice some skills and systems to a greater degree (e.g., vocabulary, reading, listening) than others, which is possibly the result of app availability and learners' interest too. In a similar way, the study by [30] revealed that most of the Korean university EFL learners frequently used dictionaries on their smartphones. Furthermore, they spend less than one hour a day practicing English. [31] also aimed at exploring first-year university students' attitudes towards using mobile apps for language learning purposes. Overall, the participants displayed positive attitudes. "Additionally, it was found that most students regularly practice their listening skills with mobile applications, and Facebook is the most favorite online learning source. Guidance from instructors on how to use applications effectively and properly should be provided, following the fact that students positively accept mobile applications as learning tools" [31, p. 371].

On the basis of the literature review, it can be concluded that overall, the perceptions of using smartphones in EFL settings by university EFL learners appear to be rather positive, but there are also a number of issues that require attention by teachers and researchers in order to effectively implement smartphones into the process of teaching and learning English.

3. RESEARCH METHODS

This research concentrated on the perceptions of using smartphones in EFL settings by university EFL learners. The primary research method was a questionnaire After they had been collected, the data were statistically analyzed employing the Microsoft Excel spreadsheet editor. In order to meet the research objectives, the following research questions were formulated:

1. What are university EFL students' general perceptions of using smartphones for learning and practicing English?
2. What are university EFL students' perceptions of using smartphones for practicing and improving particular language skills and systems?
3. Is there a statistically significant difference between the Czech and Slovak research participants?

The research participants were formed by the B.A. and M.A. Czech and Slovak university EFL learners (convenient sampling), whose major was Teacher Training of English Language and Literature. There were a total of 108 students (n=108), 27 males, 79 females, and one respondent preferred not to state their gender. 64 students were from the Slovak university and 44 respondents were from the Czech university. On average, they were 22.2 years old, and they had been studying English for approximately 14 years. Voluntary participation, privacy, and confidentiality were ensured.

Being a popular and commonly used research method [32], [33], the questionnaire was the research instrument chosen for the purposes of data collection. The questionnaire was created by the authors, and after the evaluation of their peers, several statements were revised. Its final version comprised altogether three sections – demographic questions, general statements, and EFL learning statements. The quantitative data were obtained by employing the Likert scale, which refers to a set of statements where participants are required to display their level of agreement on a scale from 1 to 5 [34], where 1 corresponds to a strong disagreement and 5 reflects a strong agreement. The research instrument was distributed through the Google Forms tool.

The level of agreement will be interpreted as displayed in Table 1 [35].

Table 1

Interpretation of level of agreement (Sarigöz, 2016)

Mean score	Score interpretation	Level of agreement
1.00 – 1.80	Strongly disagree	Very low
1.81 – 2.60	Disagree	Low
2.61 – 3.40	Undecided	Neutral
3.41 – 4.20	Agree	High
4.21 – 5.00	Strongly agree	Very high

4. THE RESULTS AND DISCUSSION

The first research question was concerned with the general perceptions of using smartphones for learning and practicing English. Participants' responses are displayed in Table 2, ranked in descending order according to the calculated score.

Table 2

General perceptions of smartphones

No.	Statement	Mean score
1	My smartphone enables me to learn/practice my English whenever and wherever I want.	4,62
2	Learning/practicing English through my smartphone is convenient and flexible.	4,39
3	Smartphones create plenty of favorable opportunities for learning/practicing my English.	4,21
4	The advent of smartphones has greatly contributed to facilitating my language learning process.	4,16
5	Learning/practicing English through my smartphone represents an attractive and inspiring way of learning a foreign language.	4,12
6	Learning/practicing English through my smartphone represents an effective way of learning a language.	4,07
7	In the future, smartphones will surely form an inseparable part of foreign language learning.	3,99
8	Using my smartphone for English language learning/practicing makes me a more autonomous learner.	3,80
9	Foreign language learners should be allowed to use smartphones during their English lessons for the purposes of learning/practicing English.	3,79
10	My teachers should employ smartphones at our English lessons/seminars to a greater degree.	3,31
11	Using my smartphone for English language learning/practicing increases my creativity.	3,27
12	Using my smartphone for English language learning/practicing increases my confidence.	3,18
13	I prefer using my smartphone for learning/practicing English in comparison to traditional ways of learning/practicing English (using pen/pencil, paper/notepad, workbook, etc.).	3,02
14	I prefer using my smartphone to using a computer or a laptop when it comes to learning/practicing my English.	2,90
15	My language learning success (also) depends on my smartphone.	2,79
16	I cannot imagine learning/practicing English without my smartphone anymore.	2,72

A very high level of agreement can be attributed to the first three statements as the participants strongly agree that their smartphones, which provide them with favorable opportunities for EFL learning, allow them to conveniently and flexibly practice English whenever and wherever they want.

A high level of agreement can be identified within statements 4 – 9. The students agree that the advent of smartphones, which represent an attractive, inspiring, and effective way of learning L2, has led to facilitating their language learning process, making them more autonomous learners. Further, they agree that language learners ought to be able to use

smartphones for language learning purposes at their English lessons and that in the future, these smart devices will undoubtedly form an inseparable part of their language learning. These findings are in line with other studies such as [12] or [24] which support the notion of positive perception of smartphones in the context of EFL learning.

Statements 10 – 16 fall into the neutral level of agreement. The participants are undecided about whether teachers should employ smartphones to a higher extent at EFL lessons. They do not seem to be sure whether using smartphones for EFL learning purposes increases their creativity and confidence. Similarly, they do not know if their language learning (also) depends on their smartphone and if they can imagine learning English without their smartphones anymore. Finally, they seem to be undecided whether they prefer using their smartphones for EFL learning and practice in comparison to traditional ways as well as when compared to using computers or laptops. The statements with a neutral level of agreement indicate that although EFL students display positive attitudes towards the use of smartphones in EFL settings, they might be adopting a somewhat cautious approach as they are undecided whether EFL instructors ought to use smartphones to a higher extent in their classes, or if their language learning indeed is also dependent on their smartphones. This notion is also supported by the fact that learners employ to a high degree other devices than smartphones (e.g., computers or laptops), or prefer a more traditional approach by using pens, pencils, notepads, paper, and the like. It appears that they might be uncertain about the effects smartphones have on their learning, which is in line with [26].

The second research question was concerned with the EFL students' perceptions of using smartphones for practicing and improving particular language skills and systems. Participants' responses are displayed in Table 3, ranked in descending order according to the calculated score.

Table 3

Perceptions of using smartphones for practicing skills and systems

No.	Statement	Mean score
1	I use my smartphone in order to find out/check the meaning of unknown words.	4,66
2	I use my smartphone for watching English videos (movies, TV shows, sitcoms, etc.) in order to practice/improve my English skills.	4,44
3	I use my smartphone in order to find out/check the appropriate pronunciation of words.	4,43
4	Using my smartphone, I can easily and effectively share and exchange the course-related material with my peers.	4,38
5	I use my smartphone for practicing and improving my English vocabulary.	4,30
6	I use my smartphone in order to find out/check the appropriate grammatical structures.	4,29
7	I use my smartphone for practicing and improving my English reading skills.	4,19
8	I use my smartphone for chatting and/or making video-calls (consulting) with my peers regarding my English assignments.	4,06
9	I use my smartphone for practicing and improving my English listening skills.	3,96
10	I use my smartphone for learning/practicing English.	3,87
11	My smartphone helps me do my language-learning home assignments.	3,85

12	I use my smartphone for practicing and improving my English grammar.	3,83
13	I use my smartphone for practicing and improving my English writing skills.	3,73
14	I use a dictionary app/apps that is/are installed on my smartphone on a regular basis.	3,70
15	I use my smartphone for practicing and improving my English pronunciation.	3,60
16	I use my smartphone for practicing and improving my English speaking skills.	3,05
17	I use English language learning app(s) (other than dictionary apps) that are installed on my smartphone for learning/practicing English on a regular basis.	2,94

A very high level of agreement can be assigned to statements 1 – 6. The research participants strongly agree that they use their smartphones to find out/check the meaning of unknown words, grammatical structures, and pronunciation. Furthermore, they watch movies and videos in order to improve their English. Finally, they strongly believe that by using their smartphone, they can effectively and easily share learning materials with their peers.

A high level of agreement can be attributed to statements 7 – 15. Overall, they agree that they use their smartphones for learning/practicing English, namely reading, listening, grammar, writing, and pronunciation, respectively. They also use their smart devices for chatting or making video calls with peers about their home assignments, considering smartphones to be helpful in this context. Finally, they use a dictionary app which is installed on their device on a regular basis.

A neutral level of agreement was recognized within the last two statements. First, the participants are undecided about using smartphones to practice and improve speaking skills. In a similar way, they are neutral about using other than dictionary apps for learning English on a regular basis.

It seems that smartphones are generally employed and used by EFL students for developing particular systems and skills but to varying degrees, which is in line with studies conducted by Hsu [36], [27], or [29]. While the participants agree that they use their smartphones for vocabulary, reading, listening, grammar, writing, or pronunciation, they adopt neutral attitudes towards using smartphones for practicing and improving speaking skills. However, one must understand that it is also this primary skill, which can be practiced and developed by means of smartphones. “EFL learners need to understand that speaking can be practiced by means of smartphones in a number of ways, for example by using various chat protocols and video calls with their friends and classmates or by recording oneself, which is then followed by the speech analysis conducted by learners themselves or by their peers” [27, p. 546]. [37, p. 74] add that “Pedagogically, the study recommends innovating, implementing, and integrating smartphone applications in teaching oral skills, along with drilling teachers and learners on how to effectively utilize them”.

Interestingly, participants were also neutral about using other apps (other than dictionary apps) for practicing and learning English. This is in contradiction to a number of studies (e.g., [38], [39], [40] which suggest that language learners demonstrated positive attitudes towards language learning apps and that they can be regarded as popular, effective, and inspiring.

4.1. Differences between the Czech and Slovak students

The third research question was focused on whether there exists a statistically significant difference between the Czech and Slovak responses. Figure 1 below shows the mean scores for Czech students, Slovak students, and the overall mean.

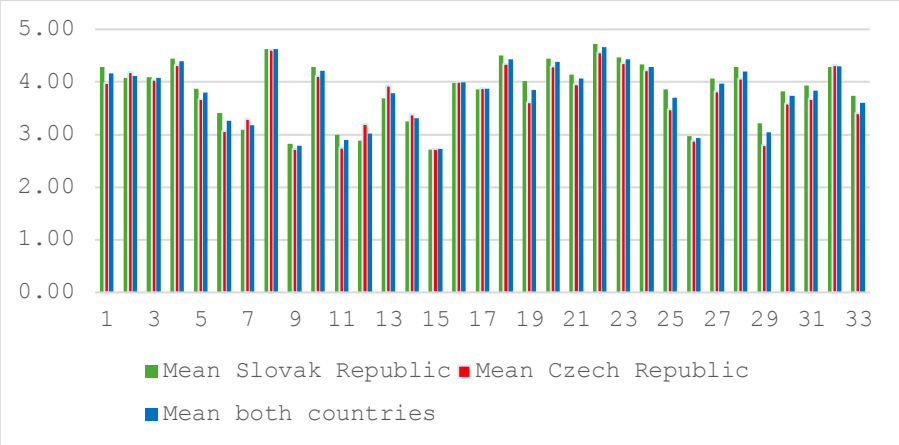

Figure 1 Comparison of respondents' responses

For calculating the potential difference, 33 independent sample t-tests were carried out between the two groups of students. It was revealed that the statistically significant differences were discovered only in two cases, within the statement "The advent of smartphones has greatly contributed to facilitating my language learning process" and "My smartphone helps me do my language-learning home assignments". In both instances, the Slovak students achieved a statistically different (higher) score. With the remaining 31 statements, no statistically significant differences were identified; therefore, it can be concluded that overall, students from both universities perceive the use of smartphones for the purposes of language learning and practice in the same way.

5. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Modern digital technologies demonstrate considerable potential as regards foreign language learning, and it appears that it is the smartphone that is at the center of attention when it comes to mobile learning, gaining increasing popularity and the attention of academia. This paper attempted to explore university EFL students' perception of EFL learners towards exploiting smartphones for the purposes of English language learning and practice.

On the whole, the research participants, who were Czech and Slovak university EFL learners display positive attitudes towards smartphone-assisted language learning. However, it should be emphasized that while some statements received a high or a very high level of agreement, there were also items about which the students displayed neutrality in their responses. They do not seem to be sure whether smartphones enhance their creativity and confidence, and they might still be using more traditional ways of learning and practicing English, such as using pens, pencils, paper, etc. Furthermore, they also tend to use laptops or computers to some extent in comparison to smartphones.

Regarding the practice and development of language systems (grammar, lexis, pronunciation) and skills (listening, reading, writing, speaking), it can be concluded that all of them are practiced through smartphones, albeit to varying degrees. The skill which warrants the most attention is the skill of speaking as the research participants displayed a neutral level of

agreement regarding the use of smartphones for practicing and developing speaking skills. Apparently, developing speaking requires more attention from researchers and academics, as speaking skills and subskills can be improved via smartphones.

It is also language learning apps that research participants were asked about. While a high level of agreement was expressed as regards the regular use of a dictionary app, neutrality was observed in the use of apps other than dictionaries, which can be regarded as an interesting finding. [12] claim that smartphone apps demonstrate potential in the realms of language learning, but learners are in urgent need for guidance from their instructors, which could possibly ensure the productiveness and effectivity of apps. Undoubtedly, this too can be considered to be an area that deserves further exploration as language learning apps are constantly being developed.

To discover the potential differences between the Czech and Slovak students, 33 independent sample t-tests were performed. However, it was revealed that overall, there is no statistically significant difference between the perception of Czech and Slovak students since differences were only observed within two statements.

As is with every research, this one too has some limitations. The number of research participants could be increased in future studies, involving also learners from other countries. Moreover, employing further research methods, such as observation or (focus-group) interview, will possibly prove useful and increase the reliability of the obtained data. It is also the smartphone challenges and drawbacks that need to be further explored as much remains unclear in this regard.

This study can be considered a pilot study, forming a basis for further exploration in the field of smartphone-assisted language learning. The number of smartphone owners, language learning apps, new opportunities, and challenges for using smartphones in language learning continue to arise.

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СПРИЙНЯТТЯ СТУДЕНТАМИ НАВЧАННЯ ІНОЗЕМНИХ МОВ ЗА ДОПОМОГОЮ СМАРТФОНІВ

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Анотація. Цифрові технології мають потужний вплив на всі сфери людської діяльності, включно з освітою. Мобільне навчання відіграє важливу роль у сфері сучасної мовної освіти завдяки своїй повсюдності, доступності та зростаючій популярності. Смартфон, завдяки своїй зростаючій популярності та доступності, є новим, цікавим та інноваційним інструментом для навчання мови L2. З огляду на це метою представленого дослідження є вивчення результативності навчання англійської мови та практики її використання із залученням смартфонів. У дослідженні взяли участь 108 учасників (n = 108) з Чеської Республіки та Словацької Республіки. Їхнє завдання полягало в тому, щоб вказати ступінь своєї згоди або незгоди, заповнивши анкету за шкалою Лайкерта, яка складалася з тверджень щодо використання смартфонів під час практичних занять з англійської мови та підвищення рівня володіння нею. Результати дослідження свідчать, що загалом студенти продемонстрували високий і дуже високий рівень згоди з більшістю тверджень, але нейтрально поставились до кількох пунктів опитувальника. Крім того, 33 незалежні вибіркові t-тести показали, що в цілому не було виявлено статистично значущих відмінностей між чеськими та словацькими студентами. Можна зробити висновок, що студенти використовують смартфони для розвитку різних мовних систем і навичок, хоча й різною мірою, водночас навичка говоріння є найменш практикованою і розвиненою. Інші висновки стосуються недостатнього використання додатків для вивчення мови і видів гаджетів (смартфони, комп'ютери, ноутбуки). Крім цього, підкреслюється, що подальші дослідження в цій галузі є нагальною потребою, оскільки ця сфера все ще залишається дещо недослідженою, оскільки смартфони, їхні функції та додатки постійно розвиваються.

Ключові слова: студент, який вивчає англійську мову; навчання мови за допомогою смартфона; навчання англійської мови; навички для вивчення англійської мови; системи мови.

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