

Determining a Mobile Internet Acceptance Model of Special Education Teacher Candidates

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Abstract—This is the general aim study is to determine the mobile Internet acceptance model of special education teacher candidates. A quantitative method is employed in the study. The research is conducted during the spring semester of 2016–2017. The study group consists of teacher candidates studying at the Department of Special Education at the Faculty of Education. Total of 107 teacher candidates participated in the study. ‘Mobile Internet use scale’ was administered to the special education teacher candidates. Data collected via online survey. The collected data was analyzed with SPSS program. To analyze the data collected through mobile Internet use scale, frequency, percentage, mean, standard deviation, minimum and maximum values, Kruskal–Wallis H-test and t-test were conducted. The results of the study reveal that the mobile Internet acceptance model of special education teacher candidates is positive.

Keywords—Mobile Internet, teacher candidates, special education

1 Introduction

It is obvious that mobile Internet use makes life more convenient with regards to its structure, convenience and advantages [1]. Through this way research, new trends in mobile teaching activities will be set up in the coming years and a new path for researchers will be shown [2]. Also the use of learning technologies offers a variety of possibilities that are not possible with other environments[3], especially for learning smartphone users [4]. Virtual banking, universities that offer distance learning, online shopping and distribution services also increase the use of mobile Internet [5]. It is also a subject of interest; to what extent the special education teacher candidates facilitate the ever-growing use of mobile Internet. Mobile Internet and smart devices are of great significance for special education teacher candidates for a more effective learning environment [6]. Arslan and Unal’s study (2013) reveal the research findings conducted by the Turkish Statistical Institute that the use of smart phones and mobile Internet has reached up to 90.5% and that this percentage comprises of young population [6].

Certain features of mobile devices and mobile Internet such as convenience to carry, recording voice and sound, taking photographs and recording videos and convenience to store data form the grounds of its widespread use [7]. Teacher education is of great importance in terms of teaching profession [8]. The efficiency of its use is also emphasised with regards to their convenience of sharing information among individuals in educational and instructional processes as well as their convenience for taking less space and low costs [9]. When all these points are taken into consideration, it is revealed that the tendency towards mobile Internet use is valid and it is in a positive progress [10]. In this study, mobile internet method was used in teaching method [2]. The use of mobile Internet is in progress and it is an alternative to traditional education, and its functionality increases rapidly [6].

The widespread use of mobile Internet every day has become a significant material for teacher candidates [11]. Likewise, the use of technology among teacher candidates and the fact that mobile Internet is one of the most widely preferred technologies of today put emphasis on the research intended for teacher candidates' use of mobile Internet and their education [12].

The adaptation of modern technologies and virtual programs into education provides various innovative educational and learning opportunities to educators and instructors [13]. The number of users of mobile Internet with a wide range of practices increases every day due to its rapid growth and appeal to all segments of society.

1.1 Purpose of the study

This study aims to determine the mobile Internet acceptance model of special education teacher candidates.

In order to reach this aim, the answers to the following questions have been sought:

1. What is the knowledge of special education teacher candidates on mobile Internet use in general?
2. Is there a difference between the mobile Internet acceptance model of special education teacher candidates and their sexes?
3. Is there a difference between the mobile Internet acceptance model of special education teacher candidates and their age groups?
4. Is there a difference between the mobile Internet acceptance model of special education teacher candidates and their class levels?

2 Method

This section presents the findings related to the purposes, results with regards to the findings and comments regarding the determination of mobile Internet acceptance model of special education teacher candidates.

The study is conducted with a quantitative methodology and designed to determine the mobile Internet acceptance model of special education teacher candidates.

2.1 Instruments

1. Personal information form (Demographic data): personal information form consists of questions to collect data for; sex, age, class group, the daily use of mobile Internet and mobile devices, daily use of Internet and social media.
2. Mobile Internet use scale: a 5-item Likert-type scale is used to collect data from the teacher candidates regarding their use of mobile Internet. The scale consists of 20 items about mobile Internet use. All of the 20 items of the scale are positive statements. Among the items, 1-point states ‘I Strongly Disagree’ while 5-points state ‘I Strongly Agree’.

2.2 Participants

A total of 107 volunteer teacher candidates studying at the Special Education Department of a private university participated in the study. The study is conducted during the spring term of 2016–2017.

Sex. The distribution of the sexes of teacher candidates participating in the study is presented in Table 1.

As seen in Table 1, 63.6% (68 people) of the teacher candidates in the study group are male and 36.4% (39 people) are female. The findings in the sex group reflect the real distribution of sexes.

Age. The distribution of age groups of the teacher candidates participating in the study is presented in Table 2.

The distribution of age groups of the teacher candidates who took part in the study are presented in Table 2. According to this distribution, 86.9% (93 people) of the teacher candidates are between the age group 18–25, while 13.11% (14 people) of the teacher candidates are between 26–33 age group.

Daily use of mobile Internet. Daily use of mobile Internet of the teacher candidates participating in the study is presented in Table 3.

Table 3 reveals the information regarding the daily mobile Internet use of teacher candidates participating in the study. According to this distribution, 37.4% (40 people) use mobile Internet for 1–3 hours, 37.4 (40 people) use mobile Internet for 3–5 hours, 15.0% (16 people) use mobile Internet for 5–7 hours and 10.3% (11 people) use mobile Internet for seven hours or more daily.

Daily use of mobile devices. Daily use of mobile devices of the teacher candidates participating in the study is presented in Table 4.

Table 4 demonstrates the daily mobile device use of teacher candidates participating in the study. According to this distribution; 33.6% (36 people) of the teacher candidates use mobile devices for 1–3 hours, 33.6% (36 people) use mobile devices for 3–5 hours, 23.4% (25 people) use mobile devices for 5–7 hours and 9.3% (10 people) use mobile devices for 7 hours or more daily.

Daily use of Internet. Daily Internet use of the teacher candidates participating in the study is presented in Table 5.

Table 5 reveals the information regarding the daily Internet use of teacher candidates participating in the study. According to this distribution, 22.4% (24 people) use

Internet for 1–3 hours, 26.2% (28 people) use Internet for 3–5 hours, 30.8% (33 people) use Internet for 5–7 hours and 20.6% (20 people) use Internet for 7 hours or more daily.

Table 1. The distribution of sexes of teacher candidates participating in the study

Sex	<i>f</i>	%
Male	68	63.6
Female	39	36.4
Total	107	100.0

Table 2. The distribution of age groups of teacher candidates participating in the study

Age group	<i>f</i>	%
18–25	93	86.9
26–33	14	13.1
Total	107	100.0

Table 3. The distribution of daily use of mobile Internet of teacher candidates participating in the study

Daily use of mobile Internet	<i>f</i>	%
1–3 hours	40	37.4
3–5 hours	40	37.4
5–7 hours	16	15.0
7– or more	11	10.3
Total	107	100.0

Table 4. The distribution of daily use of mobile devices of teacher candidates participating in the study

Daily use of mobile devices	<i>f</i>	%
1–3 hours	36	33.6
3–5 hours	36	33.6
5–7 hours	25	23.4
7– or more	10	9.3
Total	107	100.0

Table 5. The distribution of daily use of Internet of teacher candidates participating in the study

Daily use of Internet	<i>f</i>	%
1–3 hours	24	22.4
3–5 hours	28	26.2
5–7 hours	33	30.8
7– or more	22	20.6
Total	107	100.0

Daily use of social media. Daily social media use of the teacher candidates participating in the study is presented in Table 6.

Table 6. The distribution of daily use of social media of teacher candidates participating in the study

Daily use of social media	<i>f</i>	%
1–3 hours	26	24.3
3–5 hours	36	33.6
5–7 hours	26	24.3
7– or more	19	17.8
Total	107	100.0

Table 6 demonstrates the daily social media use of teacher candidates participating in the study. According to this distribution; 24.3% (26 people) of the teacher candidates use social media for 1–3 hours, 33.6% (36 people) use social media for 3–5 hours, 24.3% (26 people) use social media 5–7 hours and 17.8% (19 people) use social media for 7 hours or more daily.

2.3 Data analysis

The data collected through the survey is analysed with SPSS IBM 24.0 program. The results of the analysis are presented with percentages, frequency and descriptives, *t*-test (independent samples *t*-test) and Kruskal–Wallis H-test.

3 Results

This section presents the comments and results with regards to the findings related with the purposes to determine the mobile Internet acceptance model of teacher candidates studying at the Department of Special Education.

3.1 General results of the knowledge of special education teacher candidates on mobile Internet acceptance model use

The descriptive statistics to determine the knowledge of special education teacher candidates on mobile Internet use are presented on Table 7.

As can be seen in Table 7, when the mobile Internet use knowledge of teacher candidates studying at the Department of Special Education is analysed, it is revealed that the views of teacher candidates on the knowledge of mobile Internet use is at a positive level. Although there is a significant difference among many of the statements, the statement of ‘Use of mobile Internet makes my Internet actions more practical’ has a mean of $\bar{X} = 3.93$, is among the most notable statements. Likewise one of the most notable statements of special education teacher candidates ‘It is important to

Table 7. The descriptive statistics of the knowledge of special education teacher candidates on mobile Internet acceptance model use

No.	Items	\bar{X}	SD
1	Mobile Internet allows me to operate more quickly on the Internet	3.85	1.299
2	Use of mobile Internet makes my Internet actions more practical	3.93	1.191
3	Use of mobile Internet is practical for the actions on the Internet	3.88	1.207
4	The use of mobile Internet is easy for me	3.85	1.277
5	It is easy to learn to use mobile Internet	3.82	1.211
6	I find myself competent at mobile Internet use	3.77	1.118
7	It is a good idea to use mobile Internet	3.83	1.177
8	I enjoy using mobile Internet	3.73	1.160
9	Mobile Internet use is desired	3.67	1.257
10	Using mobile Internet is a wise idea	3.78	1.213
11	I use mobile Internet when I need to use Internet	3.69	1.284
12	I presume that I will use mobile Internet when I have access	3.64	1.260
13	I will continue to use mobile Internet in the future	3.78	1.213
14	It is important to make audio and video calls through mobile Internet	3.88	1.276
15	It is possible to read e-magazine, e-books and e-newspapers through mobile Internet	3.86	1.229
16	It is possible to follow social media closely (Facebook, twitter, etc.) through mobile Internet	3.89	1.273
17	It is possible to check e-mails whenever and wherever desired through mobile Internet	3.78	1.296
18	People who use mobile Internet has more prestige than people who do not	3.53	1.253
19	People who use mobile Internet are high level people	3.14	1.369
20	Using mobile Internet is a status symbol	3.28	1.439
Total		3.73	0.886

make audio and video calls through mobile Internet’ also has a mean of $\bar{X} = 3.88$. Another significant statement of teacher candidates of Special Education Department ‘It is possible to follow social media closely (Facebook, twitter, etc.) through mobile Internet’ has a mean of $\bar{X} = 3.89$. Among other statements ‘The use of mobile Internet is easy for me’ has a mean of $\bar{X} = 3.85$. Finally, the general total mean of mobile Internet use knowledge of teacher candidates of the Department of Special Education is $\bar{X} = 3.73$. In light of the obtained results, it may be inferred that the mobile Internet acceptance model knowledge of special education teacher candidates are high.

3.2 The comparison results of the knowledge of special education teacher candidates on mobile Internet acceptance model with regards to sex

The data regarding the results of the independent samples *t*-test conducted to determine whether there is a significant difference with regards to sex of teacher candidates studying at the Department of Special Education is presented in Table 8.

Table 8. The knowledge of teacher candidates on mobile internet acceptance model with regards to sex

Mobile Internet use	Group	<i>N</i>	\bar{X}	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
	Male	68	3.74	0.959	105	0.210	0.063
	Female	39	3.71	0.751			

As seen in Table 8 the arithmetic mean and standard deviation scores of male candidates' knowledge on mobile Internet use are calculated as ($\bar{X} = 3.74$, *SD* = 0.959), while the arithmetic mean and standard deviation scores of female teacher candidates' knowledge on mobile Internet use are calculated as ($\bar{X} = 3.71$, *SD* = 0.751). The obtained result reveals that there is no significant difference between the sexes of the students studying at the Department of Special Education (*t* = 0.210, *P* > 0.005).

3.3 The comparison results of the knowledge of special education teacher candidates on mobile Internet acceptance model with regards to age group

The data regarding the results of the independent samples *t*-test conducted to determine whether there is a significant difference between the knowledge on mobile Internet use of teacher candidates studying at the Department of Special Education and their age groups is presented in Table 9.

Table 9. The knowledge of teacher candidates on mobile internet acceptance model with regards to age group

Mobile Internet use	Age	<i>N</i>	\bar{X}	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
	18–25	42	3.75	0.865	105	0.476	0.846
	26–33	59	3.62	1.043			

As seen in Table 9, the arithmetic mean and standard deviation scores of candidates' knowledge on mobile Internet use at the age group of 18–25 are calculated as ($\bar{X} = 3.75$, *SD* = 0.865), while the arithmetic mean and standard deviation scores of teacher candidates' knowledge on mobile Internet use at the age group of 25–33 are calculated as ($\bar{X} = 3.62$, *SD* = 1.043). The obtained result reveals that there is no significant difference between the age groups of students studying at the Department of Special Education (*t* = 476, *P* > 0.005).

3.4 The comparison results of special education teacher candidates on mobile Internet acceptance model with regards to class levels

The results of the Kruskal–Wallis H-test conducted to determine the mobile Internet acceptance model of teacher candidates studying at the Department of Special Education are presented in Table 10.

Table 10. The comparison results of special education teacher candidates on mobile internet acceptance model with regards to class levels

Mobile Internet acceptance model	Class	N	Mean rank	SD	X ²	P
	1st Grade	71	60.32	2	8.87	0.012
	2nd Grade	29	40.72			
	3rd Grade	7	44.86			

As seen in Table 10, there is a significant difference for mobile Internet acceptance model of special education with regards to their class levels ($\chi^2(2) = 8.87; P = 0.012; P < 0.05$). When the mobile Internet acceptance model is compared with regards to the special education teacher candidates' class levels, it is revealed that the mobile Internet use acceptance model of the students studying at the group of 1st grade are higher than that of the students studying at the 2nd and 3rd grades.

4 Conclusion and discussion

The results of the study reveal that, 37.4% (40 people) use mobile Internet for 1–3 hours, 37.4 (40 people) use mobile Internet for 3–5 hours, 15.0% (16 people) use mobile Internet for 5–7 hours and 10.3% (11 people) use mobile Internet for seven hours or more daily. In their study titled ‘Internet Addiction Among University Students and Related Socio-Demographic Factors’ Aslan and Yazici (2016) evaluated the hours of weekly Internet use and revealed that the students with Internet addiction use the Internet for 40 or more hours weekly, the difference reaching a statistically significant difference[14]. In this context, the information on daily use of mobile Internet of teacher candidates studying at the Department of Special Education is revealed.

The results of the study demonstrate the daily mobile device use of special education teacher candidates; 33.6% (36 people) of the teacher candidates use mobile devices for 1–3 hours, 33.6% (36 people) use mobile devices for 3–5 hours, 23.4% (25 people) use mobile devices for 5–7 hours and 9.3% (10 people) use mobile devices for 7 hours or more daily. The results reveal that special education teacher candidates use mobile devices daily mostly for ‘1–3’ and ‘3–5’ hours. In addition, it is also uncovered that 22.4% (24 people) of special education teacher candidates use Internet for 1–3 hours, 26.2% (28 people) use Internet for 3–5 hours, 30.8% (33 people) use Internet for 5–7 hours and 20.6% (20 people) use Internet for 7 hours or more daily. This result shows that special education teacher candidates use mobile Internet daily mostly for ‘5–7’ hours. Finally, the daily use of social media among special education teacher candidates is also demonstrated; 24.3% (26 people) of the teacher candidates

use social media for 1–3 hours, 33.6% (36 people) use social media for 3–5 hours, 24.3% (26 people) use social media for 5–7 hours and 17.8% (19 people) use social media for 7 hours or more daily. According to this result, it is demonstrated that special education teacher candidates use social media mostly for ‘3–5’ hours daily.

In the light of these results, it is seen that the knowledge of teacher candidates studying at the Department of Special Education on mobile Internet acceptance model is at a positive level. In Cakir’s (2010) study titled ‘Developing and Evaluating a Software for Mobile Learning’, many of the participants who had a chance to utilise mobile educational tools and applications have showed an interest for the educational environment and stated that they would like to use if there is a chance[15]. In addition, in Bolat et al.’s (2017) study titled ‘*Investigation of Distance Learners’ Mobile Internet Usage for Instructional Activities Based on the Technology Acceptance Model*’, it is revealed that the attitudes of distance learners towards mobile Internet use are positive. In addition, in the study titled ‘*Development and Validation of Mobile Addiction Scale: The Components Model Approach*’ by Fidan (2016), it is uncovered that the mobile Internet access is quite widespread and that the uses of mobile telephones for Internet purposes are higher than that of the purposes of phone communication [16].

The results of the study reveal that there is no significant difference between the sexes of the teacher candidates studying at the Department of Special Education. In the study conducted by Karaaslan and Budak (2012) titled ‘*Research on the Use of Mobile Phone Features by University Students and Its Impact on Their Communication Practices in Everyday Life*’, uncover that female students use the mobile access feature of their mobile telephones more than the male students[17]. In addition, in their study titled ‘*Internet Addiction and the Level of Subjective Well-Being in Adolescents*’, Derin and Bilge (2016) reached the results that the Internet addiction mean score of females is $f = 69.26$, while the Internet addiction mean score for males is $f = 78.33$ [18].

Finally, it is uncovered that there is no significant difference between the age groups of special education teacher candidates, while the mobile Internet acceptance model of 1st grade teacher candidates shows difference in comparison to the other class groups. According to this result, it may be inferred that the 1st grade teacher candidates have higher scores compared to the other grades due to the retention of knowledge, as a result of the technology course given at the first grade term and their use of mobile Internet during the day. This study conducted on special education teacher candidates finally reveals that it should be useful for teacher candidates and individuals to include mobile Internet acceptance model in other research.

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