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## The Evaluation Of The Most Used Mobile Devices Applications By Students

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### Abstract

Mobile devices and mobile device applications have become an indispensable factor in our daily lives. Recent research shows that the usage of mobile devices is gradually increasing. With the increase use of mobile devices, the use of mobile device applications has been an agenda for the purpose of education. Due to the factors, which mobile devices hold, the applications downloaded for the intention to operate the process of education are increasing day by day. In this study, the applications most used by students on mobile device's will be determined and for these applications to be used in the process of education. Within the scope of this study, a questioner was applied to 72 university students using mobile devices. When the result of the questioners where taken in to account, it has been established that the university students did not use their mobile device applications for educational purposes, but mainly they used them for communication and social networking purposes. If opportunities offered by mobile device applications are used for educational purposes, a more effective education environment could be created.

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### 1. Introduction

The rise of mobile devices sale rates and popularity use of applications have substantially started to direct our lives. At first these mobile devices were only used for telephone calls and for text messages. However these days mobile devices are used for different purposes (Dewitt & Siraj, 2011). In recent times the importance of mobile devices in our lives has been a subject to many studies and the number of research of these studies has raised sufficiently (Aldhaban, 2012). Many people prefer to get devices, which support different applications such as smart phones or tablet computers instead of ordinary telephones. The most important reason for these preferences is the ease of use, variety of different applications and the richness of functions. However for effective use of mobile devices different applications should be downloaded and there will be benefits if these applications are used for educational purposes. (Kesen, 2012).

It could be seen that in a short period of time there has been a big change in mobile devices. As well as smart phones are now no different than computers; the use of mobile devices is gradually increasing. In the research IDC (International Data Corporation) conducted, 305 million smart phones were sold globally in 2010. In 2011, 494 million items were sold with a 62% rise. Also in the same research, it is guessed that 660 million telephones were sold in 2012 and as of 2015 1 billion smart phones expected for sell. With the sales rate of smart phones rising from year to year, the rise of smart phone sales is an indication of the rise of use in smart phones (IDC, 2012).

Nowadays mobile devices can do things, which computers can without any problem or complications such as data transmission, Internet access, emails etc. In the upcoming years, mobile devices will be meet Internet connection. These mobile devices will be the basic Internet connection tools. It is for seen that corporations will use mobile devices instead of desktop computers for data processing (Laudon & Laudon , 2012).

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## 2. Purpose of Research

The purpose of the study is, because of mobile devices and mobile device applications have become indispensable components of our daily lives, there will be an investigation on the most popular mobile device applications and to increase the use of these applications within education. For the content's purpose, answers were searched for the questions below. The study attempted to find out the answers to the following subjects:

1. The reasons why students use mobile device applications and what are the most used applications?
2. The frequency of checking their mobile devices, what are the cases of application usage?
3. What are the cases of downloading e-books to mobile devices?

## 3. Method

### 3.1. Participants

This study was conducted by 72 undergraduate volunteers from Computer Education and Instructional Technology (CEIT) and Pedagogical Formation Departments in Near East University in Cyprus. The questioner was formed by students in 2012-2013 Fall semester period, 43, 1% is women and 56, 9% is men.

### 3.2. Instruments

Data was collected via questioner, which was developed by researchers. The questioner was formed from two sections. In the first section, there is personal information about students. In the second section, purposes of mobile devices usage were given and analysis was made. Cronbach's alfa reliability coefficient of this scale was 0,92.

### 3.3 Data Analysis

Using developed scale-collected data. After analysing the data collected from questioner by using percentages with SPSS program, frequency and statistical analysis techniques were used.

## 4. Results & Discussion

### 4.1. The reasons of using applications on mobile devices by students

As it can be seen from Table 1, that 47,2% of students use applications of mobile devices mostly because of need. Respectively, findings showed that 41,7% of students use applications for communication purposes, 26,4% because of being popular, 20,8% because of curiosity, and the least percentage is educational purposes with 22,2%. In the report of Barker & Asmundson (2013) related with mobile devices it was stated that Turkey is in the leading position with Internet usage on smart phones between developing countries with a ratio of 91% and 9 out 10 of smart phones are connected to the Internet in Turkey.

In report estimating the increase in smart phone sales, it is stated that total sale number of smart phones is expected to come up 2 billion at the end of 2013. In the same report, it is indicated that the usage of tablets will double in 4 years time. It is stated that, whereas with a higher tariff charge on calls in Turkey, percentage of the users who want to connect to a limitless internet is 24%, on the other hand with a lower charge, 33% of users want to connect unlimited to their favourite applications only. Whereas the first service, which these users mostly want to use, is Facebook with 78%, respectively e-mail and Youtube follows it. In the research prepared by Cisco (2012), in Turkey and in other 17 countries, approximately 70% of participants indicated that mobile applications have a very important place in their everyday lives.

Table 1. Distribution of the reasons students using mobile device applications

Items	Yes		No	
	f	%	F	%
Because of being popular	19	26,4	53	73,6
Because of curiosity	15	20,8	57	79,2
Because of needs	34	47,2	38	52,8
Communication purpose	30	41,7	42	58,3
Education purpose	17	22,2	55	77,8

#### 4.2 The cases of students checking their mobile devices

As it can be seen from Table 2, the majority of students who have participated in the questioner (58%, 3) stated that they check their mobile devices at least 31 times a day. Only 1,4% of students stated that they only check their mobile devices 10-15 times.

In Oulasvirta, Rattenbury, Ma & Raita (2012) study, it is shown that users are not addicted to their smart phones, however they were addicted to current news, which came with smart phones' applications, and the habit to checking their e-mails or social network sites. As a result of the research, an average user will check their smart phone 35 times, while an addicted user checks much more.

Table 2. Distribution of the cases of students checking their mobile devices

Items	f	%
10-15 times	1	1,4
16-20 times	11	15,3
21-25 times	11	15,3
26-30 times	7	9,7
31 and more	42	58,3
Total	72	100

#### 4.3 The cases of students using mobile device applications

As it can be seen from Table 3, the cases of students using mobile device applications have been examined according to duration of usage, frequency, purpose and place of use. The majority of students stated that they use mobile device applications every day. The order of frequency of using mobile device applications by students are as followed; every day users (69,4%), once a week (15,3%), a couple days a week (15,3%).

A study conducted in an English lesson by Thomton & Houser (2005), they have sent e-mails to 44 Japanese university students' mobile phones periodically to increase systematic studying. They compared these students with the other students who were directed to study systematically with paper or different materials. It has been seen that, students learn better by using mobile applications, 71% of students prefer to use mobile devices. In the study of Küçükarslan and others (2009), they have argued that positive effects will emerge if mobile devices are used in education.

Table 3. Distribution of the cases of students using mobile device applications

Items	f	%
Every day	50	69.4
Once a week	11	15.3
Couple days a week	11	15.3
Total	72	100

#### 4.4 The cases of students downloading e-books to their mobile devices

As it can be seen from Table 4, 38,9% of students have stated that they download e-books on their mobile devices, whereas 61,1% prefer to download other applications. According to data collected from e-book site named Indefix, Kural (2012) stated that the number of e-book readers have increased in time in Turkey. In 2010, after Indefix had put e-book tablet reading into service, the the number of “Library” application users increased 4 times more than the previous year and noted that it has reached 150.000 users. According to research of Indefix, it is explained that in the last 2 years because of “Library” application, 84% of e-book reading users have become new members of Indefix. The habit of book reading is changing direction because of the developing technology and mobile device application usage. The e-books, which can be read any time anywhere, are important applications for reaching and sharing information. This application will gain a different dimension for educational purposes.

Table 4. Distribution of the cases of students downloading e-books to their mobile devices

Items	f	%
Yes	28	38.9
No	44	61.1
Total	72	100

#### 4.5 The most frequently used applications on mobile devices which students use

As it can be seen from Table 5, the order of the applications which the students most prefer to use are as followed; Facebook (86.1%), Youtube (70.8%), Whatsapp (62.5%), Skype (56.9%) and Twitter (52.8%). It is seen that, the applications which the students most prefer are usually social networking purposes. The applications which the students least prefer are Evernote (13.9%), Pinterest (13.9%), Dropbox (19.4%), Facetime (26.4%) and TeamViever (27.8%). Results based on the report Barker & Asmundson about mobile devices support this research . Facebook comes to the forefront with 78% as the users’ most preferred service, and the followers will be e-mails and Youtube. In a different study, the number of logins to Facebook via mobile devices have been determined with the total number of subscribers passing 1 billion. By the end of 2012, the number of users are as followed; 192 million Android, 147 million Iphone(iOs), 48 million Ipad(iOs), 60 million RIM(Blackberry), 16 million Windows Phone (Evans, 2013). As a result, it is determined that facebook usage ratio on mobile devices are apprecibly high. According to this result, facebook application usage for educational purpose is on the agenda. It will have positive effects on students when used for educational purposes. In the study of Bicen and Ozdamli conducted in 2012, they came up with the result that the applications as Evernote, Dropbox from Cloudcomputing services are used in educational purposes could have positive effects on the students. If these applications are used for educational purposes, then the usage will increase.

Table 5. Distribution of the applications, which are, used most by students

Items	I use		I do not use		I think about using	
	f	%	f	%	f	%
Facebook	62	86,1	10	9,7	3	4,2
Youtube	51	70,8	19	26,4	2	2,8
Whatsapp	45	62,5	20	27,8	7	9,7
Skype	41	56,9	26	36,1	5	6,9
Twitter	38	52,8	30	41,7	4	5,6
Viber	32	44,4	35	48,6	5	6,9
Instagram	31	43,1	32	44,4	9	12,5
Tango	25	34,7	45	62,5	2	2,8
Chorome	24	33,3	40	55,6	8	11,1
Safari	24	33,3	45	62,5	3	4,2
Foursquare	21	29,2	44	61,1	7	9,7
Maps	20	27,8	46	63,9	6	8,3
TeamViewer	20	27,8	47	65,3	5	6,9
Facetime	19	26,4	46	63,9	7	9,7
Dropbox	14	19,4	56	77,8	2	2,8
Pinterest	10	13,9	54	75,0	8	11,1
Evernote	10	13,9	58	80,6	4	5,6

### 3. Conclusion

Nowadays, the usage of mobile devices, smart phones and tablets together has showed an increase. Usage of the applications developed for these devices are increasing every day. In this study, it has been researched which applications the students use most with mobile devices. With this research, for the most used applications contents for educational purpose will be formed and new learning approaches will be examined. When the research finding were examined, it can be seen that the students use their mobile devices when they most need and for communication purposes. Besides this, it is seen that these devices were checked at least 31 times a day, but not used for educational purposes as much. Students have noted that they use the applications on their mobile devices every day, on the other hand e-book application is low on usage. According to these findings, there are not many studies on mobile device usage for educational purposes, and students do not know how they could reflect these applications to their education. Students mostly use social networking applications. Among these applications, the most popular are Facebook, YouTube, Whatsapp, Skype, Twitter and Viber. In the following studies, the approach will be based on the students' preference to use the applications for educational purposes.

### References

- Aldhaban, F. (2012). "Exploring the Adoption of Smartphone Technology: Literature Review", 2012 Proceedings of PICMET'12: Technology Management for Emerging Technologies.
- Barker, J. & Asmundson, P. (2013). "State of the Global Mobile Consumer: Connectivity is core" Retrieved January 11, 2013, from <http://www.deloitte.com/mobileconsumer>.
- Bicen, H. & Ozdamli F. (2012). The Cloud Computing Preferences of University Students. IV. International Future-Learning Conference on Innovations in Learning for the Future 2012: e-Learning (Nov 14-16, 2012, Istanbul, Turkey).
- Cisco (2012). "Cisco Connected World Technology Report". Retrieved January 11, 2013, from <http://www.cisco.com/en/US/netsol/ns1120/index.html>.
- Dewitt, D., & Siraj, S. (2011). Learners perceptions of technology for design of a collaborative mLearning module. *World Journal On Educational Technology*, 2(3). Retrieved March 4, 2013, from <http://www.world-education-center.org/index.php/wjet/article/view/172>.
- Evans. (2013). "Facebook's 470m mobile app users", Retrieved January 14, 2013, from <http://ben-evans.com/benedictevans/2013/1/2/facebook-545m-mobile-app-users>.
- IDC. (2012). "Worldwide Smartphone 2012–2016 Forecast Update", Retrieved January 15, 2013, from <http://www.idc.com/getdoc.jsp?containerId=235193#UP-6bR26fSk>.
- Kesen, M. (2012). "Akıllı Mobil Cihazları Etkin Kullanmak İçin En İyi Uygulamalar" Retrieved January 12, 2013, from [http://www.tid.web.tr/ortak\\_icerik/tid.web/151/29-%20mesut%20kesen.pdf](http://www.tid.web.tr/ortak_icerik/tid.web/151/29-%20mesut%20kesen.pdf).
- Küçükarslan, S., Koçak, Ş., Kara, M. (2009). "Cepte Taşınabilir Aygıtların Eğitimde Kullanılması Üzerine Bir Öneri: Mp4 Oynatıcı Örneği", IX. Akademik Bilişim Konferansı Bildirileri.
- Kural, S. (2012). "Türkiye'de E-Kitap Okuma Oranı Bir Yılda Dört Kat Arttı", Retrieved January 18, 2013, from <http://sosyalmedya.co/e-kitap-okuma-orani-artti>.
- Laudon, K. J. & Laudon, J. P. (2012). "Management Information Systems: Managing the Digital Firm", Prentice Hall, Boston, USA, 181.
- Oulasvirta, A., Rattenbury, T., Ma, L., & Raita, E. (2012). Habits make smartphone use more pervasive. *Personal and Ubiquitous Computing*, 105-114.
- Thornton, P., & Houser, S. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning*, 21, 217-228.