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TECHNOLOGY AND LANGUAGE LEARNING: ENGLISH AS A FOREIGN LANGUAGE LEARNERS' USE OF SMARTPHONES FOR ONLINE INFORMAL LEARNING IN INDONESIA

TECNOLOGIA E APRENDIZADO DE IDIOMAS: O USO DE SMARTPHONES PELOS ALUNOS DO INGLÊS COMO LÍNGUA ESTRANGEIRA PARA A APRENDIZAGEM INFORMAL ONLINE NA INDONÉSIA

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ABSTRACT: A considerable number of studies on mobile-assisted language learning have been conducted, but less attention has been paid to online informal learning of English as a Foreign Language (EFL) performed using smartphones among undergraduate EFL learners in Indonesia. Thus, this study was specifically aimed at investigating EFL learners' most frequently-performed EFL learning activities through smartphones, the predominant online language use, and the relationship between EFL learners' predominant online language use and their perceived EFL proficiency. The study adopted a quantitative approach. The findings reveal that the participants still more frequently access content and information from their smartphones for receptive rather than interactive/productive online activities. Indonesian, which is the participants' first language, is still predominantly used for their online activities. The mean score of the perceived EFL proficiency of those who frequently perform online activities in English is statistically and significantly higher than those performing online activities in Indonesian. Overall, the mean score of the perceived EFL proficiency of those performing online activities in English is higher than those in Indonesian, although the difference is not statistically significant. Finally, the study's implications with suggestions for future research are discussed.
KEYWORDS: smartphones; mobile learning; informal learning; online informal learning; technology-based EFL learning.

RESUMO: Um número considerável de estudos sobre o aprendizado de idiomas assistido por celular foi realizado, mas menos atenção foi dada ao aprendizado informal *online* do Inglês como Língua Estrangeira (ILE), realizado usando *smartphones* entre os alunos de graduação em ILE na Indonésia. Assim, este estudo teve como objetivo específico investigar as atividades de aprendizagem de ILE mais frequentemente realizadas pelos alunos de ILE por meio de *smartphones*, o uso predominante de idiomas *online* e a

relação entre o uso predominante de idiomas *online* dos aprendentes de ILE e sua percepção de proficiência em ILE. O estudo adotou uma abordagem quantitativa. As descobertas revelam que os participantes acessam com mais frequência conteúdo e informações de seus *smartphones* para atividades *online* receptivas, em vez de interativas/produtivas. O Indonésio, que é o primeiro idioma dos participantes, ainda é usado predominantemente em suas atividades *online*. A pontuação média da proficiência percebida no ILE daqueles que frequentemente realizam atividades *online* em inglês é estatisticamente e significativamente maior do que aqueles que realizam atividades *online* na Indonésio. No geral, a pontuação média da proficiência percebida no ILE daqueles que realizam atividades *online* em inglês é mais alta do que na indonésia, embora a diferença não seja estatisticamente significativa. Finalmente, são discutidas as implicações do estudo, com sugestões para futuras pesquisas.
PALAVRAS-CHAVE: *smartphones*; aprendizado móvel; aprendizado informal; aprendizado informal *online*; aprendizado por EFL baseado em tecnologia.

1 Introduction

Today, researchers have been increasingly interested in investigating various potentials of technology in the age of the fourth industrial revolution, which is also referred to as Industry 4.0 (HARIHARASUDAN; KOT, 2018). The Industry 4.0 is said to not only have an effect on people, business, and governance, but it also has a huge amount of influence over education (HARIHARASUDAN; KOT, 2018), which then the term Education 4.0 came into existence. This term emphasizes that technology should be aligned with human and education to enable new potential possibilities (HUSSIN, 2018). In other words, technology should be utilized to help students acquire knowledge that changes to the curriculum are highly required in order for students to develop their capacity (PENPRASE, 2018). Therefore, technology is believed to play an important role and give positive impacts on education in general (HARIHARASUDAN; KOT, 2018) and on language learning in particular (SAMIRA, 2011).

There is now much evidence to support great importance of technology on language learning, particularly on English as a Foreign Language (EFL) learning. Çiçek (2005); Ebadi and Goodarzi (2017); Hsu (2016); Jalali and Dousti (2014); Öz (2015) state that EFL learners have a positive attitude to computer-assisted language learning (CALL). Learners are also reported having positive attitudes toward web-based English learning (YAO, 2016) and power-point presentation (MOHSENZADEH; MARZBAN; EBRAHIMI, 2014). Besides CALL and web-based EFL learning technologies, social media and mobile technologies are also reported playing a noticeable role in EFL learning (DASHTESTANI, 2013; ALSHABEB; ALMAQRN, 2018).

University students are reported having a positive perception on mobile-assisted language learning (MALL) (WAN AZLI; SHAH; MOHAMAD, 2018) because mobile devices can effectively be used to disseminate, train, improve, and maintain non-native speakers' linguistic competence (ALI; MIRAZ, 2018). Duman, Orhon and Gedik (2015) found that the use of mobile devices such as PDAs and mobile phones for teaching vocabulary has been a popular topic over the period of 2000-2012. Bozdoğan (2015) also reveals that in the period of 2010-2015 the well-known MALL phenomena have been favorite topics of analyses for several research purposes such as skill-based language learning, learning

factors, integrating social media into learning, design and development of mobile applications. Burston (2013) reported that the well-known MALL topics have also been favorite topics for investigation over the past two decades (1994-2012) related to technical issues, mobile devices ownership, learning theory, pedagogical design, users' attitudes, motivation, institutional infrastructure, and teacher training. He further added that the most frequently published type of MALL studies is related to "project implementation descriptions" (BURSTON, 2013, p. 157).

Learning through mobile devices is not without limitations, but it has more advantages and is much cheaper compared to computers. Almost all students own them and they can access their mobile device from anywhere and at any time (ELAISH; SHUIB; GHANI; YADEGARIDEHKORDI; ALAA, 2017). As reported, 40 per cent of young people and adults use their smartphones for more than four hours each day for making calls and sending messages (TORRECILLAS, 2007 as cited in CHA; SEO, 2018). Worldwide, these mobile devices were used by around 1.85 billion people in 2014, which is expected to be 2.32 billion in 2017 and 2.87 billion in 2020 (STATISTA, 2017 as cited in CHA; SEO, 2018). It is reported that by 2016 100 per cent of Indonesian university students from high socio-economic status have a smartphone, 94.12 per cent of those coming from middle to low socio-economic status are also reported having the mobile device (PRATAMA, 2017), and 55.49 per cent of them use their time for more than five hours doing something on their mobile devices every day (PRATAMA, 2018).

Studies about language teaching and learning suggest three main groups of learning including learning which takes place in a formal context (formal learning), learning which takes place in a non-academic context (non-formal learning), and learning which takes place naturally outside of any institutional settings using resources which are not specifically aimed at educational purposes (informal learning). The process of informal learning occurs unconsciously and, in the context of English online informal learning, it involves the Internet-based resources for English learning (SOCKETT, 2014) through smartphones. The phrase "informal learning" is a term used to "describe the way in which exposure to English outside the classroom may lead to acquisition of the language" (SOCKETT, 2014, p. 8) and young people love spending more hours to learn English online than in formal, institutional settings (TOFFOLI; SOCKETT, 2015 as cited in TRINDER, 2017). Moving from understanding of what language learners do in their spare time to understanding how their acquisition is influenced by the situation refers to what is known as "incidental acquisition" (SOCKETT, 2014). Ellis also stated that "incidental acquisition" is the most important part among other types of language learning, which includes learning in formal contexts (ELLIS, 1994 as cited in SOCKETT, 2014). Informal learning is learner-controlled taking place beyond the classroom which is not linked to any courses and/or institution. It is not well structured and in most cases non-intentional/incidental (STEVENS, 2009 as cited in TRINDER, 2017).

Thus, it can be said that a considerable number of studies on MALL have been conducted, but less attention has been paid to online informal EFL learning through smartphones as the most popular mobile device today. In other words, there is a lack of evidence to show that EFL learners in the Indonesian context perform online informal learning activities through their smartphones. The only reported study, to our knowledge, investigated learners' predominant language use for their online informal learning activities in EFL context through smartphones (PUTRAWAN; RIADI, 2020). Therefore, this study made an attempt to investigate online informal learning activities performed by Indonesian

EFL learners through their smartphones that focused on their frequently-performed online activities, their predominant online language use, and the comparison of perceived EFL proficiency of those who frequently perform online activities in Indonesian and those in English.

2 Literature review

The term online informal learning of English (OILE) refers to “a complex range of Internet-based activities” in which “people carrying out these online activities are not primarily seeking to learn English through them although language development may be taking place” (SOCKETT, 2014, p. 7). These activities are done outside the classroom setting (WILSEY, 2014) by communicating or interacting with native speakers or getting exposure to the authenticity of language input (BAHRANI; Sim, 2012) and it is generally accepted that language learning is one of disciplines that derive much benefit from the mobile learning and technology (KUKULSKA-HULME, 2015). The informal learning can also be said to take place in an informal setting which is self-directed by learners and they are responsible for the initiatives and activities they do towards their own learning (ROSELL-AGUILAR, 2018). Therefore, learners of both EFL and English as a second language (ESL) are advised to take advantage of authentic language input either inside or outside the classroom (BAHRANI; SIM; NEKOUEIZADEH, 2014) to get the opportunity to communicate with the real world (POPESCU, 2012).

The study on technology use in online informal learning of EFL has become an important aspect of investigation. Rosell-Aguilar (2018) argued that social media such as Twitter and Facebook can be utilized for formal and informal learning. The online informal learning through social media can be also used as supplementary media for formal learning in the classroom that “increases learners’ awareness to language learning opportunities and continuous learning process” (ALADJEM; JOU, 2016, p. 161). Bahrani and Sim (2012) conducted research on informal language learning setting which attempted to investigate the effects of exposure (either technology or social interaction) on English speaking proficiency. They found that EFL participants with an exposure to audio-visual mass media performed better at speaking compared to ESL participants who were exposed to social interaction as their source of language input.

Lai, Hu and Lyu (2018) who examined learning experiences employed by language learners from outside the classroom as well as the influencing factors identified three kinds of experiences which include instructional-, entertainment-, and information-oriented technological experiences. The three kinds of technological experiences were affected by a variety of attitudinal and support factors. Findings by Trinder (2017) suggest that seventy-two per cent of the subjects under his study confirmed that they intentionally get involved in online activities with a specific purpose of improving certain English language aspects such as vocabulary, grammar, and pronunciation. Language learning through mobile phones is also positively perceived by learners as a useful method form improving their reading and grammar competences (WANG; SMITH, 2013). Engaging in a variety of informal digital learning of English (IDLE) activities with a focus on form and meaning could also significantly predict EFL learners’ speaking proficiency (LEE; DRESSMAN, 2018).

A very few researchers have turned to the investigation of informal learning of EFL

which is performed online through smartphones. Jurkovič (2019) found that EFL learners still retrieve online content from their smartphones for receptive such as reading emails, listening to music, and reading comments on social media, rather than interactive/productive online activities such as writing short text messages, communicating with classmates regarding study-related materials, and writing emails, and the participants' first language is predominantly used for their online activities. Putrawan and Riadi (2020) who conducted preliminary research on the predominant language use for online learning activities found that English is not predominantly used by EFL learners in the Indonesian context. Sierocka, Jurković and Varga (2019) found that the subjects under their investigation use smartpones for receptive online activities more frequently, but they infrequently use their smartphones for the purpose of learning a language. They further stated that the predominant use of either first language or English for online informal learning activities does not significantly make an impact on the participants' self-assessed English competence.

It is also found that smartphones play a significant role to boost learners' critical thinking, creative thinking, and increase their communication and collaboration skills (RAMAMURUTHY; RAO, 2015) because the use of smartphone for English learning can make them become an autonomous learner (NURHAENI; PURNAWARMAN, 2018). It indicates that mobile learning through smartphones allows learners to get out of the classroom to deal with the real world (STOCKWELL, 2010). Thus, the use of mobile devices, especially smartphones, "is one of the principal enablers of the growth in online informal learning (GODWIN-JONES, 2017b as cited in GODWIN-JONES, 2019, p. 15).

3 Research questions

To date less attention has been paid to online informal learning of EFL through smartphones among undergraduate EFL learners in Indonesia. Thus, the aims of this study are specifically to address the following questions:

(1) What are the most frequently-performed EFL learning activities through smartphones among undergraduate EFL learners in Indonesia?

(2) What is the predominant online language use through smartphones among undergraduate EFL learners in Indonesia?

(3) Do EFL learners with different predominat language use (Indonesian predominant language use and that of English) for their online informal learning activities differ in their perceived EFL proficiency?

4 Methodology

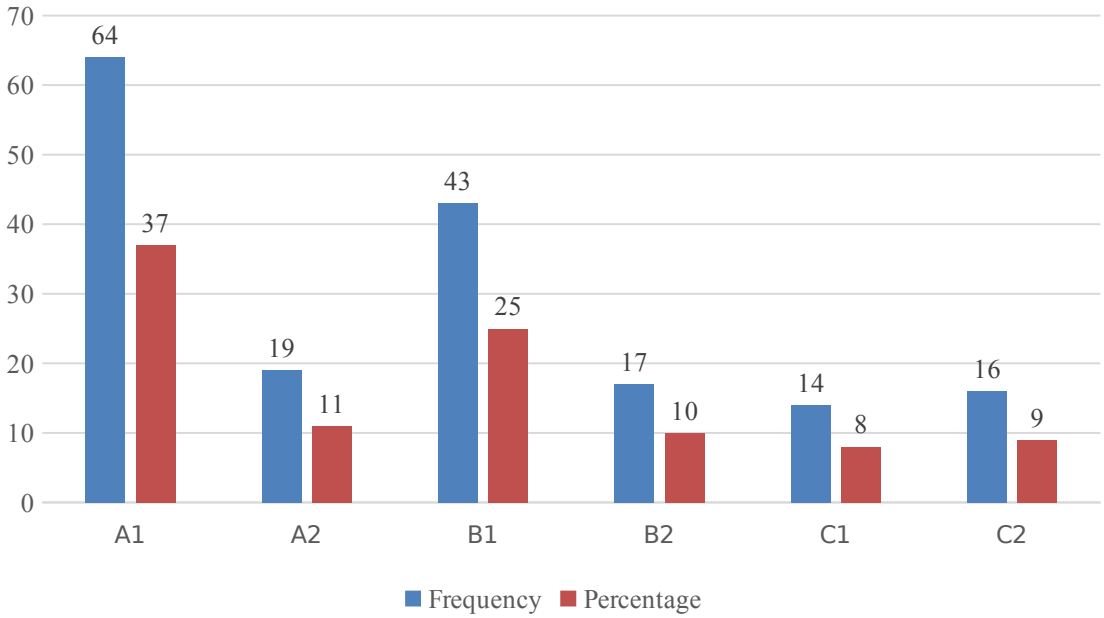
4.1 Participants

A total of 173 undergraduate EFL learners in Lampung Province, Indonesia, participated in the present study. Thirty two (18.5%) out of the 173 participants were male, the rest (81.5%) were female. In addition, the participants were also almost at the same age ranging from 17 – 23 years old, 19.39 years of age on average. They majored in

English Education (89.6%) and English Language and Literature (10.4%). They studied EFL in public universities (51.4%) and private ones (48.6%).

The participants were also required to self-assess the level of their EFL proficiency which was based on the Common European Framework of Reference for Languages (CEFRL). The Chart 1 below illustrates their perceived EFL proficiency.

Chart 1: Participants' perceived EFL proficiency based on CEFRL.



Source: from the authors.

The Chart 1 above illustrates the frequency and percentage of the participants who self-assessed their EFL proficiency. It can be seen that most of the participants self-assessed themselves at Level A1 (37%), followed by Level B1 (25%), with a total of 64 and 43 participants respectively. Turning to the other levels, it can be clearly said that Levels A2, B2, C1, and C2 have an almost similar pattern, with Level A2 having only 19 participants (11%), followed by Levels B2 and C2 with 17 participants (10%) and 16 participants (9%) respectively. Level C1 has the fewest frequency, with only 14 participants (8%).

4.2 Instruments

The participants in this present study were asked to respond to three instruments: a 34-item online questionnaire for collecting data on the participants' online informal language learning activities and a 31-item online questionnaire for collecting data on predominant language use when performing the online activities using their smartphone. Both of them were developed by Jurkovič (2019) in which a few minor adjustments to the Indonesian context were made. The last instrument was a self-assessment language proficiency grid according to the CEFRL classified into three broad levels including Basic User, Independent User, and Proficient User which can be broken down into six levels (A1-C2) (COUNCIL OF EUROPE, 2001). This self-assessment, which was on a 1-6 scale

ranging from A1-C2, was used to see the participants' perceived EFL proficiency.

4.3 Data analyses

The questionnaires were distributed online to the participants taking part in this study. The 34-item online questionnaire was on a 5-point Likert scale ranging from 1 (never or almost never) to 5 (several times a day) in which the participants were classified into two categories, frequent users (coded 3, 4, and 5) and infrequent users (coded 1 and 2) (JURKOVIČ, 2019). The 31-item online questionnaire was on a 1-3 scale (1 – Indonesian, 2 – English, 3 – Indonesian and English). This questionnaire, which was used to look at the language predominantly used for online informal learning activities using smartphones, was quantitatively analyzed through descriptive statistics.

The data were also analyzed through the independent samples t-test to look at the comparison between the mean value of the participants' self-assessed EFL proficiency and their predominant online language use (frequent and infrequent users of Indonesian and English).

5 Findings

With regard to the participants' most frequently-performed EFL learning activities through smartphones (Research Question 1), their responses to the online questionnaire for collecting data on their online informal EFL learning activities were computed as presented in Table 1 below.

Table 1: Frequent users of online informal learning activities through smartphones (n = 173).

No.	Online informal learning activities	% of users
1	Writing short text messages	98.9
2	Reading emails.	75.1
3	Communicating with classmates regarding study-related issues.	93.6
4	Listening to music.	92.4
5	Reading social media comments.	87.3
6	Checking non-study related information.	91.3
7	Looking for study-related information.	96
8	Watching short clips with text.	82.7
9	Reading the daily news.	83.2
10	Writing emails.	42.8
11	Reading long texts.	83.2
12	Accessing online dictionaries.	94.1
13	Watching foreign films and television series with no subtitles.	48.5
14	Watching foreign films and television series with subtitles in English or another foreign language.	69.4
15	Posting social media comments.	54.3
16	Communicating with teachers regarding study-related issues.	59
17	Watching foreign films and television series with subtitles in my	54.3

	first language.	
18	Watching television	59.6
19	Listening to the radio.	23.1
20	Writing down new words learnt in a foreign language.	65.8
21	Playing games that require reading instructions.	46.8
22	Accessing websites with language learning exercises.	60.8
23	Using language learning applications that I have downloaded onto my smartphone.	74
24	Reading e-books.	62.4
25	Participating in LinkedIn, Facebook, and other online groups that talk about language learning.	49.1
26	Playing language games such as crosswords.	37
27	Leaving voice messages to other users.	63
28	Listening to podcasts.	44.5
29	Listening to lectures.	89
30	Playing games that require written communication with other players.	38.7
31	Playing games that require spoken communication with other players.	37
32	Listening to audio books.	35.3
33	Keeping a blog.	16.2
34	Keeping an audio/audio-visual blog.	22.5

Source: from the authors.

Table 1 above gives information that most of the participants (almost 100%) frequently use their smartphones to do two productive and/or interactive online activities which include writing short text messages (98.9%) and communicating with their classmates (93.6%). Regarding the receptive online activities, these activities are shared by more participants including looking for study-related information (96%), accessing online dictionaries (94.1%), listening to music (92.4%), checking non-study related information (91.3%), listening to lectures (89%), reading social media comments (87.3), reading daily news and long texts (83.2%), watching short clips with text (82.7%), and reading emails (75.1%). Overall, it is apparent that the receptive online activities using smartphones are more common compared to the productive and/or interactive ones.

The other online activities the participants perform through their smartphones which lie between 74% and 54.3% include using language learning applications (74%), watching foreign films and television series with subtitles in English or another foreign language (69.4%), writing down new words learned in a foreign language (65.8%), leaving voice messages to other users (63%), reading e-books (62.4%), accessing websites with language learning exercises (60.8%), watching television (59.6%), communicating with teachers regarding study-related issues (59%), posting social media comments (54.3%), and watching foreign films and television series with subtitles in first language (54.3%).

The other online activities which are done by less than half of the participants include watching foreign films and television series with no subtitles (48%), playing games that require reading instructions (46.8%), listening to podcasts (44.5%), writing emails (42.8%), playing games that require written communication with other players (38.7%),

playing language games such as crosswords (37%), playing games that require spoken communication with other players (37%), listening to audio books (35.3%), listening to the radio (23.1%), keeping an audio/audio-visual blog (22.5%), and keeping a blog (16.2%) which is the most infrequently-performed online activity by the participants under investigation.

To address the Research Question 2 on the predominant language use for online informal learning activities using smartphones, three categories of language use variables were created. Value 1 refers to Indonesian, Value 2 to English, and Value 3 to both Indonesian and English. Table 2 below shows data about the languages used by the participants for their online activities through smartphones.

Table 2: Language use and online activities using smartphones (n = 173).

No.	Online informal learning activities	Indonesian	English	Indonesian & English
		% of users		
1	Writing short text messages	54.3	4	41.6
2	Reading emails.	48	20.2	31.8
3	Communicating with classmates regarding study-related issues.	65.3	6.4	28.3
4	Listening to music.	2.3	57.8	39.9
5	Reading social media comments.	39.3	15	45.7
6	Checking non-study related information.	56.1	13.3	30.6
7	Looking for study-related information.	35.8	27.7	36.4
8	Watching short clips with text.	28.3	41	30.6
9	Reading the daily news.	61.8	8.7	29.5
10	Writing emails.	68.2	4.6	27.2
11	Reading long texts.	43.4	12.7	43.9
12	Accessing online dictionaries.	7.5	56.6	35.8
13	Posting social media comments.	46.2	15	38.7
14	Communicating with teachers regarding study-related issues.	30.6	25.4	43.9
15	Watching television.	75.7	4.6	19.7
16	Listening to the radio.	82.1	5.8	12.1
17	Writing down new words learnt in a foreign language.	22	53.8	24.3
18	Playing games that require reading instructions.	23.7	50.3	26
19	Accessing websites with language learning exercises.	29.7	44.8	25.6
20	Using language learning apps downloaded onto smartphone.	18.5	56.1	25.4
21	Reading e-books.	30.1	29.5	40.5
22	Participating in LinkedIn, Facebook, and other online groups that talk about language learning.	49.7	23.1	27.2
23	Playing language games such as crosswords.	32.4	43.3	24.3
24	Leaving voice messages to other users.	70.5	6.9	22.5
25	Listening to podcasts.	54.9	22.5	22.5
26	Listening to lectures.	12.7	32.9	54.3

27	Playing games that require written communication with other players.	42.8	22.5	34.7
28	Playing games that require spoken communication with other players.	49.7	22	28.3
29	Listening to audio books.	35.8	39.3	24.9
30	Keeping a blog.	63	8.7	28.3
31	Keeping an audio/audio-visual blog.	56.6	15	28.3

Source: from the authors.

Table 2 shows language use and online activities using smartphones. It is clear that the participants perform their informal learning activities online through their smartphones in Indonesian, in English, and in combination of Indonesian and English. Looking firstly at the activities predominantly performed in Indonesian, these activities include listening to the radio (82.1%), watching television (75.7%), leaving voice messages to other users (70.5%), writing emails (68.2%), communicating with classmates regarding study-related issues (65.3%), keeping a blog (63%), reading the daily news (61.8%), keeping an audio/audio-visual blog (56.6%), checking non-study related information (56.1%), listening to podcasts (54.9%), and writing short text messages (54.3%).

Regarding the activities predominantly performed in English, more than half of the participants listen to music in English (57.8%). Accessing online dictionaries, writing down new words learned in a foreign language, and playing games that require reading instructions are activities that are also performed in English by most of the participants, 56.6%, 53.8%, and 50.3% respectively.

The participants under study also reported that they listen to lectures in both Indonesian and English. In other words, they sometimes perform it in Indonesian and on some other occasions in English. However, it can be clearly seen that the other activities are performed in either Indonesian, English, or Indonesian and English by less than half of the participants, for example, listening to music is also performed in Indonesian, but by only 2.3% of them. Writing short text messages is also performed in English, by 4% of them and listening to the radio is performed both in Indonesian and English by 12.1% of them.

To find out whether there is a statistically significant difference between the participants' perceived EFL proficiency and their online predominant language use (Research Question 3), an inferential statistical test, the independent samples t-test, was run. This test was used to find out the difference between the means of the participants' perceived EFL proficiency obtained from two independent samples. Therefore, the test was used to compare dichotomous variables, those who only predominantly use Indonesian for their online informal learning activities and those who only predominantly use English (see Table 3).

Table 3: CEFRL means difference between two independent groups.

Nº	Online informal learning activities	Indonesian			English			t	Sig.
		% of users	CEFRL mean	SD	% of users	CEFRL mean	SD		
1	Writing short	54.3	2.20	1.478	4	5	1.826	-4.757	.000

	text messages								
2	Reading emails.	48	2.19	1.550	20.2	3.43	1.685	-3.855	.000
3	Communicating with classmates regarding study-related issues.	65.3	2.53	1.653	6.4	2.82	1.991	-.540	.590
4	Listening to music.	2.3	2.25	2.500	57.8	2.67	1.688	-.480	.633
5	Reading social media comments.	39.3	2.10	1.527	15	3.69	1.715	-4.361	.000
6	Checking non-study related information.	56.1	2.41	1.612	13.3	3.52	1.806	-2.899	.004
7	Looking for study-related information.	35.8	2.19	1.556	27.7	3.04	1.688	-2.732	.007
8	Watching short clips with text.	28.3	2.04	1.353	41	2.96	1.784	-3.042	.003
9	Reading the daily news.	61.8	2.33	1.534	8.7	3.80	1.612	-3.461	.001
10	Writing emails.	68.2	2.47	1.668	4.6	3.25	1.669	-1.273	.206
11	Reading long texts.	43.4	2.25	1.595	12.7	3.18	1.736	-2.354	.021
12	Accessing online dictionaries.	7.5	1.46	.877	56.6	2.56	1.675	-2.319	.022
13	Posting social media comments.	46.2	2.29	1.577	15	3.35	1.999	-2.778	.006
14	Communicating with teachers regarding study-related issues.	30.6	2.47	1.636	25.4	2.36	1.644	.323	.747
15	Watching television.	75.7	2.60	1.611	4.6	3.38	2.200	-1.288	.200
16	Listening to the radio.	82.1	2.69	1.685	5.8	2.40	1.430	.531	.596
17	Writing down new words learnt in a foreign language.	22	2.03	1.423	53.8	2.94	1.718	-2.881	.005
18	Playing games that require reading instructions.	23.7	1.95	1.532	50.3	3.08	1.679	-3.649	.000
19	Accessing websites with language learning exercises.	29.7	2.16	1.488	44.8	3.13	1.657	-3.385	.001
20	Using language learning apps	18.5	1.81	1.203	56.1	3.05	1.686	-3.843	.000

	downloaded onto smartphone.								
21	Reading e-books.	30.1	2.06	1.406	29.5	2.98	1.738	-2.965	.004
22	Participating in LinkedIn, Facebook, and other online groups that talk about language learning.	49.7	2.53	1.727	23.1	2.98	1.641	-1.353	.179
23	Playing language games such as crosswords.	32.4	2.18	1.503	43.3	2.96	1.696	-2.737	.007
24	Leaving voice messages to other users.	70.5	2.39	1.485	6.9	4.33	2.060	-4.178	.000
25	Listening to podcasts.	54.9	2.39	1.453	22.5	3.33	1.854	-3.142	.002
26	I listen to lectures.	12.7	1.59	1.098	32.9	2.93	1.741	-3.352	.001
27	Playing games that require written communication with other players.	42.8	2.23	1.549	22.5	3.10	1.759	-2.716	.008
28	Playing games that require spoken communication with other players.	49.7	2.27	1.475	22	2.87	1.803	-1.951	.053
29	Listening to audio books.	35.8	2.19	1.389	39.3	2.97	1.787	-2.749	.007
30	Keeping a blog.	63	2.53	1.681	8.7	2.53	1.457	-.003	.998
31	Keeping an audio/audio-visual blog.	56.6	2.23	1.456	15	3.54	1.772	-3.873	.000

Source: from the authors.

Table 3 gives information about the mean scores of the perceived EFL proficiency of the participants who perform online informal learning activities in Indonesian against those performing in English. In some online informal learning activities, the participants' predominant language use for online informal learning activities, either Indonesian or English, is closely related to the their perceived EFL proficiency. It can be clearly seen that the CEFRL mean of those who oftetimes perform online informal learning activities in English is statitistically and significantly higher than those performing in Indonesian (p > 0.05). The online activities include writing short text messages, reading emails, reading social media comments, checking non-study related information, watching short clips with text, reading the daily news, writing down new words learned in a foreign language,

playing games that requires reading instructions, accessing website with language learning exercises, using language learning apps, reading e-books, leaving voice messages to other users, listening to podcasts, and keeping an audio/audio-visual blog.

Regarding the other online activities through smartphones, it is apparent that the CEFRL mean of those who perform online activities in English is higher than those in Indonesian, with the exceptions of listening to the radio and keeping a blog, but it is not statistically significant.

6 Discussion

This study focuses on the most frequently-performed online EFL learning activities through smartphones, the predominant language used for the online activities by the participants under investigation, and the difference between the means of the participants' perceived EFL proficiency divided into two independent groups (those who perform online informal learning activities in Indonesian and those in English).

Two productive and/or interactive online informal learning activities constitute nearly 100% of the participants under investigation. The two most frequently-performed productive and/or interactive online activities by EFL learners in Indonesia are writing short text messages and communicating with their classmates regarding study-related issues, which is in line with Jurkovič's (2019) finding in the Slovenian context and with Sierocka, Jurković, & Varga's (2019) finding in the context of Polish and Croatian students. Turning to the receptive ones, the online informal learning activities most frequently performed by the participants through their smartphones include looking for study-related information, accessing online dictionaries, listening to music, checking non-study related information, listening to lectures, reading social media comments, reading daily news and long texts, watching short clips with text, and reading emails. In other words, the receptive online activities using smartphones are more frequently performed compared to the productive and/or interactive ones.

Regarding the predominant language use, the participants perform their online activities through smartphones in Indonesian, which is the participants' first language, in English, and in both Indonesian and English, in which English is not the predominant language used by the participants under investigation. This resonates with Putrawan and Riadi's (2020) finding. This indicates that although they can access their smartphone from anywhere and at any time (ELAISH *et al.*, 2017), they do not make use of their smartphone to its full extent to improve their English linguistic competence as non-native speakers of the language (ALI; MIRAZ, 2018) and to position themselves as true English users, not only as learners of the language (SOCKETT; TOFFOLI, 2012). In other words, the Internet-based activities through their smartphones are performed to not primarily learn English even though they have a chance to develop their English language competence (SOCKETT, 2014) and to get much exposure to authentic language input through their smartphones (BAHRANI; SIM, 2012).

Finally, regarding the last research question on the difference of the mean scores of the participants' perceived EFL proficiency, it can be argued that their predominant language use for online informal learning activities has to do with their perceived EFL proficiency. The mean of the perceived EFL proficiency of those who frequently perfom

online informal learning activities through their smartphones in English is statistically and significantly higher than those performing in Indonesian. This is in line with Jurkovič's (2019) finding. Overall, although it is not statistically significant, the mean score of the perceived EFL proficiency of those performing online activities in English is higher than those in Indonesian, with the exceptions of listening to the radio and keeping a blog in which the mean scores of their perceived EFL proficiency for these two activities are nearly the same. This finding adds proof to other findings that language use plays an important role in learners' language development (BYBEE, 2010; ELLIS, RÖMER; O'DONNELL, 2016; LEE; DRESSMAN, 2018; SOCKETT; KUSYK, 2015 as cited in JURKOVIČ, 2019; JURKOVIČ, 2019).

7 Conclusion

The findings of this present study explicitly indicate that receptive online informal learning activities are performed more frequently by EFL learners in the context of Indonesia compared to the productive and/or interactive activities in which Indonesian, the first language, is predominantly used for the online activities through smartphones. In other words, although the participants major in English Education and English Language and Literature, however, English is not the predominant language used for their online activities through smartphones. In addition, the mean score of the perceived EFL proficiency of those who frequently perform online activities in English is statistically and significantly higher than those performing online activities in Indonesian. Overall, the mean score of the perceived EFL proficiency of those performing online activities in English is higher than those in Indonesian, although the mean difference is not statistically significant.

This study has implications for EFL learning. Because language learning can derive much benefit from mobile technology (KUKULSKA-HULME, 2015), integrating online informal learning activities into formal educational contexts needs to be given consideration (SOCKETT; TOFFOLI, 2012). Online learning activities can help learners improve their certain aspects of English such as vocabulary, grammar, pronunciation, reading (TRINDER, 2017; WANG; SMITH, 2013) and English speaking proficiency (LEE; DRESSMAN, 2018). Social media such as Twitter and Facebook can also be integrated into formal settings as a medium for learning (ROSELL-AGUILAR, 2018). Social media can be fun online supplements to formal learning to help learners increase their awareness to language learning opportunities in an effort to make them continuously learn (ALADJEM; JOU, 2016), which then leads them to become an autonomous EFL learner (NURHAENI; PURNAWARMAN, 2018).

However, this research is not without limitations. Although the findings in this present study are able to provide fascinating insights into EFL learners' most frequently-performed online activities through smartphones, their predominant online language use, and the differences between their perceived EFL proficiency and their online language use, this study was conducted in a medium-sized sample (n=173). Therefore, larger number of samples should be taken into account to provide more reliable findings. Conducting similar research with larger sample sizes in different contexts and settings where English is a foreign language would also be useful to understand whether the findings of the present study are globally applicable and acceptable.

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