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EFL Learners in the Digital Age: An Investigation into Personal and Educational Digital Engagement

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Abstract
To gauge the success of integrating technology into classrooms which is among the popular topics in the field of language learning, there is a need to understand how end users, language learners, use technology and bear the characteristics of digital learner as claimed for the current generation of learners. To this end, this study collected data through a survey design from 1163 university level English as a Foreign Language (EFL) learners to provide cross-cultural, empirical evidence towards building an accurate picture of EFL learners in the digital age. Data were analysed through factor analysis to identify meaningful patterns of technology use, descriptive statistics and correlations to explore the relationships between technology use patterns, language achievement and digital characteristics. Findings suggest that EFL learners are digital learners at a moderate level and the range of technology tools used both for daily and language learning purposes is not as broad as claimed for their generation. The results of the study carry implications for EFL practitioners aiming at better understanding current EFL learners and providing them with technology-integrated language instruction properly.

Keywords
EFL learners, digital engagement, digital learners, ICT, digital natives

Introduction

Depending on the rise of Information and Communication Technology (ICT) tools, along with the proliferation of smartphones and laptops, the field of language learning has been dominated by research in the areas of technology use for over 30 years. A number of publications discuss the effectiveness of various ICT tools, from Web 2.0 technologies

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such as blogs (Ducate and Lomicka, 2008), wikis (Şahin Kızıl, 2015) and chat applications (Blake, 2009) to individual study tools like electronic dictionaries (Koyama and Takeuchi, 2007) and corpus (Liu and Jiang, 2009) (See Golonka, Bowles, Frank, Richardson, and Freynik, [2014] for a comprehensive overview). Most research in this line, essentially, has pointed out that integration of ICT tools into language education should play a prominent role catering to students. The main reason underlying this extensive emphasis on ICT integration is the idea that advances in technology have caused societal changes conducive to the emergence of a new kind of learner (Bennett and Maton, 2010).

Often dubbed the net generation (Tapscott, 2009) or digital natives (Prensky, 2001), this new generation of learners are claimed to be different from their predecessors since they think, behave and learn in a different way because of steady, pervasive exposure to ICT tools (Bennett and Maton, 2010). They are different in that they have a tendency for receiving information fast, are capable of carrying out multiple tasks simultaneously, are over reliant on the web as the main source of information, have nonlinear processing, thrive on instant gratification and prefer visuals to text while learning (Palfrey and Gasser, 2008; Rosen, 2010; Teo, 2013).

Defining contemporary learners within such clear-cut terms has aroused interest in the field of education and has been investigated in a number of contexts (Jones, 2010; Kennedy and Fox, 2013; Margaryan and Littlejohn, 2008; Thinyane, 2010; Thompson, 2013, and Thompson, 2015 just to name a few). Recent empirical evidence, however, has revealed that it would be too simplistic to label a whole generation as digital natives based on only a generational argument (i.e. age) as 'current students and teachers might have a more complex mix of skills and experience with new technologies (Kennedy et al., 2007: 518), forcing a shift from focus on age-based conceptions on which the original idea was based (Prensky, 2009) to focus on experience, exposure and expertise with ICT tools through more in-depth analyses (Helsper and Enyon, 2010). Although the generational divide has been excluded, 'an undercurrent of technological determinism persists' in the literature on education implying that current learners are 'highly adept technology users' (Bennett and Maton, 2010: 322), which requires update in pedagogical practices to address the contemporary learners (Bennett et al., 2008).

However, as noted by Kennedy, Judd, Churchward, Gray and Krause (2008), premises underlying these arguments should be carefully scrutinized before taking major steps in pedagogical models. Empirical data considering the contextual variables is essential to widen the context and to substantiate the arguments on the nature and extent of technology uptake by students (Margaryan et al., 2011). Among the contextual variables, disciplinary difference is highlighted as one of the key factors in previous research reporting higher rates of ICT use among business and engineering students but lower rates among social work students (Kirkwood and Price, 2005; Margaryan et al., 2011), which implies the need to focus on language learning as a discipline in which ICT tools have become nearly ubiquitous in almost every setting (Golonka et al., 2014). Furthermore, most of the studies in the relevant literature have relied on learners' direct use of technology without proposing a framework upon which typical attributes of current learners in connection with ICT usage could be characterized (Teo, 2013). Therefore, there is a need for understanding the characteristics of contemporary learners within the

context of digital technologies beside their direct experiences with ICT tools (Bennett and Maton, 2010; Li and Raineri, 2010).

With the purpose of contributing cross-cultural, empirical evidence towards building an accurate picture of the nature and extent of technology adoption by EFL learners, this article reports on a study which aims to investigate (1) patterns of ICT use by university EFL learners and (2) the extent to which university EFL learners consider themselves as having the digital characteristics attributed to their generation.

Literature Review

Theoretical Framework: Digital Learner Characteristics

Digital characteristics of contemporary learners have been discussed in a number of studies and each researcher has proposed unique lists to define the current generation of learners. However, closer scrutiny of the literature reveals a substantial overlap among the lists. Based on this overlap, Teo (2013) has presented a framework upon which the behaviours of the digital learners could be characterized, also making the theoretical framework for the current study. Accordingly, attributes of digital learners have been grouped into four categories as illustrated in figure 1.

One defining feature of digital learners is their immersion in ICT tools since birth. They are 'bathed in bits and bytes' in such a way that using the digital technologies is 'as natural as breathing' (Tapscott, 2009: 7, 18). Thus, digital learners are skillful at sophisticated technologies and inclined to use ICT tools more frequently. Another common characteristic of digital learners is multitasking which is linked with proficiency in ICT use and ability to adopt technologies for changing needs (Jones et al., 2010). The third attribute is that digital learners are reliant on graphics for communication, and are claimed to prefer visuals, graphics and images to reading books (Prensky, 2001; Tapscott, 2009). The last trait of a digital learner is the need for instant gratifications and rewards. Due to the high levels of speed and efficiency of ICT tools to which the young generation are accustomed to experiencing during their adolescence, current learners are claimed to expect immediate gratification in every part of their life including learning environments

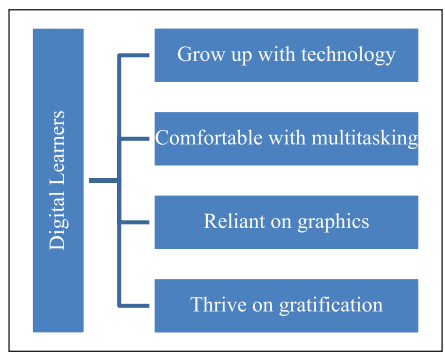

Figure 1. Features of Digital Natives.

(Prensky, 2008). Teo (2015) notes that this craving for instant gratification and instant access to information is considered to be indigenous to digital learners.

Researching Digital Learners: Technology Access and Use

Starting from the mid-2000s, researchers investigated the claims made in the literature about contemporary students as digital learners. The initial focus has been the extent of young people's access to certain ICT tools which is considered to be an obvious sign of technology use. In due course, the focus has moved away from the particular technologies to the activities these ICT tools support (e.g. communication, content creation etc) (Bennett and Maton, 2010).

Empirical studies conducted with students majoring in various fields have yielded the following results in holding continued challenges for further investigation of the topic:

1. There is a lack of homogeneity in technology adoption patterns among university level digital learners (Kennedy et al., 2008).
2. The digital native generation exists only if we think in terms of basic communication tools as there is a very limited use of Web 2.0 tools among the students (Jones et al., 2010; Nagler and Ebner, 2009).
3. The concept of the digital native is far from being a universal term for referring to contemporary learners and further investigation with students in different subject fields is necessary to explain the variations and to reach specific conclusions (Margaryan et al., 2011).
4. While researching the topic, besides the frequency and types of ICT tools used by the students, there is a need to focus on the specific attributes assumed to be inherent in the digital generation to have a greater appreciation of how issues surrounding digital natives could impact teaching and learning (Teo, 2013; Thompson, 2013, Thompson, 2015).

In the sphere of language learning, studies on learners' use of technology and the impacts of various ICT applications exist in abundance (Golonka et al., 2014), yet research approaching the issue within the context of digital nativeness is scarce. Jung (2006) investigated Chinese university level EFL students' (n=591) frequency and perceptions of ICT tools for general and language learning purposes. He found that a majority of the participants are not frequent users of ICT tools in their social activities; 40% reported that they spent less than one hour per week using digital tools for studying English; and only 12% of the participants considered themselves to be skilled at ICT. Interpreted in connection with the arguments on digital nativeness, the overall results imply that it would be misleading to regard them as digital natives. Particularly interested in the conceptualization of digital nativeness in an EFL context, MacLean and Elwood (2009) reached similar conclusions in their study with 301 participants. Their findings indicated that EFL learners in general exhibit minimal proficiency with ICT tools, except word processing and web surfing which are the only areas of perceived competence. This leads to the conclusion that 'contemporary students are not actually

becoming digital natives, users in possession of fluent skills in the language of the cyber sphere' (MacLean and Elwood, 2009: 168).

Based on the literature outlined above, it could be maintained that although progress has been made in defining digital learners, there are gaps in understanding the concept entirely. Most of the studies either rely only on access to and use of ICT tools (Jones et al., 2010; Kennedy et al., 2008; Nagler and Ebner, 2009) or focus directly on the specific traits assumed to be possessed to define the digital generation (Teo et al., 2014; Thompson, 2013, Thompson, 2015). However, extant research implies that taking a combined stance, considering both technology use and characteristics possessed by digital learners, would yield a clearer understanding to define the generation. Additionally, research indicates that location and cultural community are crucial variables when defining the stereotypical digital learner as 'there is a different level of web technology and computer usage among the same demographic of digital natives in Australia and those in the UK as digital natives' (Benini and Murray, 2013: 26). Therefore, providing data on digital learners from different cultures would be beneficial for an accurate portrayal of digitalization in learning. Finally, investigating the claims for digital learners within the discipline of language learning seems to produce promising results for the practitioners in the field, as ICT tools have become ubiquitous for foreign language (FL) learning in many settings (Golonka et al., 2014).

Considering the aforementioned issues, this study investigated Turkish EFL learners' use of ICT tools for both learning and daily activities, and their characteristics within the context of digital nativeness. Four research questions have guided this study:

1. What ICT tools do university EFL learners use and how frequently do they use them for general purposes?
2. How frequently do EFL learners use ICT tools for language learning?
3. To what extent do EFL students report having digital characteristics claimed for their generation?
4. Do EFL learners' patterns of ICT use both for daily and language learning purposes correlate with their achievement in language learning and their digital learner characteristics?

The following section explains the methodology adopted to address these questions.

Methodology

Participants and Design

This study was conducted in the School of Foreign Languages, Fırat University, Turkey, where students registering for various departments experience intensive instruction in English before continuing their education in their respective fields. A total of 1,163 EFL students (877 male and 285 female) participated in the study. The mean age of the survey respondents was 21 with ages ranging from 17 to 36.

To carry out the study, first, necessary permissions from the school administration were obtained and subsequently, English instructors were contacted to request

collaboration for data gathering. Collected in 2015, the data source of the study was questionnaires that were distributed with consent forms during lectures by the instructors. Students completed the questionnaires in-situ and immediately returned them to the instructors. Agreed classes were visited for a second time to make sure that students missing at the time of first data collection were included in the study. Before the completion of the survey, participants were informed about the purpose of the study, reminded about the voluntary basis of the study and their right to withdraw at any time. No reward in kind or monies was offered. Participants took about 20 minutes to complete the survey.

Instruments and Data Analysis

Two measures were used in this study to collect the data. The first was a questionnaire developed based on the relevant literature (Kennedy et al., 2008; Margaryan et al., 2011; Thompson, 2013) consisting of three sections:

> *Part 1: Demographic Information*: Participants were asked about their age, gender, access to ICT tools. Students' final score from the proficiency exam administered by their school is also in the demographic information part of the scale.
>
> *Part 2: ICT Use Scale (ICTUS)*: Respondents rated their frequency of using a list of 42 common ICT tools.
>
> *Part 3: ICT for Language Learning Scale (ICTLLS)*. This included statements through which students reported the frequency of using ICT tools to learn language.

The questionnaire was pilot tested with 41 students enrolled in the same school, with the purpose of measuring the appropriateness of the survey items, identifying any vague expression and seeking comments on the scope of learners' technology activities. Following the results of the pilot test, survey items were revised, in particular, examples of the ICT tools were replaced with the updated ones considering learners' comments. The revised version of the survey was administered, and internal consistency estimates of reliability were calculated using SPSS (v. 22). Cronbach's alpha was found to be .94 for ICTUS, and .90 for the ICTLLS, indicating that survey items are reliable.

The other instrument was the Digital Native Assessment Scale (DNAS) developed by Teo (2013). DNAS is a self-report questionnaire including a total of 21 statements aiming to measure students' perceptions of the extent to which they are digital natives. In a 7 point Likert-type scale (1 was 'strongly disagree' and 7 was 'strongly agree'), each item in the instrument focused on various attributes of digital natives. The scale was originally divided into four factors:

1. Grew up with technology
2. Comfortable with multitasking
3. Reliant on graphics for communication
4. Thrive on instant gratification

The possible total score of the scale ranges from 21 to 147. A score leaning to either extreme points to the extent to which a respondent is not or is a digital native, respectively. (For a detailed discussion on DNAS' development and use with different learner populations, see Teo, 2013; Teo, 2015). This study used a Turkish version of DNAS obtained through a translation and back-translation process to preclude any misconception in the responses. The Cronbach's alpha for Turkish DNAS was .97, pointing to a higher rate of internal consistency.

Having administered the measures to the participants, raw data were digitized manually coding via SPSS v.22. Descriptive and inferential statistics were used to extract meaningful information from the data. An alpha level of .05 was used as the criterion for significant findings.

Findings

ICT Access and Use

The purpose of this study was to investigate patterns of ICT use among EFL learners and the extent to which they regard themselves as digital learners as claimed for their generation. The first research question asked, What ICT tools do university EFL learners use and how frequently do they use them? This question was addressed by analysing the responses to the ICTUS subscale.

The first part of the survey asked about access to the internet and ownership of major ICT tools. A large portion of students reported using their mobiles for internet access (n=1005, 86.4%). Laptop computers were the second most popular tool used for internet access (n=607, 52.2 %), followed by desktops at public cafes (n=330, 28.6%). Regarding their access to a range of technology hardware (i.e. computers, mobile phones etc.), the findings are presented in figure 2. As would be expected, most of the students have unrestricted access to mobile phones and almost half have no access to a Personal Digital Assistant (PDA) or a games console, an interesting result as one attribute of digital learners is their pervasive use of digital video games.

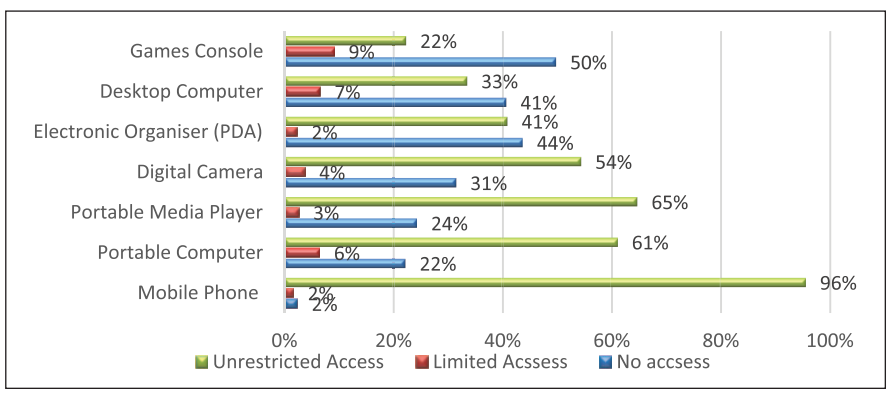

Figure 2. The percentage of students' access to hardware.

The next set of analysis focused on frequency of ICT use by EFL learners through descriptive statistics and a factor analysis to identify patterns of ICT use. An exploratory factor analysis which ascertains the number of underlying dimensions of the instrument and the pattern of item-factor relationships (Leech et al., 2015) was conducted to account for the variation and co-variation among a set of individual technologies. The analysis produced a four-factor solution that explained 59% of the variance. Items with loadings of .4 and greater which is typically considered high (Leech et al., 2015) were retained. After the analysis, two items with low factor loadings (i.e. using mobiles as MP3 players and watching videos or listening to music on the computer) were dropped from the analysis. In order to compute a score for each participant on each ICT group, each factor was converted into a scale. Internal consistency analysis for each factor was also computed. The four factors of the survey, their indicators, component matrix of the factors with their Eigenvalues and Cronbach's alpha are presented in Table 1. The mean scores for the frequency of the use of each ICT tool is included in Table 1 to present the reader with a detailed account.

Subsequent to factor analysis, scores for the four technology use subscales were analysed by taking the average of the responses for each subscale. Table 2 displays the means and standard deviations of the average scores for each ICT use factor.

As seen in Table 2, students used mobile phones quite frequently while computer based activities (i.e. working on Word, Spreadsheets or presentations) were rarely performed. The most interesting finding is related to the category of Web 2.0 based activities including collaborative and self-publishing technologies that are often cited as having positive impacts on language learning (Golonka et al., 2014). This study showed that EFL learners use 'Web 2.0' tools such as blogs (x=2.3 n=1097), wikis (x=2.0 n=1102), collaborative writing projects (x=2.2 n=1127) and podcasts (x=2.6 n=1105) rather infrequently.

ICT Use for Language Learning

Research question 2 asked: How frequently do EFL learners use ICT tools for language learning? The ICTLLS portion of the survey presented learners with a list of ICT tools that could be used to learn language and it provided data to address this question. Table 3 presents the results. Rating scales have been collapsed for ease of interpretation.

An overall look at Table 3 indicates that a number of students are familiar with the use of basic ICT applications in their language learning process. About three out of four students (72.2%) are using their mobiles on a daily basis to support their language learning. Most of the students (57.3%) are also exploiting the benefits of social networking sites to create opportunities to learn language. However, there are areas where the ICT based language learning is far from being prevailing. A large portion of the participants are not aware of the potentials of Web 2.0 tools which are frequently highlighted in the relevant literature (Arslan and Şahin Kızıl, 2010; Hourigan and Murray, 2010) as more than half of them had never used blogs (53.9%), wikis (53.5%) or podcasts (63%) for language learning purposes. Only 20.4% of the students surveyed reported using games for language learning, which is in stark contrast to the claims labelling them as being the gamer generation (Carstens and Beck, 2005). The overall results contradicting the claims

Table 1. Component Matrix of Technology Use Factors and their Frequency of Use.

ICT Activity	Factor Loadings				*Frequency of Use	SD
	1	2	3	4		
Factor 1: Web 2.0 based Activities						
Making phone calls through the net	.850				4.74	3.16
Instant messaging or chat through the net	.828				7.48	2.72
Web conferencing	.788				3.44	2.98
Following RSS feeds	.764				5.43	3.11
Sending and receiving emails	.753				6.34	2.56
Commenting on content in multimedia websites	.745				4.03	3.03
Contributing to the collaborative websites	.698				2.28	2.26
Downloading podcasts	.678				3.16	2.89
Commenting on a blog or forum	.663				3.02	2.77
Playing strategy games	.659				3.94	3.23
Playing action or skill games against real players	.646				3.90	3.32
Using social networking sites	.629				7.62	2.47
Sharing digital materials through the net	.609				6.34	2.95
Sharing music files	.577				7.21	2.17
Contributing to a wiki	.567				2.03	2.06
Using social bookmarking to share interesting content	.545				5.15	3.33
Publishing podcasts	.542				2.61	2.66
Annotating web page	.452				3.38	2.97
Writing on a blog	.446				2.32	2.45
Factor 2: Web Resource Use						
Reading entertainment web pages		.801			7.30	2.44
Using web to find fact		.769			7.72	2.01
Using web to explore topic in-depth		.753			6.89	2.30
Shopping online		.747			3.64	2.94
Creating/maintaining websites	.411	.706			2.73	2.75
Reading long or detailed web page		.622			5.40	2.95
Listening to audio records through internet		.465			5.66	2.12
Factor 3: Computer based Activities						
Using database software (e.g. Microsoft Access)			.757		2.96	2.50
Using word processing software (e.g. Microsoft Word)			.739		4.22	2.76
Using presentation software (e.g. Powerpoint, Keynote)			.723		3.32	2.41
Creating/modifying videos (e.g. Moviemaker)		.416	.644		3.34	2.66
Using Spreadsheet			.640		3.39	2.54
Playing games against computer (e.g. chess)		.419	.617		5.49	3.01
Creating/modifying photos (e.g. Photoshop/ Retrica)		.481	.503		4.30	2.99

(Continued)

Table 1. (Continued)

ICT Activity	Factor Loadings				*Frequency of Use	SD
	1	2	3	4		
Factor 4: Mobile based Activities						
Sending SMS				.677	7.89	2.11
Calling people				.667	8.32	1.45
Taking digital photos or videos				.540	7.17	2.39
Accessing internet				.473	7.85	2.26
Sending emails				.459	5.60	3.27
Using as PDA				.457	7.26	2.65
Making video call				.422	4.39	3.24
Variance explained	18.31	14.83	13.41	13.01		
Cronbach's alpha	.94	.92	.89	.74		

*Note: Scale range was 1–9, where 1 was 'never' and 9 was the highest frequency of use.

Table 2. Means and Standard Deviations for ICT Subscales.

Technology Category	Mean	SD	N
Mobile based use	6.8	1.66	1162
Computer based use	3.8	1.95	1150
Web resource use	5.4	1.77	1151
Web 2.0 based use	4.4	1.64	1154

Note: Scale range was 1–9, where 1 was 'never' and 9 was the highest frequency of use.

Table 3. Frequency of ICT Use by EFL Learners for Language Learning.

ICT Tools	Daily %	Weekly %	Monthly %	Over Monthly %	Never %	Mean
Using web to access a learning portal (e.g. a Learning Management System)	19.8	22.6	10.8	7.1	39.7	3.3
Web pages offering language learning materials	27.4	28.3	15.7	9.1	19.5	5.3
Using mobile based language learning applications	72.2	11.2	6	2.7	7.9	7.6
Video and audio clips	49.3	26.5	8	3.6	11.5	6.7
Games and simulations	25.8	14.4	10.2	8.6	41.0	4.3
Online chatting	39.8	16.3	8.1	5.3	30.3	4.4
Social networking sites	57.3	15	6.1	2.8	18.9	6.6
Collaborative web pages	21.9	22.1	12.2	9.3	34.5	5.4
Blogs	12.5	14.4	9.4	9.7	53.9	3.2
Wikis	15.6	12.5	9.8	8.1	53.5	2.9
Podcasts	8.6	13.7	7.4	8.3	63	1.7

that contemporary learners are poised for pervasive use of ICT tools in language education (Luke, 2006) bear significant implications for practitioners in the field, which is discussed in the following section.

Digital Characteristics of EFL Learners

The third research question asked: To what extent do EFL students report having digital native characteristics claimed for their generation? Responses to the DNAS scale formed the basis for the analysis. An average of all 21 items in the scale was calculated for each participant. The participants had a mean Average Digital Characteristics score of 5.29 (n=1148, SD=1.09) and a range from 4.13 to 6.80, suggesting EFL learners in this study are moderately digital natives.

Descriptive analysis on each item in the scale was also computed. Regarding the instant gratification, it was found that 89.3% had a desire to reach information quickly, 82% demand instant updates in the websites of interest and 88.7% prefer to learn things that are instantly useful. This tendency towards gathering information quickly is consistent with previous findings (Thompson, 2013). For use of visuals for communication, 43.4% of participants reported preferring pictures rather than words for an explanation, and 56.7% use graphs and icons in their messages. This finding on lower percentages in the category of 'reliance on graphics for communication' contradicts the perception that digital natives heavily use visuals in their communication (Prensky, 2001), leading to a conclusion that 'reliance on graphics for communication' might not be a typical trait explaining behaviours of digital natives worldwide. Regarding multitasking – a typical characteristic of the digital natives, 81.2% of the participants agreed that they could communicate with friends through ICT tools while performing other tasks and 83.1% stated that they could use more than one application simultaneously.

A further analysis on the responses to DNAS was conducted to explore possible relationships between digital nativeness and age. Initially, the data underwent a test of normality and the results showed that the data did not follow a normal distribution ($p<0.05$). Therefore, Kruskal-Wallis test, the non-parametric equivalent of parametric one-way ANOVA was performed on the data. Table 4 displays the findings.

The Kruskal-Wallis test indicated that there were no statistically significant differences among the three age groups for any of the characteristics of digital nativeness (i.e.

Table 4. Relationships between Age Groups and DNAS (Factor Means and Chi-Square Values).

Characteristics of Digital Natives	Age Groups			
	19 and under	20–29	30 and over	X^2
Reliance on technology	5.51	5.35	5.90	11.105
Being comfortable with multitasking	5.69	5.57	5.63	3.684
Reliance on graphics for communication	4.57	4.38	4.52	5.868
Thriving on instant gratifications and rewards	5.72	5.64	6.60	11.039

Note: Scale range was 1–7, where 1 was 'strongly disagree' and 7 was 'strongly agree'.

Table 5. Correlations among Language Proficiency, ICT Use and Digital Native Characteristics.

Variables	Achievement Scores	ICT Use in Language Learning	Mobile based Use	Computer based Use	Web Resource Use	Web 2.0 based Use	Digital Nativeness
Achievement scores	1						
ICT use in language learning	.04	1					
Mobile based use	.065	.37**	1				
Computer based use	.024	.45**	.32**	1			
Web resource use	.020	.46**	.45**	.54**	1		
Web 2.0 based use	.069	.65**	.48**	.54**	.66**	1	
Digital Nativeness	.005	.46**	.39**	.37**	.43**	.50**	1

**Correlation is significant at the 0.01 level (2 tailed).

reliance on technology X^2 (2,1143) = 11.105, p=0.08; multitasking X^2 (2, 1143) =3.684, p=0.29; reliance on graphics for communication X^2 (2, 1141) = 5.868, p= 0.11; thriving on instant gratification X^2 (2,1136) =11.039, p= 0.06). The only characteristic that showed a trend towards a difference was thriving on instant gratification and rewards where the older group (30 and over) appears to have higher ratings than the other two groups. This finding questions age variable as a predictor of digital nativeness.

Research question 4 asked about the correlations, if any, between the students' achievement levels in language learning and their patterns of technology use. This question was addressed by using the final scores the participants received from the final exam administered by their school, four ICT factors identified in factor analysis, responses to ICTLLS and DNAS. The final exam from which achievement levels of the respondents were determined was targeted at level B1 of the CEFR. It consisted of six sessions assessing students' proficiency in listening comprehension, reading comprehension, grammatical knowledge, vocabulary use, written production and language in use where students provided with specific communicative contexts were expected to produce language used in such situations. Administered in a timed paper-based format, the final exam was comprised of a total of 100 questions, and a score over 70 was considered as the pass grade.

Due to non-normal distribution as shown by the results of Shapiro-Wilk Test of Normality ($p<0.05$), the non-parametric Spearman Rank correlation was computed to explore the relationship, and the results are presented in Table 5.

The analysis showed that there are no significant correlations between students' achievement levels in language learning and their use of ICT tools for language learning purposes rs[992]=.04, p=0.90. Table 5 also shows that correlations between achievement scores and four ICT factors are not significant. The only area where significant correlations were observed is the students' use of ICT in language learning activities and four factors of ICT use rs[992]=.37; .45; 46 and 65, $p<0.01$ respectively. This finding could be interpreted as frequent users of ICT tools tend to extend this behaviour to their language learning activities; however, this has no relation to success in language learning. This claim is further verified by the significant correlations between digital nativeness and ICT use for language learning rs[992]=.46, p=0.01, suggesting that digital learners are inclined to employ ICT tools in their educational lives.

Discussion

EFL Learners Employ a Limited Range of ICT Tools

This study sought to explore the technology use patterns of EFL learners and their characteristics as digital natives. Results indicated that the range of ICTs EFL learners use might be fairly narrow, which is in contrast to the claims that contemporary learners are universally proficient on all technology tools (Oblinger and Oblinger, 2005; Palfrey and Gasser, 2008). Of the four categories of technology focused on in this study, only those referred to as web resources and those incorporating mobiles were used frequently by most of the students. Many other technologies including computer based activities (e.g. working on word processors or playing games against a computer) and collaborative and self-publishing tools were reported to be used rather infrequently or not at all by the majority of the participants. This finding is in line with the previous research (Jones et al., 2010; Kennedy et al., 2008; Margaryan et al., 2011) and suggests that EFL learners of this study are not major users of Web 2.0 tools which are often cited as bearing great educational potentials (Golonka et al., 2014). This result implies that it is important for language teachers to evaluate the claims about the contemporary learners' ICT proficiency critically and make realistic appraisals while incorporating ICT tools into their teaching settings.

EFL Learners Need Scaffolding for the Use of ICTs in Language Learning

One significant conclusion reached by this study is that EFL learners do not fully exploit the potentials of ICT tools in learning language. As implied in their responses to ICTLLS, they are most probably not aware of the promises of the ICT tools underlined in relevant literature. For example, nearly half of the participants (41%) had never used games in their educational activities, nor are they frequent gamers in their daily lives (see table 1). This could provide language teachers with some insights as students playing online games several times a year or never would not automatically appreciate the significance of games in language learning and they may need scaffolding from teachers regarding proficiency on playing games. Thompson (2013), in that vein, observes that learners who do not prefer games in their daily lives would not find them engaging in an educational context. This is also the case with such Web 2.0 tools as LMSs, blogs, wikis, podcasts and social networking sites. Since the majority of learners use these tools infrequently there is an argument that they need guidance on their use. It is also suggested that language practitioners inform their students about these tools to raise students' awareness about the possible outcomes of using Web 2.0 tools for language learning.

Contemporary EFL Learners Are Moderately Digital Natives

EFL learners in this study self-reported having the characteristics of digital nativeness at a moderate level, which shows that they had a desire to learn instantly useful things and to access information quickly. This finding, however, should be taken with caution from a pedagogical perspective as inclinations to get information quickly could impede taking full advantage of the web for learning. Following Thompson (2013) who notes that

performing digital characteristics does not guarantee effective use of web technologies for learning, it is suggested that educators of the current students should acknowledge this trait and provide explicit instruction helping students make effective use of the web. Additionally, the relatively higher results on thriving on instant gratification of EFL learners could transform into an expectation of instant feedback in learning contexts. In support of this inference, Butler (2015) studying computer games in an EFL context, reports that EFL learners as digital natives place much value on instant feedback. Though the connection might not be that straightforward, this finding still bears some implications for the language teachers who wish to develop an insight regarding the expectations of the students while learning. It is, therefore, recommended that EFL teachers recognize this characteristic of EFL learners while planning their teaching practices.

Concluding Remarks

Results from this study affirmed previous research through the findings that:

1. Digital nativeness is valid only in terms of established ICT tools (Kennedy et al., 2007, Kennedy et al., 2008; Nagler and Ebner, 2009) as the majority of students are not frequent users of emerging technologies.
2. It would be too simplistic to count *age* as a predictor of digital nativeness (Jones et al., 2010) as no significant difference regarding the use of ICT tools has been observed among the age groups in this study.
3. Within the language learning domain, the use of ICT tools is far from being an established practice (Jung, 2006; MacLean and Elwood, 2009).

Besides, this study has added several noteworthy findings that support an emerging body of literature. The finding about relatively limited use of Web 2.0 tools both in general and educational activities could serve as an advisory for language teachers assuming digital natives are natural users of all types of ICT tools. This suggests that learners may need scaffolding from teachers in their technology integrated learning activities. Regarding the attributes of digital natives, this study found that EFL learners consider themselves digital natives at a moderate level, possessing some of the traits of the digital native generation, which provides teachers with some indication of what is needed when planning instructional activities.

Though this study adds to our understanding of the patterns of ICT use and digital characteristics of EFL learners, the self-report nature of the instruments remains a limitation. Another limitation of this study is related to the population; first year university students learning English, which makes the generalizability of the findings to the non-college-bound or older EFL learners limited. Further studies could focus on different student populations through experimental designs to investigate actual ICT use among EFL learners.

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