Abstract:
The present study investigated Jordanian EFL teachers' use of mobile apps as tools for their professional development, particularly self-directed content knowledge development. One hundred and eighty-six teachers of different cities of Jordan responded to a researcher-designed questionnaire. The data collected from the participants were tabulated and discussed in light of the five research questions. A significant result of this study was that 95.2% of the participants use their mobile apps as a vehicle to improve their English, and that the language areas attracting the participants' attention the most were vocabulary and grammar. Another finding of this research was that the most popular social media, language learning, and news-in-English apps used by the participants for the purpose of professional development were Facebook, BBC Learning English, and BBC News, respectively.

Keywords: mobile apps, EFL teachers, Jordan, professional development

ارتباط تطبيقات الهواتف المحمولة كأدوات للتنمية المهنية لمعلمي اللغة الإنجليزية الأردنيين

الملخص:
بحثت الدراسة الحالية في استخدام معلمي اللغة الإنجليزية الأردنيين لتطبيقات الأجهزة المحمولة كأدوات لتنميتهم مهنيا، وخاصة التنمية الذاتية في مجال تخصصهم (اللغة الإنجليزية)، حيث استجاب مائة وستة وثمانون معلماً من مدن مختلفة في الأردن لاستبانة صممو الباحث، وبعدها جدول الباحث البيانات التي جمعها من المشاركين وناقشها في ضوء أسلألة الدراسة الخمسة. ومن ضمن النتائج البارزة لهذه الدراسة أن 95.2% من المشاركين يستخدمون تطبيقات الأجهزة المحمولة الخاصة بهم كوسيلة لتحسين لغتهم الإنجليزية، وأن المجالات اللغوية التي تجذب انتباه المشاركين أكثر من غيرها هي المفردات والقواعد، ومن النتائج الأخرى لهذا البحث أن أكثر تطبيقات الوسائط الاجتماعية والتعليمية المستخدمة هم Facebook و BBC News و BBC Learning English.

كلمات مفتاحية: تطبيقات الهواتف المحمولة، معلم اللغة الإنجليزية، الأردن، التنمية المهنية.
Introduction:
With the growing ubiquity of smartphones and tablets around the globe, a plurality of tasks can be accomplished while users are sitting in the comfort of their homes. Currently, more and more people are relying on these devices whenever they desire to surf the Internet, play games, buy or sell goods, learn a craft or language, as well as communicate verbally or in writing.

Mobile applications (apps), which run on smartphones and tablet computers, are self-contained programs designed to perform specific functions. Mobile apps fall under a wide range of categories, including business, communication, education, entertainment, lifestyle, family, finance, games, fitness, shopping, medical, and the news. A significant benefit of these apps is that they can be used to facilitate self-directed professional development. Teachers of the English language, especially those who are both smartphone-savvy and willing to maintain their English language at a high level, could get the most out of mobile apps.

Review of Literature
In this section, the topics of e-learning, teacher development, and schooling in Jordan are discussed. This is followed by a review of previous studies on the topic and then determining what gap the present study is bound to fill.

E-learning
Electronic learning (e-learning) is learning with the aid of electronic devices. According to Sekhon and Hartley (2014), e-learning goes back to the 1980s and 1990s. However, e-learning, as a term, was first used in the mid-1990s (Garrison, 2011). As defined by Pachler and Daly (2011), e-learning is utilizing information and communications technology (ICT) to assist learning. For Wallace (2015), e-learning is looked at as learning with the aid of computers, the Internet, intranet, or disks. Similarly, e-learning was defined by Clark and Mayer (2016) as instruction offered via a digital device to support learning. Considering all the above definitions, it could be concluded that any learning facilitated and backed by electronic devices or services might fall under the umbrella of e-learning.

Access to information has become easier and more appealing, thanks to e-learning. The virtual environments through e-learning, according to Holmes and Gardner (2006), can be particularly conducive to accessing, imparting, increasing, and applying new knowledge and information. For Kramer and Schmidt (2001), technology provides different media types that can be networked to hypermedia learning materials and facilitates synchronous and asynchronous communication and, consequently, shortens the physical distance between teachers and learners. Clark and Mayer (2016) listed four benefits that are unique to e-learning: offering practice with automated feedback, real-time communication, learning tailored to learners’ responses, and the use of simulation programs. Gautam and Tiwari (2016) regarded self-paced learning, availability of expert knowledge, and reduction of learning time and cost as substantial benefits of e-learning.

To put it in a nutshell, e-learning might yield several benefits, especially to the learners themselves. Responding to learners’ individual differences and various learning styles and schedules, easily sharing and accessing information, as well as saving time and effort may pave the way for learners to become highly motivated and actively engaged in the learning process.

Learning supported by Personal Digital Assistants (PDAs), and smart mobile phones in particular, is called mobile learning (m-learning), which is a subdivision of e-learning. Even though m-learning is a relatively new field, it has attracted a lot of research attention (Boylan, 2018). Since
many people own a smartphone or tablet, m-learning has become an almost inevitable part of their daily lives.

A distinctive feature of m-learning is mobility. Martin, McGill, and Sudweeks (2013) regarded mobility as a key motivator for m-learning. Masrom and Ismail (2010) explained that with m-learning, learners could learn anytime and anywhere without embarrassment, a capacity which is not present in other forms of e-learning. Mobility in education, according to El-Hussein and Cronje (2010), mobility takes on three dimensions: mobility of technology, mobility of learning, and mobility of learners.

Besides mobility, the Internet connection facility and the ability to offer more personal and private learning environments make m-learning an effective, non-traditional educational tool, which may in the end enhance motivation. Laurillard (2007) emphasized that motivation is a unique feature that m-learning offers. In this regard, Sung, Chang, and Liu (2016) remarked that the majority of research has used mobile devices for a principal reason: to generate motivation and increase learners' active engagement.

Mobile-Assisted Language Learning (MALL) is a subdivision of m-learning. This term was coined by Chinnery in 2006. MALL has emerged as a primary constituent of Computer-Assisted Language Learning (CALL) in a brief period of time (Kim, 2016). The avid interest in MALL is due to both the special keenness to learn a foreign or second language and the increased use of smartphones and tablets. In MALL, contrary to classroom conventional learning, learners do not have to sit on their classroom desks or at a computer to get their language learning materials (Helwa, 2017). Copiousness of mobile applications, many of which are free or inexpensive, has been instrumental, according to Diaz-Vera (2012), in moving language learning to a leading position in m-learning.

Teacher Development

Teacher development falls under a larger field: teacher education. Richards and Schmidt (2010, p. 578) defined teacher education as "the field of study which deals with the preparation and professional development of teachers". Hooker (2008), who regarded both teacher development and teacher education as one field, defined it as the instruction given to teachers in order to stimulate their development in a certain field.

For other researchers, such as López (2004) and Richards and Schmidt (2010), teacher education entails teacher training and teacher development. López (2004) explained that teacher training implies that someone is involved to prepare teachers, while teacher development is a personal or individual process, and both need to be considered as two elements complementing one another. Richards and Schmidt (2010) clarified that teacher training is associated with basic teaching skills and typically targets novice teachers in pre-service education programs, but teacher development addresses the ongoing professional improvement of teachers in in-service education programs.

Teacher development, which is the focal point in the present study, is defined by Head and Taylor (1997) as the change initiated by the teacher's inner resources, emphasizing the teacher's self-awareness and self-reflection. Gaible and Burns (2005) stated that ongoing workshops, observations, and reflections are major forms of teacher development. Hooker (2008) regarded teacher development as the most integral constitute of any project in ICT. Stressing the importance of teacher development, López (2004) pointed out that the development of teachers would result in better learners' development, which is the ultimate goal of teaching.

Teacher development is not just one single model. Gaible and Burns (2005) placed Teacher Professional Development (TPD) models in three categories: standardized TPD, which is used to
widely disseminate skills among teachers, site-based TPD, and self-directed or independent TPD, which offers teachers chances for choice and individualization. Teachers, especially those who are technology literate and strongly motivated, have ample opportunities to become autonomous learners.

The knowledge base in teacher education programs can be comprised of different areas. In this regard, Day (1993) touched upon four categories: content knowledge, or knowledge of the subject matter, pedagogic knowledge addressing teaching strategies and practices, pedagogic content knowledge, or the knowledge of how to present content knowledge in a variety of ways understandable by learners, and support knowledge, which is the knowledge that informs teachers’ approach to teaching and learning, such as linguistics and second language acquisition. Johnson (2009) offered three areas pertinent to the knowledge base: what second language teachers need to know, how they should teach, and how they learn to teach.

Schooling in Jordan

In Jordan, Arabic is spoken as the first language. In Jordanian schools, colleges, and universities, English as a foreign language (EFL) is a compulsory subject. In their language classes, school students learn all English language skills, i.e., listening, reading, speaking, and writing, as well as language components or systems such as grammar, vocabulary, and pronunciation. They receive ten years of basic education, from the first to the tenth grade, and two years of secondary education: the eleventh and twelfth grades. Schooling in Jordan is mainly provided to students by the Ministry of Education. Government and private schools provide schooling to students at basic and secondary levels. In addition to the Jordanian Ministry of education, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) offers basic education free of charge to Palestinian refugee children in Jordan.

Previous Studies

There has been some research on the effect of using mobile apps on EFL learners' language development (e.g., Mindog, 2016; Guaqueta & Castro-Garces, 2018; Tso, 2020). However, teacher development was absent in such research. Other studies (e.g., Atay, 2008; Wichadee, 2011; Mohammadi & Moradi, 2017) investigated EFL teachers' professional development but failed to include the technological element. A third type of research tackled technological devices as tools for teacher development. For example, Aubusson, Schuck, and Burden (2009) investigated mobile learning for teacher professional learning, and Franklin, Sexton, Lu, and Ma (2007) carried out a research paper on PDAs in teacher education. Nevertheless, this type of research neither targeted EFL teachers nor focused on mobile apps.

To the best of the researcher’s knowledge, no study has been published on EFL teachers’ use of mobile apps to develop their English. Thus, the present study has been conducted to fill that gap, and this endeavor adds to its significance and novelty.

Scope of the Study

This study targets in-service Jordanian EFL teachers working in government, private, and UNRWA schools in the academic year 2021-2022. Mobile apps in this study refer to those apps that can be installed on smartphones and tablets. Teacher professional development in the present study is limited to self-directed teacher development in content or subject matter knowledge, i.e., the English language.

Purpose and Questions of the Study

The present study aims at investigating Jordanian EFL teachers’ use of their mobile apps as tools for their professional development. The study specifically has been carried out to answer the following five questions:

Question one: Do Jordanian EFL teachers use mobile apps as tools to improve their English language?
Question two: Which social media apps do Jordanian EFL teachers use the most to improve their English language?

Question three: Which language learning apps do Jordanian EFL teachers use the most to develop their English language?

Question four: Which news-in-English apps do Jordanian EFL teachers use the most to keep their English language up to date?

Question five: Which areas of language do Jordanian EFL teachers focus on in their professional development via mobile apps?

Methodology

Participants

Of 270 Jordanian English language teachers randomly selected to take part in the study, 186 participated in the study by responding to a questionnaire specifying their use of mobile apps as tools to improve their English language. The participants were 123 females (66.1%) and 63 males (33.9%) from the twelve governorates of Jordan: Amman, Irbid, Zarqa, Mafraq, Balqa, Karak, Ma'an, Jerash, Ajlun, Madaba, Tafilah, and Aqaba. Table 1 presents participants' background information.

Table 1
Participants' Background Information

| Categories          | No. of Participants (N=186) | Percentage |
|---------------------|-----------------------------|------------|
| Education           |                             |            |
| Bachelor            | 147                         | 79%        |
| Master              | 35                          | 18.8%      |
| Doctorate           | 4                           | 2.2%       |
| Teaching experience |                             |            |
| 1-5 years           | 31                          | 16.7%      |
| 6-10 years          | 44                          | 23.7%      |
| 11+ years           | 111                         | 59.7%      |
| Working sector      |                             |            |
| Public              | 121                         | 65.1%      |
| Private             | 30                          | 16.1%      |
| UNRWA               | 35                          | 18.8%      |

As shown in Table 1, most of the participants hold their first university degrees. However, over 20% have obtained higher degrees. Also, the majority of the participants have been teaching EFL for more than a decade. Concerning working sector, most of the participants work at public schools, some are employees at the UNRWA, and others are teachers at private schools.

Design and Instruments

This is a descriptive study, which does not involve any experimental manipulation. The researcher collected, tabulated, and analyzed data pertinent to the Jordanian EFL teachers' use of mobile apps to improve their English language.

As for instrumentation, the researcher designed a questionnaire to collect data on whether Jordanian EFL teachers use their mobile apps as tools to improve their English language, what language areas the participants focus on in their professional development via mobile apps, and what apps are commonly used for that developmental purpose.

The questionnaire consisted of two parts. The first one was designed to gather data on the participants' personal information: gender, working sector, teaching experience, and academic degree. The participants' background information has been tabulated in the Participants section. Figure 1 represents the second part of the questionnaire.
As shown in Figure 1, the second part of the questionnaire aimed at eliciting respondents' answers concerning their use of mobile apps to improve their content knowledge, which is the English language. The apps on the questionnaire have been selected carefully by the researcher and a group of EFL teachers. All of the apps on the questionnaire have met two criteria: they are free of charge, and they have been listed among the top apps in their category. These apps have been

**Figure 1**

_The Second Part of the Questionnaire_

Do you use your smartphone/tablet apps to improve your English language skills?
- Yes
- No

Which social media app(s) do you use to improve your English language? You can choose more than one item.
- Facebook
- Instagram
- YouTube
- LinkedIn
- TikTok
- WhatsApp
- Messenger
- Pinterest
- Snapchat
- Twitter
- Other: please specify .........

Do you use language learning apps to develop your English language?
- Yes
- No

Which language learning app(s) do you use to develop your English language? You can choose more than one item.
- BBC Learning English
- Mermise
- Cake
- Improve English (Knudge.me)
- Hello English
- Busuu
- Duolingo
- VOA Learning English
- Other: please specify .........

Do you use news-in-English apps to keep your English up to date?
- Yes
- No

Which news-in-English app(s) do you use to keep your English up to date? You can choose more than one item.
- BBC News
- CNN
- Reuters
- Guardian
- NYTimes
- AJ English (AlJazeera)
- Roya News (in English)
- Other: please specify .........

Which language area(s) do you focus on in your professional development via mobile apps? You can choose more than one item.
- Grammar
- Vocabulary
- Pronunciation
- Writing
- Translation
- Conversation
- Reading
chosen by Karl (2021), Masab (2020), and Parnrod, Sinraks, Nung-alee, Yacharat, Junnuan, Laptawewong, and Yeera (2020). The researcher has actually used all of these apps and found out that they are all worth downloading.

**Results and Discussion**

The present study aimed at investigating Jordanian EFL teachers' use of their mobile apps as tools for professional development. The data were collected via a researcher-designed questionnaire. The data are presented and discussed in question order.

**First Question**

The first question of this study asked whether Jordanian EFL teachers use their mobile apps as tools to improve their content knowledge, i.e., their knowledge of the English language. The answer to this question is summarized in Figure 2.

![Figure 2: Participants Using Mobile Apps for Professional Development](attachment:image)

The data collected from the participants show that 177 of 186 Jordanian EFL teachers use their mobile apps as tools for content or subject matter (English language) development, while only nine of the participants do not. Thus, the vast majority of the participants (95.2%) do use their mobile apps as a vehicle to upgrade their English language, while only 4.8% of the participants reported that they do not. According to Silver, Smith, Johnson, Jiang, Anderson, and Rainie (2019), 85% of people in Jordan use smartphones, and such usage is especially common among educated adults.

**Second Question**

The second question of the present study reads as which social media apps do Jordanian EFL teachers use the most to improve their English language? Social media apps have become integral parts of everyday life. Besides their essential role in making communication easier and faster, they can be used as tools for teaching others and self-teaching. Social media platforms
promote online education. Social media users have chances to spark off debates and discussions, ask and answer questions, leave comments, and get feedback on their posts.

According to the participants’ responses to the questionnaire, as many as 177 of 186 (95.2%) use social media apps to improve their English language. That means that all the participants reporting that they use their mobile apps for improving their English language use social media apps to serve that purpose.

To obtain further information on the social media apps that Jordanian EFL teachers use, the participants were asked to tick whatever app they work with. Table 2 tabulates the results.

### Table 2

**Participants' Use of Social Media Apps to Improve their English**

| No. | Social Media App | Responses N (out of 177) | Percent | Percent of Cases |
|-----|------------------|-------------------------|---------|-----------------|
| 1   | Facebook         | 144                     | 25.8%   | 81.4%           |
| 2   | Instagram        | 40                      | 7.2%    | 22.6%           |
| 3   | YouTube          | 130                     | 23.3%   | 73.4%           |
| 4   | LinkedIn         | 23                      | 4.1%    | 13.0%           |
| 5   | TikTok           | 19                      | 3.4%    | 10.7%           |
| 6   | WhatsApp         | 91                      | 16.3%   | 51.4%           |
| 7   | Messenger        | 41                      | 7.3%    | 23.2%           |
| 8   | Pinterest        | 25                      | 4.5%    | 14.1%           |
| 9   | Snapchat         | 15                      | 2.7%    | 8.5%            |
| 10  | Twitter          | 20                      | 3.6%    | 11.3%           |
| 11  | Other            | 10                      | 1.8%    | 5.6%            |
|     | **Total**        | **558**                 | **100.0%** | **315.3%**     |

As shown in Table 2, the most common social media app used by the participants to improve their English language is Facebook. This is followed by YouTube and then WhatsApp. The results of the current study are similar to Silvers et al. (2019), who reported that the most common social media apps in Jordan were WhatsApp (78%) and then Facebook (71%), although the present study targeted teachers only and limited the usage of social media to the users’ professional development.

Unlike the three apps: Facebook, YouTube, and WhatsApp, the other social media apps on the list, namely (Facebook) Messenger, Instagram, Pinterest, LinkedIn, Twitter, TikTok, and Snapchat, do not enjoy that popularity as a source of professional development for Jordanian EFL teachers, and the number of their users ranged from 15 to 41 only. Finally, it is noteworthy that all of the ten participants who ticked the option Other reported that they use Telegram as a tool for their professional development.

**Third Question**

The third question in this study reads as which language learning apps do Jordanian EFL teachers use the most to develop their English language? Educational apps are getting ubiquitous as they provide an interactive learning environment, offer a plethora of online learning sources, promote entertainment, and are available around the clock. Educational apps are not just for students, they
can also be of great benefit to teachers and educators. Figure 3 demonstrates the percentage of the participants using language learning apps to develop their English language.

![Figure 3](image_url)

**Figure 3**

*Participants Using Language Learning Apps for Professional Development*

Based on the 186 participants' replies to the questionnaire, as many as 152 (81.7%) use language learning apps to improve their English language. Table 3 demonstrates the language learning apps that the participants usually use.

**Table 3**

*Participants' Use of Language Learning Apps to Develop their English Language*

| No. | Language Learning App                  | Responses | Percent | Percent of cases |
|-----|---------------------------------------|-----------|---------|------------------|
|     |                                       | N (out of 152) |         |                  |
| 1   | BBC Learning English                  | 120       | 54.8%   | 78.9%            |
| 2   | Mermise                               | 5         | 2.3%    | 3.3%             |
| 3   | Cake                                  | 10        | 4.6%    | 6.6%             |
| 4   | Improve English (Knudge.me)           | 17        | 7.8%    | 11.2%            |
| 5   | Hello English                         | 22        | 10.0%   | 14.5%            |
| 6   | Busuu                                 | 1         | 0.5%    | 0.7%             |
| 7   | Duolingo                              | 32        | 14.6%   | 21.1%            |
| 8   | VOA Learning English                  | 11        | 5.0%    | 7.2%             |
| 9   | Other                                 | 1         | 0.5%    | 0.7%             |
| **Total** |                                     | **219**   | 100.0%  | 144.1%           |

As evident from Table 3, the lion's share goes to the BBC Learning English app, and no other app on the list is as popular. British English being used in Jordanian EFL textbooks, the versatility of the programs in the app, and the popularity of the BBC TV and radio channels are possible reasons why Jordanian EFL teachers prefer the BBC Learning English app over other language learning apps.
The other apps, i.e., Mermise, Cake, Improve English, Hello English, Busuu, Duolingo, and VOA Learning English, may be common among students willing to learn, practice, and enhance their English language, but these apps do not hold much appeal for Jordanian EFL teachers, according to the participants’ responses. One participant ticked the option Other and reported that she uses Livemocha: Learn English Free as a language learning app to facilitate self-directed professional development.

Fourth Question

The fourth question of the present study is as follows: Which news-in-English apps do Jordanian EFL teachers use the most in order to keep their English language up to date? Exposing oneself to the news and other authentic materials in a foreign language is particularly beneficial. It enriches one's vocabulary, enhances their reading, listening, and speaking skills, as well as helps them keep abreast of the current local, regional, and world affairs and news. Thanks to mobile apps and the Internet, the news in English is now easily accessible. Such news apps supply users with breaking news, trending stories, personal news feed, live bulletins and shows, in addition to details about politics, sports, health, lifestyle, entertainment, business, technology, and many more. Figure 4 shows the percentage of the participants using news-in-English apps to keep their language up to date.

![Figure 4](image)

*Figure 4*

*Participants Using News-in-English Apps to Keep their English up to Date*

As shown in Figure 4, of the 186 participants, 129 (69.4%) reported that they use news-in-English apps to maintain their English at a high level. Table 4 illustrates the news-in-English apps that the participants use.

**Table 4**

*Participants' Use of News-in-English Apps*

| No. | News-in-English App | Responses | Percent of cases |
|-----|----------------------|-----------|-----------------|
|     |                      | N (out of 129) | Percent |                      |
| 1   | BBC News             | 90        | 34.6% | 69.8%                |
| 2   | CNN                  | 65        | 25.0% | 50.4%                |
As illustrated in Table 4, the BBC News app enjoys more popularity than other news-in-English apps among the participants, followed by CNN, and AJ English respectively. Roya News in English, which belongs to a Jordanian news agency, is the fourth most popular app.

**Fifth Question**

The fifth question in this study reads as which language areas do Jordanian EFL teachers focus on in their professional development via mobile apps? The 177 participants, who reported making use of their mobile apps to improve their English, ticked the areas of language in which they are particularly interested. The results are presented in Table 5.

**Table 5**

*Participants' Areas of Focus*

| No. | Language area     | Responses | Percent | Percent of Cases |
|-----|-------------------|-----------|---------|-----------------|
|     |                   | N (out of 177) |         |                 |
| 1   | Grammar           | 116       | 17.9%   | 65.5%           |
| 2   | Vocabulary        | 116       | 17.9%   | 65.5%           |
| 3   | Pronunciation     | 106       | 16.4%   | 59.9%           |
| 4   | Writing           | 69        | 10.6%   | 39.0%           |
| 5   | Translation       | 87        | 13.4%   | 49.2%           |
| 6   | Conversation      | 89        | 13.7%   | 50.3%           |
| 7   | Reading           | 65        | 10.0%   | 36.7%           |
|     | Total             | 648       | 100.0%  | 366.1%          |

As shown in Table 5, grammar and vocabulary, followed by pronunciation, are the focus of interest for the participants. Conversation, which entails listening and speaking, and then translation are the fourth and fifth areas of interest respectively. The areas receiving the least attention from the participants are writing and reading.

Learning vocabulary is fundamental as it is certainly needed to produce and understand written and spoken texts. Vocabulary items are the building blocks in language, and they are key to comprehension (Cain, 2010). Grammar, which is the structure of a language, performs an instrumental role in sticking such blocks together to make grammatical sentences and paragraphs. Pronunciation is vital to proper verbal communication. Failure to correctly utter a word or sentence is likely to lead to the message being distorted or misunderstood. Thus, for those willing to achieve adequate proficiency in the four language skills, close attention needs to be devoted to principal components of language, vocabulary, grammar, and pronunciation. This might explain the participants' first three areas of focus in the present study.
Conclusion

The present study added pieces of research into the use of mobile apps as tools for professional development. It targeted Jordanian EFL teachers throughout the country. One hundred and eighty-six participants filled out a researcher-created questionnaire on their use of mobile apps for professional development, particularly self-directed content knowledge development.

The study concluded that the vast majority of the participants (95.2%) use their mobile apps to keep their English language at a high level. The language areas attracting the participants' attention the most were vocabulary and grammar, followed by a third language component: pronunciation.

Three app categories were highlighted in the study: social media apps, language learning apps, and news apps. The result of this study accentuated the social media apps as tools for professional development. All of the participants using their mobile apps to improve their English (95.2%) reported that they use social media apps for the same purpose. Also, 81.7% of the participants use language learning apps to develop their English language, and 69.4% use news-in-English apps to keep their English language up to date.

Concerning the use of social media apps to improve the participants' English, both Facebook and YouTube apps stand out as being the most popular. As far as language learning apps are concerned, the BBC Learning English app was reported to be enjoying massive popularity, holding a commanding lead over other language learning apps. As for news-in-English apps, BBC News, CNN, and AJ English occupied the first, second, and third positions respectively.

It is recommended that further studies on the use of mobile apps as tools for teacher professional development should be done, especially those investigating the nature of use of such apps. Also, research tackling other dimensions of teacher professional development, such as pedagogic knowledge, is strongly recommended.

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