Perspectives of Students on Acceptance of Tablets and Self-directed Learning with Technology

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Abstract

Recent mobile learning technologies offer the opportunity for students to take charge of the learning process both inside and outside the classroom. One of these tools is the tablet PC (hereafter 'tablet'). In parallel with increased access to e-content, the role of tablets in learning has recently begun to be examined. This study aims to reveal the relationship between the level of acceptance of tablets (TAM) and the level of self-directed learning with technology (SDLT) of students and to differentiate these in terms of gender. A mixed method research design is used in this study. In addition, the qualitative part of the study aims to determine the reasons students have for using or not using tablets for supporting learning. The study group consisted of 414 high school students, involved in the pilot application group of the FATIH project in Turkey. According to the study, a significant positive relationship was determined between four of the variables of tablet acceptance and the SDLT level. While the degree of acceptance of tablets was different according to gender, the SDLT level was not.

Keywords: Tablet computers; Self-directed learning; Secondary education; Learning with technology; Gender studies

Introduction

Although tablets first emerged at the end of the 1980s, the first types were not widely adopted because of issues with operating systems, low computer processing speeds, internet connection problems, constraints in other characteristics and their size and weight (Atkinson, 2008; Gerpott, Thomas, & Weichert, 2013). In recent years, tablets have offered increasingly tempting opportunities to users in industries such as health, construction and education due to their portability, ease-of-use and other features (El-Gayar, Moran, & Hawkes, 2011). Tablets have provided an opportunity for students to be at the forefront of learning with their introduction into schools. They can provide access to the internet to both retrieve information and contribute to its production, and allow students to use tools such as simulations, wikis and blogs (Moran, Hawkes, & El Gayar, 2010). Mobile technologies such as tablets and smartphones provide new modes and forms of interactions through social networking and an increased possibility of sharing information (Zhong, 2013). Tablets, which strongly aid this kind of interaction and information-sharing, can enhance the possibilities of learning within specific educational environments. Tablets can be used for many activities that support learning and the acquisition of knowledge, including taking notes during the lesson (Steinweg, Williams, & Stapleton, 2010), accessing e-books (Dundar & Akcayir, 2014), using different applications (Keskin & Kuzu, 2015), using computer-aided test instruments (Siozos, Palaigeorgiou, Triantafyllakos, & Despotakis, 2009) and carrying out research through various websites.

In research into state-funded investments in 11 countries, primarily with regard to K12, Turkey was in overall first place with regard to the number of tablets that had been provided to students and for the size of the country's investment in this area (Tamim, Borokhovski, Pickup, & Bernard, 2015). Within its FATIH (The Movement to Increase Opportunities and Technology) project, Turkey distributed 1 437 800 tablets to K12 students up till December 2015. There are plans to distribute 10 600 000 more tablets more from 2016 to 2019 and to provide in-service training for 900 000 teachers on lesson contents (Cakmakci, 2015). In addition, more than 11 million students are registered on the Education Informatics Network (EBA), which contains more than 80 000 learning resources made up of e-books, an e-portal, videos and audio files (EBA, 2016). E-contents thus occupy an important position in terms of providing self-learning opportunities to students.

While the use of computers in the classroom is becoming widespread and investments in this area are increasing, studies on computerization and educational outputs are limited (Bebell & O'Dwyer, 2010). It has been suggested that further research is required to assess tablets' effectiveness in learning environments (Nguyen, Barton, & Nguyen, 2015). Moreover, the degree of acceptance of a technology tends to indicate someone's intention to use it in the present, as well as their belief in its future potential usefulness (Smarkola, 2011). Whether or not mobile learning tools such as tablets are accepted and adopted is an important variable with regards to their use for effective learning in or outside of the classroom.

While learning occurs with tablets in the classroom environment, the learning process also continues outside the classroom. As a result of the rapidly increasing availability of and access to information today it has become difficult to view learning and information-gathering as something confined solely to the classroom environment. It has been suggested that students will increasingly acquire the skills needed in the current transition from mass education to individualized learning by using hand-held computers and smartphones (Corlett, Sharples, Bull, & Chan, 2005).

One of these skills is self-directed learning. Self-directed learners are proactive learners who can take the initiative instead of waiting quiescently (Knowles, 1975). Individuals can acquire advanced cognitive behaviors with mobile self-directed learning skills (Sha, Looi, Chen, Seow, & Wong, 2012). Alongside the level of self-directed learning one of the important variables is technology-aided learning (Holt, 2011; Jung, 2014; Kim, Olfman, Ryan & Eryilmaz, 2014; Lee, Tsai, Chai & Koh, 2014; Shum & Tian, 2014). It has also been stated that the level of self-directed learning is a predictor for the integration of technology (Kirk, 2012). Self-directed learning is among the most important variables for mobile learning environments (Jung, 2014). There has not to date been any research in the literature assessing the relationship between the level of acceptance of tablets and the level of self-directed learning with technology. Gender has also been found to be among the variables that have an effect on the acceptance of technology (Yucel & Gulbahar, 2013), and it has been suggested that studies be conducted on the acceptance of tablets relating to gender (Gungoren, Bektas, Ozturk, & Horzum, 2014).

This study aims to contribute to the field in terms of self-directed learning with tablets by seeking an answer to the questions such as the relationship between SDLT and the acceptance of tablets that have an important potential in terms of in-class and non-class learning, the differentiation of the variables in terms of gender variable, intended use of the tablet computers and why they are not used for learning.

Literature Review

Acceptance of Tablets

Understanding the acceptance of technology involves examining the cognitive and psychological aspects required for this acceptance to occur. It can be looked at by the use of a model which tries to explain factors that are effective for technology to be accepted and adopted (Gungoren et al., 2014). Various models for examining the acceptance of technology have been proposed and a number of them are found in various studies regarding the acceptance of tablets. In research on the acceptance of tablets, TAM (Cuhadar, 2014), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Ifenthaler & Schweinbenz, 2013), modified UTAUT (El-Gayar & Moran, 2007; Moran et al., 2010), and the Theory of Planned Behavior (TPB) (Courtois, Montrieux, De Grove, Raes, De Marez & Schellens, 2014) are the models that we encountered. The 'Technology Acceptance Model (TAM)' aims to measure people's intentions towards and beliefs involving the use of technology (Smarkola, 2011). TAM was the model most commonly selected as a baseline for the theoretical framework in studies examining international research on the expansion, acceptance and adoption of innovations in educational fields (Kaya & Kocak Usluel, 2012; Usluel & Mazman, 2010). Moreover, according to the results of content analysis of international publications, perceived benefit and ease of use are the variables most often studied (Usluel & Mazman, 2010; Yucel & Gulbahar, 2013).

TAM aims to explain the acceptance of technology by users by grounding itself on the perception of users (Davis, 1989). This model tries to predict behaviors within specific situations and uses Fishbein and Ajzen's 'Theory of Reasoned Action' (1975) as a baseline. According to Fishbein and Ajzen, the attitude of the individual affects his/her intention to carry out a specific action and the determinants of how he/she acts. According to the TAM model, Perceived Ease of Use (PEU), has a causal effect on Perceived Usefulness (PU). PU and PEU affect the intention to use a given tool, and this intention affects usage behavior. Perceived Usefulness is defined as "the degree to which an individual believes that using a particular system would enhance his or her job performance." Perceived Ease of Use is defined as "the degree to which an individual believes that using a particular system would be free of physical and mental effort." (Davis, 1986, p.26). This model is shown in Figure 1.
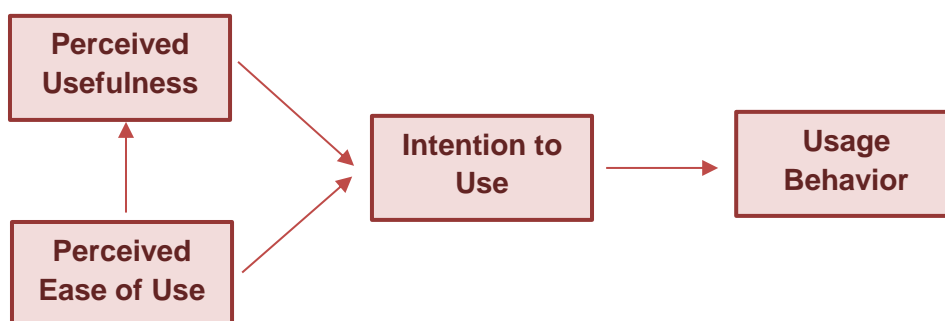

Figure 1. Technology Aceptance Model (Davis, 1986)

The TAM model has been adapted for studies on many different forms of technology and on the acceptance of learning systems using technology, such as learning management systems (Sánchez & Hueros, 2010), e-learning (Park, 2009), e-portfolio systems (Shroff, Deneen, & Ng,

2011), mobile learning (Liaw & Huang, 2011), mobile wireless networks (Kim, 2008), and the tablet (El-Gayar & Moran, 2007).

Self-directed Learning with Technology (SDLT)

Self-directed learning (SDL) describes "a process by which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources to help them in their learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p.18). Knowles, who thinks that the theory of andragogy, which came to light between the years 1970 and 1980 when the discussions about student-teacher centered learning approach were continuing for the learning of adults, can be carried to classroom environment, suggested that both of the approaches can be appropriate for children and adults depending on the situation (Merriam, 2001). SDL is a model that grounds on an integration that is about motivation, internal monitoring, and external management (Garrison, 1997). In addition to forming a basis for the implementation of modern learning approaches, SDL may also saves time and reduce expenditure (Alotaibi, 2015). According to the constructivist learning approach, the objective of education is to implement and achieve individual and self-directed learning (Chen, Kao, & Sheu, 2003). It has been stated that there is a strong connection between SDL readiness and academic performance (Alotaibi, 2015).

At our present day, in which knowledge doubles itself in every 72 hours, SDL abilities have also started to become important with the technology having build-up its place stronger in the curriculum. When we think of cooperation in learning processes, personal liability for learning, self-confidence, persistence in learning and gumption, the help of digital tools have become non-negligible in the knowledge intensive 21st century age (Bryan, 2015). When we think that there will be access to a lot of and various education materials in the environments in which educational technology is used, learners have to be more active and they have to be more self-directed learner (Akerlind & Trevitt, 1999). In the literature, SDL and technology-aided learning are contextualized. Studies have been conducted on topics such as the place of SDL in the e-learning environment (Kim, et al., 2014; Song & Hill, 2007), language learning in the e-learning environment (Lai, Shum & Tian, 2014), the opportunity provided for SDL by blogs (Robertson, 2011), the effect of technology on supporting SDL (Akerlind & Trevitt, 1999; Lai, Shum, & Tian, 2014; Lee et al., 2014; Su, Feng, Hsu & Yang, 2013), SDL in planning an e-lesson (Yamagata-Lynch, Do, Skutnik, Thompson, Stephens, & Tays, 2015), and teaching design to increase SDL (Taminiau, Kester, Corbalan, Spector, Kirschner, & van Merriënboer, 2015).

With regard to SDL it is important to ensure that students can access as many information sources as possible for their own learning needs and in accordance with their interests. Technological developments, which have provided the opportunity to access online information and expertise, may, in that sense, exert a direct influence on SDL (Timothy et al., 2010). In a study conducted with K12 teachers, it was concluded that students' readiness for SDL is a predictor of their ability to integrate technology (Kirk, 2012). It has also been stated that there is a relation between SDL and technology usage (Holt, 2011) and that there is a positive high level relationship between attitude towards computers and self-directed learning with technology (SDLT) (Demir, Yasar, Sert, Yurdugul, 2014). Gender also determines the degree of acceptance of technological devices. It has been suggested that gender is among the most important variables in the acceptance of tablets, and that research is needed in this area (Horzum, Ozturk, Bektas, Gungoren, & Cakir, 2014). As mentioned above, the main objective of

this study is to investigate the acceptance of tablets, and the correlation/differentiation of the variables involved. Within this context, the research questions given below were used alongside the aforementioned literature resources:

1) Do the levels of acceptance of tablets and the levels of SDLT differ according to gender?
2) Does the level of acceptance of tablets correlate with the level of SDLT?
3) What is the purpose of using tablets for students?
4) What are the student's views on not using tablets to assist them with lessons?

Method

Research Model

The quantitative method was used for the research questions on the acceptance of tablets and SDLT, and the qualitative method was used for in-depth analysis of the use of the tablets. Quantitative and qualitative data were used together in this mixed methods design study (Creswell, 2013).

Study Group

414 students participated in this study. They attended three different high schools in which the pilot scheme for the FATIH project had been conducted. Demographic information about the participants is given in Table 1. In addition, qualitative data was gathered from 214 of these students on a voluntary basis. The study was conducted during the spring semester of the 2014-2015 academic year. The schools were chosen from high schools in Ankara teaching students from the 9th to 11th grades. Three public high schools were selected using the convenience sampling method. These schools are located in the Cankaya district of the city of Ankara. This is the district whose level of education is the highest since Ankara is the capital city and Cankaya is the central district (TUIK, 2013). These three state high schools are placed near the top among the most successful schools of Turkey (Turkkamu, 2016).

Table 1. Demographic Attributes and the Level of Tablet Usage

Variable		N	%
Gender	Female	243	58.7
	Male	171	41.3
Grade	9	85	20.5
	10	215	51.9
	11	114	27.6
The level of Tablet usage*	1	49	11.8
	2	24	5.8
	3	67	16.2
	4	99	23.9
	5	175	42.3
Total		414	100

*Tablet usage 1: Very bad, 2: Bad 3: Average, 4: Good 5: Very good

When Table 1 is analyzed, it can be seen that more than half of the participants are female (58.7%), and more than half of the participants are 10th grade students (51.9%). The students' view was that their usage level is quite high. A small number of the students stated that they used a tablet and its applications less than the average level of Tablet usage (17.6%).

From February 2013, tablets were given to student groups in schools where a pilot study was being conducted as one part of the FATIH project. Tablets were also distributed to teachers. The tablets belong to the students and the teachers, and they can use them anywhere they wish. Smartboards were also used in every classroom as part of the FATIH project. The tablets use the Android operating system, have a 7 inch screen, and have application that can open various documents. Tablets were distributed to students for access to all applications and e-learning contents within the EBA Applications Market such as e-books, videos, images, sounds, presentations, courses, exams, magazines, and news; software updating, failure tracking, mobile device management software is established for secure internet; tablet applications can be carried out with V-class implementation; virtual class applications can be carried out with smart board adaptation. Settings and galleries determined by the Ministry of National Education (MNE) were denied. To prevent inappropriate/hazardous usage, a Safe Internet Service was provided, meaning that access to some websites was denied (MNE, 2014).

Data Collection Tools

Data was collected through two scales and a qualitative data collection tool. To measure the acceptance of tablets, the Scale of Tablet PC Acceptance developed by Gungoren, Bektas and Horzum (2014), and the SDLT scale were used (Demir & Yurdugul, 2013).

The Scale of Tablet PC Acceptance

The scale, which uses Davis's (1993) Technology Acceptance Model as a basis (Gungoren et al., 2014) consists of perceived ease of use, perceived benefit, attitude toward usage, and intention in using. Extent, appearance and structure validities are applied for the validity of the scale. Computers and instructional technologies, assessment and evaluation, development psychology and academicians from the field of Turkish language are selected to evaluate content and face validity. The assessment instrument contains 17 items and four factors after EFA analysis. As a result of the criterion validity measurements it is found out that the factors which constitute the scale are compatible and relevant. The variance ratio of the scale was 64.12%. The internal consistency of the 5 point Likert scale was found to be .90. The internal consistency of this study was found to be .96, which is very high. Confirmatory Factor Analysis (CFA- χ^2 /sd= 3.16, SRMR = 0.051, RMSEA= 0.074, AGFI=0.87, GFI=0.91, NFI=0.96, NNFI=0.97 and CFI=0.97) results showed an acceptable consistency for the scale.

The Scale of Self-directed Learning with Technology (SDLT)

The scale, which was originally developed by Teo, Tan, Lee, Chai and Koh (2010), evaluates young people's level of self-directed learning with technology. This is contrary to most self-directed learning scales, which are designed for use by adults. The assessment scale was translated into Turkish by Demir and Yurdugul (2013). The scale is subjected to transformation according to 4

fields and the opinions of 4 linguists. Discriminant and convergent (AVE Value > 0.5) validities are applied for construct validity. It is a 5 point Likert scale with 6 items in total, and a two-factor structure, and it explains 59.3% of the total variance. As a result of validation and credibility studies conducted with 1051 middle school and high school students in Turkey, the internal consistency level of the assessment instrument was found to be .73. In this study, this level was found to be .87 which is quite high. The CFA results ($\chi2$ /sd=5.147, RMSEA=0.063, NFI=0.96, NNFI 0.96, CFI=0.97, AGFI=0 .97) showed acceptable consistency for the scale.

Qualitative data for the study was collected through two questions asked to students at the end of the scale:
1) For what purpose do you use your tablet?
2) If you do not use a tablet as to support your work in lessons, please indicate the reason why.

Qualitative and quantitative data for the study was collected together through one Google form.

Findings

The findings are presented in the order of the research questions. The Kolmogorov-Smirnov test was used to examine the research variables and it was seen that the scores did not show normal distribution (p<0.05). Hence, non-parametric tests were used during the analysis.

Findings Regarding Quantitative Data

The Acceptance of Tablets and the Change in SDLT Level According to Gender

The analysis of the acceptance of tablets and the change in SDLT level according to gender is given in Table 2.

Table 2. Mann-Whitney U Test by Gender

Gender	N	Variable	Mean	Total Points	U	p
Female	243	PU	189.40	46023.50	16377.5	.00
Male	171		233.23	39881.50		
Female	243	PEU	193.25	46959.50	17313.5	.003
Male	171		227.75	38945.50		
Female	243	ATU	196.70	47799.00	18153.0	.026
Male	171		222.84	38106.00		
Female	243	BIU	196.85	47834.50	18158.5	.028
Male	171		222.63	38050.50		
Female	243	SDLT	205.19	469860.50	20214.5	6.36
Male	171		210.79	36044.50		

When the data presented in Table 2 was examined, it was seen that there is a meaningful difference between females and males in 4 variables regarding the acceptance of tablets. These are Perceived Usefulness (PU), Perceived Ease of Use (PEU), Attitude toward Using (ATU) and Behavioral Intention to Use (BIU), (p<0.05). There is no meaningful difference between genders with regards to the SDLT level (p>0.05)

The Level of Acceptance of Tablets and Its Relation with SDLT

The results of Spearman correlation analysis, which was conducted to evaluate the relation between the level of acceptance of tablets and the level of SDLT. It was concluded that there is a positive meaningful relationship between the level of acceptance of tablets and SDLT levels (PU/SDLT=.70, PEU/SDLT=.73, ATU/SDLT=.67, BIU/SDLT=.71).

Findings Regarding Qualitative Data

Data about the intended usage of tablets are given in Table 3.

Table 3. Intended Usage of Tablets

Variable		n	%
Education	Assistance with lessons in general	62	22.06
	Researching information	27	9.61
	E-book	25	8.90
	E-content (video, audio)	10	3.56
	Learning a foreign language	4	1.42
	Other	3	1.07
Entertainment	Game	73	25.98
	Movie, music, TV series	25	8.90
	Social network	24	8.54
	General fun	24	8.54
	Surfing the Internet	4	1.42
Total		281	100

When the data presented in Table 3 is examined, it can be seen that educational usage of tablet is at 46.62% and of use for entertainment is 53.38%. Assistance with lessons in general (22.6%), researching information for homework (9.61%) and reading e-books (8.9%) are the prominent subcategories within the education theme. Games (25.98%), media (movies, music, TV series) (8.9%), social networks (8.54%) and general fun (8.54%) are the prominent subcategories within entertainment.

Major reasons regarding why students do not use tablets to assist them with lessons are given in Table 4.

Among the reasons why students do not use their tablets to assist with lessons, the prominent reasons are not finding it useful (23.13%), restrictions placed on applications and the internet (14.93%), a preference for written resources instead of electronic ones (11.94%), the distracting effect it has while studying (10.45%), the inadequacy of e-content (10.45%), disrupted/slow internet and battery problems (8.96%). In addition, finding the tablet harmful to health (5.2%) and finding it impractical (5.2%) are also among the themes. The primary reason why students do not use tablets to assist with lessons is that students simply do not find their tablets useful.

Tablets were distributed to students with limited applications and restrictions for Internet use and this is given as the second most important reason.

Table 4. The Reasons Why Students Do Not Use Tablets to Assist with Lessons

Variable	N	%
Not useful	31	23.13
Restrictions placed on applications and the Internet	20	14.93
Preference for written resources	16	11.94
Distracting	14	10.45
Inadequacy of e-content	14	10.45
Disrupted/slow Internet	12	8.96
Not using during the lesson	8	5.97
Impractical	7	5.22
Negative effect on health	7	5.22
Battery problem	5	3.73
Total	134	100

Discussion

This study researched the level of acceptance of tablets and the level of SDLT in three schools being used to pilot the FATIH project. The relation among these two variables and differentiation according to gender constitute the quantitative part of the study. In the qualitative part one question was asked to learn about students' reasons for using their tablets and a second question was asked to discover any barriers against using them for educational purposes. According to the research results, there is a meaningful difference on behalf of male students for all the variables in the model for the level of acceptance of tablets. In one study conducted on the attitude of high school students towards tablets, a meaningful difference in terms of gender was not found (Dundar & Akcayir, 2014). In another study, it was concluded that PEU and attitude variables regarding the acceptance of tablets are moderated by the gender variable (Hur, Kim, & Kim, 2014). It has been stated that in situations that demand more effort in learning how to use technological devices, men have more of a tendency to make an effort (Venkatesh & Morris, 2000). However, this problem can be overcome with user-friendly interfaces which require less effort (Hur et al., 2014). It has been suggested that in the acceptance of application-based mobile learning, there is no meaningful difference in terms of gender (Liaw & Huang, 2015). In another study, it was stated that gender affects the intention to use and accept mobile technology for learning (Wang, Wu, & Wang, 2009). However, although the level of SDLT is greater for male students, no meaningful difference was found in current study. In a study conducted with high school students, the level of self-directed learning of students who were learning Information and Communication Technologies (ICT) was found to be related to gender, and a meaningful difference was found to the disbenefit of male students (Asfar & Zainuddin, 2015).

The level of acceptance of tablets and the SDLT level were found to be related. According to these results, PU, PUE, BIU are highly related, while ATU is moderately related to SDLT. Studies have been conducted on the effect of technology in supporting SDL (Akerlind & Trevitt, 1999; Lai et al., 2014; Lee et al., 2014). While it has been shown that the level of readiness for SDL is

an important determinant for technology integration (Kirk, 2012), it also has a strong relation to academic performance (Alotaibi, 2015). Self-directed learning, which is a prominent factor in adult education, has become an important variable for high school students in terms of the proliferation of technology and its position in young people's lives. Because of the rapid expansion and increased availability of information, using only lesson resources and the immediate classroom environment has become difficult. For learning environments in which technology opportunities are presented intensively such as within the FATIH project, studies should be conducted on how to increase the level of SDLT.

With regard to the intended usage of the tablets, the intention to use them for entertainment is slightly greater than for educational usage. Gong and Wallace (2012) also reached a similar conclusion. With regard to the educational usage of the tablets, assistance with lessons in general, researching information for homework and using them as an e-book are prominent. In a study conducted on attitudes towards tablets, there were factors that created a positive attitude towards tablets. These included the ideas that e-books ended the need to carry books around, that a tablet is both fun and practical, that it can help with homework, and that it increased students' interest in lessons (Dundar & Akcayir, 2014). Students not only use tablets to access rich learning materials but also use it for researching information (Alyahya & Gall, 2012). When it comes to leisure activities, using tablets for gaming is prominent, and media and social network usage follow this.

The reasons why students do not use tablets to assist with lessons are, in order: not finding them useful, the restrictions placed on applications and the internet, a preference for written resources instead of electronic ones, that they are distracting, the inadequacy of e-content, and technical problems. The first of these results, not finding them useful, is a variable which is about the acceptance of technology. Moreover, some of the students find tablets harmful to their health. In the study conducted by Dundar and Akcayir (2014), there were similar themes but with different rates, except for the preference for written materials. The Ministry of National Education places some filters on tablets for security reasons, and tablets are distributed for usage with some restrictions. Students want to access more lesson material (training videos, animation and e-books) with tablets, and they also want to use the internet freely (Dundar & Akcayir, 2014). However, the MNE does provide thousands of pages of e-content for the use of students on EBA (EBA, 2016). The distracting effects of tablets when they are not being used for educational purposes were also mentioned (Kinash, Brand, & Mathew, 2012; Wakefield & Smith, 2012). Studies regarding the design of educational contents should be at the forefront of future work. For example, a recent study evaluates tablet applications when studying the problem-solving skills of 5 year old children (Falloon, 2013). In many studies conducted, students do find a tablet beneficial, but it is also suggested that policies should be put in place to help students adapt to learning with mobile technologies. These could involve subjects such as providing motivation, guidance, and technological support (Nguyen et al., 2015).

Conclusion and Recommendations

A meaningful difference in the level of acceptance of the tablet was found between male and female students. It is recommended that the software and hardware tools in tablet computers should be deeply investigated within the context of gender. There was no meaningful difference found in the level of SDLT in terms of the variable of gender, which indicates a positive state of affairs. The SDLT level is a variable that affects academic success and technology integration. The level of SDLT was found to be related to the level of acceptance of tablets. Increasing the

level of acceptance of Tablet PCs will increase the level of SDLT. In future research, studies conducted on factors that affect both variables should provide significant findings with regards to mobile learning.

Tablets can be used for both education and entertainment/leisure activities. Their use for the latter can sometimes be seen as a form of relaxation, and sometimes be seen as a distraction from more important activities. Students can use tablets to assist with their lessons in general, research/search for information and read e-books. Tablets are also used as a support within the classroom environment, given with the opportunities they provide to access information. In this study, gaming was the most commonly mentioned intended usage for the students' tablets. This indicates a situation which does not necessarily seem positive. On the other hand, however, this result could however, be seen as an opportunity: It would be beneficial to design applications relating gaming to learning and to carry out further research to support these. Studies can be carried out in which the data can be acquired directly with the studies in which the computer logs are analyzed that are about which tools the students use more frequently while using tablet computers and for what purpose they use it.

When the reasons why students do not use their tablets to help them with their lessons were examined, not finding the tablets useful was the most prominent choice. Better lesson materials and activities which allow students to benefit from having tablets should be prepared. Teachers should use mobile technologies more effectively, and better motivate students to engage in out of classroom activities to support their SDLT. The restrictions that were placed on the internet and tablet applications should be reconsidered. The preference students expressed for written materials may be attributed to habit, or because e-books which take into account the specifics characteristics and needs of the students have not yet been designed. It is recommended that studies should be carried out in terms of instructional design in which the use of e-contents in tablet computers is evaluated. In addition to current deficiencies in e-content, the fact that tablets can be distracting is another obstacle against their usage as educational tools. However, technical problems such as battery problems were also indicated, although in the future, as the technology continues to develop, such problems are likely to become less and less of an issue.

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