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The Influence of Hedonic and Utilitarian Motivations on Teachers Behavioral Intention to Use Tablet PCs

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Abstract

This study aims to find out the effects of hedonic and utilitarian motivations of the teachers on their behavioral intention to Tablet PC use. The participants of the study consist of 311 teachers using Tablet PC (141 women, 166 men, and 4 not specified gender). Answers of the participants are collected with a 5 point Likert scale consisting of four factors (perceived usefulness, perceived enjoyment perceived ease of use and behavioral intention) and including total of 18 items. The data obtained from the research are analyzed employing the structural equation modeling. According to the results of the study, all the variables in the model explain the 81% of the variance on the behavioral intention to use. The teachers' intentions to use Tablet PC are determined according to the hedonic motivation and their motivations are affected by ease of use of technology. Finally, it is determined that perceived enjoyment and perceived usefulness are strong estimators of behavioral intention and they mediate the perceived ease of use.

Keywords

Teacher

Behavioral Intention

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Introduction

Information and Communication Technologies (ICT) are increasingly entering into our lives in new and unfamiliar ways, therefore the qualities to be given to the individuals who dominate them require to have a dynamic structure as much as ICTs. Researchers and pedagogues continue their studies to increase the use of modern technological tools in education and design more effective learning environments with them. For this reason, technological developments influence the decisions made in education and it is expected from teachers to use technology in their professional life effectively (Teo, 2011). Ministry of National Education and teacher education institutions are trying to develop programs in accordance with this aim. Furthermore, according to the decision made at the World Summit on the Information Society ([WSIS], 2003), countries must use all their opportunities in order to create an individual-centered, development-oriented information society involving everyone with the purpose of making all the individuals in the society a part of lifelong learning in a permanent improvement and to improve the life conditions continuously. Therefore, technological changes shape the society, and new responsibilities are required from individuals and institutions. Additionally, ICT has a place in everyday habits of young people (Johnson, Adams Becker, Estrada, & Freeman, 2014). Therefore, while all these happen, educational institutions cannot be isolated from this change.

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It is seen as a key opinion to include ICT in education and training (Demetriadisa, Barbasb, Molohidesb, Palaigeorgioua, Psillosb, Vlahavasa, Tsoukalasa, & Pombortsisa, 2003; Lim & Hang, 2003; van Braak, 2001). In recent years, investment made in ICT is increasingly going on; technological tool such as tablet PC and intelligent board is being used in classes. Countries such as USA, Singapore, South Korea, Scotland, France, and Thailand have started a big project in order to adapt the ICT to educational system (Pamuk, Çakır, Ergun, Yılmaz, & Ayas, 2013). In Turkey, Ministry of National Education spends a big amount for educational technologies and the ministry lastly has passed a comprehensive and high cost project as the Movement of Increasing Opportunities and Improving Technology (Fırsatları Arttırma Teknolojiyi İyileştirme Hareketi [FATİH]). In the scope of the FATİH project in education which has a 8 billion budget, from the beginning of the project to the end of 2015 it is expected that the number of the Tablet PCs is expected to reach 11.136.572 in total together with the ones have been distributed to the schools until today and 700.000 Tablet PCs to be bought until the end of the year (MEB, 2015).

Global tablet market is increasingly extending; consequently, the rivalry is shifting on the portability of these devices and touch screen (in terms of easiness of use and intuitive user experience) (Nichols, 2007). If the sales figure of these devices named as a modern tablet is analyzed, only in Europe it has risen from 11,5 billion to 53,2 billion since 2010 (European Travel Commission, 2012). According to an analysis made in the USA, sales of tablets will overtake the sales of PCs and laptops and there will be decrease in the sales of PCs (Sherman, 2013). In Turkey also, use of the Tablet PC has reached 1 billion (IAB, 2015).

The use of Tablet PCs as innovative devices and other mobile technologies become widespread in education (Pegrum, Howitt, & Striepe, 2013). Researches on Tablet PCs show that the use of technology in class environment provides the increase of the interest, learning, will and wonder of students toward class, helps their learning and provide students and teachers a rich learning and training environment (Aksal, 2011; Clarke, Svanaes, & Zimmermann, 2013; Delen & Bulut, 2011). Additionally, it is stated that activities in the class and exam evaluations are realized more effectively with Tablet PCs in comparison with laptops. (Cicchino & Mirliss, 2004).

After technology has been included in education, teachers are being trained for the use of these technologies and it is expected to have the ability of technology literacy from them. International Society for Technology in Education (ISTE) is publishing standards for learning, teaching and guiding which are adopted and adapted worldwide. These standards mentions (1) the teachers' being consistent with developing technological and technology oriented sources, (2) the learning, professional developments and productivity of students, (3) efficient use of technology and interpretation of the results of this situation and finally (4) egalitarian , correct and legal use of technological sources (ISTE, 2000). However, it should be first priority the will of the teachers for using this technology and their positive belief, attitude and intention towards technology. It is emphasized that the teachers' knowledge and skills about ICT have a big place in the adaptation of ICT to the learning process of the students (Cüre & Özdener, 2008; Rosen and Weil, 1995; Seferoğlu, Akbıyık, & Bulut, 2008; Usluel, Mumcu, & Demirarslan, 2007). Furthermore, beside the fact that the teachers should have required knowledge and skills to use ICT (Alev & Yiğit, 2009), it is necessary to have belief to use these technologies in their class (Göktas, Gedik, & Baydaş, 2013; Güngören, Bektaş, Öztürk, & Horzum, 2014).

Acceptance and Use of Tablet PC

There are different theoretical perspectives for the acceptance and the use of ICT (i.e., Ajzen, 1991; Davis, 1989; Rogers, 1995). Theory of Planned Action (TPA)) (Ajzen, 1991) Diffusion of Innovations Theory (Rogers, 1995), and Technology Acceptance Model (TAM) are being widely used for explaining owing and the use of ICT. However the main focus of these perspectives has become efficient in understanding the technology adaptation process of the officers working in institutional environments where technology is seen as a tool to increase its use (Kim and Han, 2009). Furthermore, it is known that the knowledge and skill of the teacher for computer use (Pelgrum, 2001), personal factors such as gender, age, experience (Shapka & Ferrari, 2003), hardware-software and suitable material (Gülbahar,

2007), technical support (Lim & Khine, 2006), facilitative situations (Teo, 2009) have direct influence on the use of technology in education. When Davis (1989) and Davis, Bogazzi and Warshaw (1989) offered technology acceptance model, they tried to find out why users accept or reject ICT. TAM has actually been an application of the Theory of Reasoned Action (TRA) which is created for explaining the voluntary and willful actions of the individuals towards a special case suggest by Fishbein and Ajzen in 1975 and is the most used theoretical substructure in scientific researches. TAM, argues that two personal beliefs such as Perceived Ease of Use (PEU) and Perceived Usefulness (PU) are effective in acceptance and use of information technologies (Davis, 1989).

Davis (1989, p. 320) describes perceived usefulness as "personal perception degree about the increase in performance when an individual uses a system. Davis et al., (1989) states that the most important determinant of the behavioral intention to use is the perceived usefulness. This shows that using technology will ease his/her work, and consequently will increase the behavioral intention to use towards that technology, in another word the person use it now and will use it in the future.

Perceived ease of use refers to "personal perception degrees for the fact that using a system does not require effort (Davis, 1989). Perceived ease of use is also expressed as the effort which the user is required to make in order to benefit from the application (Davis, 1989). Davis et al., (1989) found out that perceived ease of use is the secondary variable for guessing the intention to use. These two factors are researched in studies, made about different technologies and with different sample frequently, and it is stated that they are the most important two factors influencing the system acceptance and use (Teo, Lim, and Lai, 1999).

Another variable used in literature frequently to find out the pleasure taken from the technology by the individual is the perceived enjoyment (PE). Davis et al., (1992) and Vankatesh (2000) in their studies, named PE as the scale of the bias or credit of the individual for the use of a technology. Additionally, Vallerand (1997), states that intrinsic motivation is an action, performed with the purpose of emphasizing the pleasure or satisfaction taken from a specific activity/situation. When the use of perceived enjoyment in the studies of technology acceptance, it is seen that it is used in a way similar to intrinsic motivation (Teo & Noyes, 2011).

Hedonic- Utilitarian Use

An action performed for the adoption of an innovation is influenced by culture (Daghfous, Petrof, & Pons, 1999). The acceptance of a new technology by individuals from different cultures is expected to be different, because the values they have, differentiates in accordance with their culture. In terms of this, Köker and Maden (2012) say that the tendency of the consumers having different personal values towards adapting and adopting innovation will be different. The literature of consumer behavior is divided into two as hedonic and utilitarian (Hirschman & Holbrook, 1982).

The hedonic use arises from hedonism arguing that pleasure and happiness come at the top of the good things in the life (Merriam-Webster, 2003). According to Hirschman and Holbrook (1982) hedonism is the behavior performed by individuals within happiness, dream, awaking, feeling and pleasure. Therefore, utility obtained from the motivation relying on hedonism is empirical and emotional. Motivation relying on functionalism is described as task dependent, logical, having impact on making decision and target driven (Hirschman & Holbrook, 1982). Contrary to the utilitarian systems (based on functionalism)aiming to provide values to the users, helping them reach their purpose, systems based on hedonism aim to give values, providing to the users self-satisfaction (Heijden, 2004). Therefore, while utilitarian systems serve for a purpose out of the interaction between the user and the system, in the systems based on hedonism, the purpose itself is the interaction. For example, it can be said that the utility provided to the teacher's work with the Tablet PC use is a motivation for purpose, on the other hand, the pleasure that is felt while using the Tablet PC is a motivation based on hedonism. Parsons (2002) mentions that the systems in which these two concepts are considered together have superiority over other systems. In conclusion, the adopting and adoption process of the teachers having hedonic consumption motivation may occur in a short time in comparison with the other teachers, but

when it comes to teachers' having utilitarian motivation using the innovation, performance of the tasks and productivity are emphasized.

New perspectives for learning process are created with new technologies (Mishra & Koehler, 2009). In this regard, the increase in the need for access to information everywhere and in the number of mobile users and the incredible development in mobile tools causes the use of these devices in education. For this reason, such projects as one tool for each student in all schools are being realized in order to provide access to technology at the top level in schools. According to the Horizon Report, published in 2014, in terms of the digital learning strategies, the act of Bring Your Own Device is among the important improvements in terms of the use of technology in education at the level of K-12. In the act of Bring Your Own Device, students bring their laptops, tablets and other mobile devices to the learning environment and it is thought to be important because it provides student-centered learning. Accordingly, the Europe Horizon Report, published in 2014 shows that use of tablet in education will be among the most important developments in terms of the use of technology at a K-12 level within a year. When the tendency towards the use of tablet PCs in education and the activities carried out in schools are considered, some basic features separating the tablet technology from other technologies used in education should be criticized. In this regard, tablet PCs make it easy to communicate and access to the information, support the individual learning by providing time and space independent learning, and it is seen as an opportunity for the individuals having difficulty in learning (Clarke & Svanaes, 2014).

Receiving the support of the Tablet PCs for the learning process of the students depends on acceptance of Tablet PCs and adaptation of them to class environments by teachers (Ifenthaler & Schweinben, 2013). When the changes in education in Turkey is considered, it can be said that tablet PC has an important place in education, therefore, acceptance and use of the tablet PC is becoming important. In this framework, the start of use of Tablet PC in education can be found out by reaching the information about how the teachers accept and use this technology. However, the acceptance of technology does not mean the use of it at the same time.

This study aims to find out the interaction between the behavioral intention of the teachers for Tablet PC use and their hedonic and utilitarian motivation.

Research Model and Hypotheses

The teacher's, using the tablet PC acceptance of this technology can be determined with two basic (intrinsic and extrinsic) motivation. In studies from different fields, it is seen that motivation is an important variable and it is a highly important concept used in educational philosophy. (Davis, Bagozzi, & Warshaw, 1992; Vallerand, 1997; Venkatesh & Speier, 1999). Beside Keller (1999) emphasizes that motivation has a significant role among the factors influencing the performance of the learners in the learning and teaching process. According to the motivation model it is assumed that intrinsic and extrinsic motivation affects the intention of the individual to perform a task. For this reason motivation scholars separate the effects of intrinsic and extrinsic motivation on a personal behavior. For example Davis et al. (1992) says that intrinsic and extrinsic motivation are two key concepts in determining the intention to use the computer. Vallerand (1997) states that intrinsic motivation emphasizes the pleasure or satisfaction taken from a specific activity or situation while extrinsic motivation is an activity performed in completing or achieving a specific purpose. Deci and Ryan (1980) describe the intrinsic motivation as a pleasure and satisfaction felt after the completion of an activity. In another word, intrinsic motivation depends on the performance with an aim for an individual to enjoy himself/herself while the extrinsic motivation depends on the utility in the activity. In extrinsic motivation, the person believes that the performance that he/she shows in the whole activity or a part of it will utilize at the end. (Liaw, 2002). If a technology gives pleasure or if it is helpful for the people's work, they want to adapt the technology to their life. For this reason it can be said that motivation is an important factor for the technology acceptance and use (Teo, Lim, & Lai, 1999; Cheng, 2011; Heijden, 2004).

In the description of perceived usefulness variable, there is a personal perception degree about the increase in the work performance of an individual when he/she uses a specific system. Therefore, this variable focuses on extrinsic motivation. On the contrary, perceived enjoyment variable, which finds out the pleasure taken from the technology and is the measure of the bias or credit about the use of the technology focuses on the intrinsic motivation. Thus, while the extrinsic motivation becomes the dominant for guessing the intention to use in utilitarian systems, in hedonic systems intrinsic motivation becomes the dominant factor.

The research model seen in Figure 1, searches the effects of intrinsic and extrinsic motivation factors on the behavioral intention of the teachers for the use of Tablet PC. The model shows that the perceived usefulness (extrinsic motivation item) and perceived enjoyment (intrinsic motivation) have a direct impact on behavioral intention. In addition, perceived ease of use affects the behavioral intention both directly and indirectly upon PE and PU.

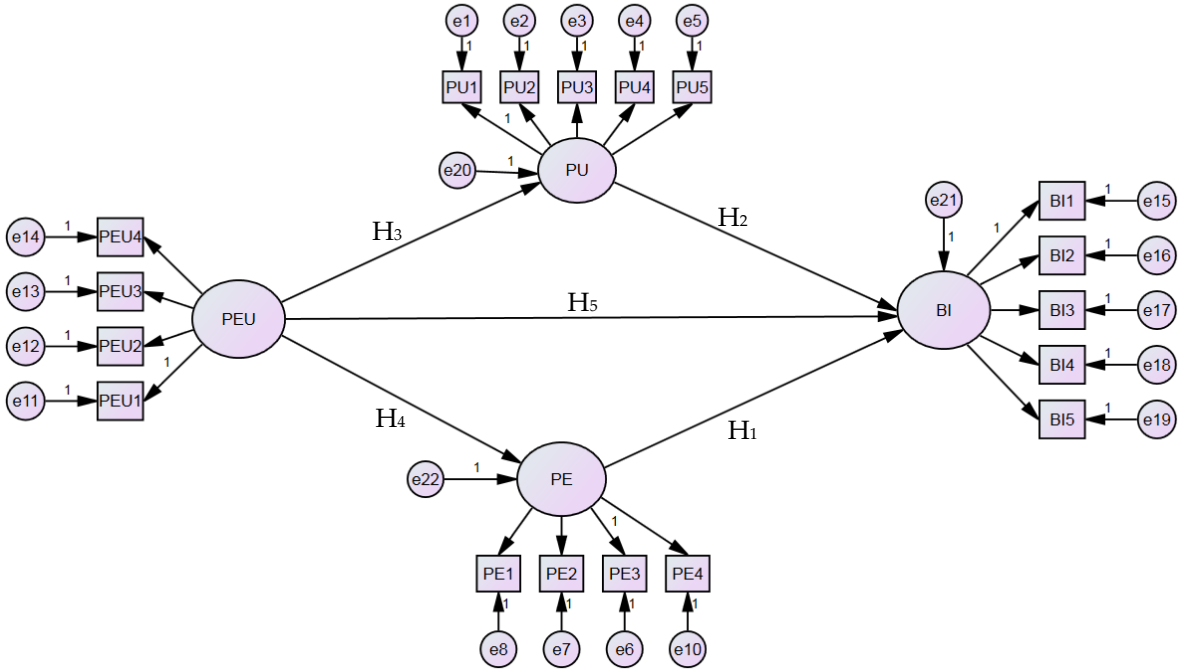

Figure 1. Research Model

Among the previous studies, there are studies showing that perceived usefulness has positive (Ma, Andersson, & Streith, 2005; Turan & Çolakoğlu, 2008; Teo, 2011; Teo, Luan, & Sing, 2008; Teo & Schaik, 2009; Teo, 2009; El-Gayar, Moran, & Hawkes, 2011; Terzis & Economides, 2011; Teo, Ursavaş, & Bahçekapılı, 2011; Teo & Ursavaş, 2012; Escobar-Rodriguez & Pedro Monge-Lozano, 2012; Teo, Ursavaş, & Bahçekapılı, 2012; Ursavaş, 2013, 2014) and insignificant (Teo, 2009; Terzis & Economides, 2011b; Terzis, Moridis, & Economides; 2012) effects on behavioral intention to use . There are also studies showing that the effects of perceived enjoyment variable on BI are positive and significant (Cheng, 2011; Heijden, 2004; Terzis, Economides, & Economides, 2011; Terzis, Moridis, & Economides, 2012; Liaw, 2002; Wang, Lin, & Liao, 2012; Teo & Noyes, 2011). Besides, there are studies showing that perceived ease of use variable has positive effect on perceived usefulness (Ma, Andersson, & Streith, 2005; Turan & Çolakoğlu, 2008; Teo, Luan, & Sing, 2008; Teo & Schaik, 2009; Teo, Lee, Chai, & Wong 2009; Teo, 2009; Terzis & Economides, 2011; Terzis, Moridis, & Economides, 2012; Teo, Ursavaş, & Bahçekapılı, 2011; Teo & Ursavaş, 2012; Park, Son, & Kim, 2012; Teo, Ursavaş, & Bahçekapılı, 2012), on the contrary there are also studies showing the insignificant effects of perceived ease of use on perceived usefulness (Escobar-Rodriguez & Monge-Lozano, 2012). On the other hand, there are studies showing that

perceived ease of use has significant and positive effect on intention to use (Turan & Çolakoğlu, 2008; Escobar-Rodrigez & Monge-Lozano, 2012; Terzis, Moridis, & Economides, 2012). In addition, Schepers and Wetzels (2007), in their meta-analysis study, find out that perceived ease of use variable has important effects on behavioral intention. According to this, the following hypotheses are suggested in this research:

H1: In hedonic systems the effect of the perceived enjoyment on the behavioral intention to use is higher in comparison with the utilitarian system.

H2: In utilitarian systems, the effect of perceived usefulness variable on the behavioral intention to use is higher in comparison with hedonic systems.

H3: In utilitarian systems, perceived usefulness variable mediates between the behavioral intention to use and perceived ease of use variables.

H4: In hedonic systems, perceived enjoyment variable mediates between behavioral intention to use of use and perceived ease of use variables.

H5: Perceived ease of use variable has a significant effect on the behavioral intention to use variable in system-independent way.

Method

Participants and Data Collection

Participants of the study are included in the research based on voluntariness and they are constituted of teachers who serves for middle and high schools affiliated to Rize Provincial Directorate for National Education. After obtaining related permissions no fee was paid to the participants and data is effectuated through the 2014-2015 school year without disturbing the education outside course hours. The scale response time is 10-15 minutes and before the responses towards the items that take place in the research and scale, teachers are informed of the scope of the research. In addition, it is emphasized that the responses of the students would be hold back and would be used within the frame of the research.

Table 1 summarizes the demographic features of the participants. According to the table, participants of the research consist of 311 teachers (141 women, 166 men and 4 not specified gender) who use a Tablet PC. Mean of the ages of the teachers is 33.20 years (SD=8.13) and mean of the professional times is 9.31 years (SD=9.19). 78.8% of participants own a Tablet PC that they can use at home or at school and their daily tablet usage times has a mean of 2.44 hours (SD=1.98). At last, the mean of use of computers is 8.16 years (SD=4.30).

Table 1. Demographic Information of the Participants (n=311)

Variable	**Number**	**(%)**
Gender		
Female	141	45.9
Male	166	54.1
Tablet PC ownership		
Yes	245	78.8
No	66	21.2
Age	33.20(SD=8.13)	
Mean years of computer use	8.16(SD=4.30)	
Mean hours of daily Tablet PC use	2.44(SD=1.98)	

Data Collection Tool and Analysis

In the research a measurement tool consisting of two sections is used. First section comprises demographic properties of the participants, and a second section comprises 18 items under four factors that take place in the research model. Measurement items related to factors are taken from a research published before (Ursavaş, 2014). Factors used in the measurement tool are perceived usefulness (PU; five items), perceived ease of use (PEU; four items), perceived enjoyment (PE; four items) and behavioral intention (BI; five items). Each factor is ranked according to five point Likert scale (1= Strongly Disagree and 5= Strongly Agree). In analysis of data, the software, IBM SPSS 21 and IBM AMOS 21 are used. For descriptive statistics measures of central tendency and dispersion (frequency, percentage, mean, kurtosis and skewness) are calculated. For the scale validity, convergent validity and discriminant validity are tested. And, for the validity of the goodness of model fit indices are analyzed.

Results

The findings of the research are divided into two sections according to the statistics techniques used. In the first section, descriptive statistics and reliability and validity analysis are included. And in the second section, variables in the structural equation model formed of research hypothesis and estimations belonging to direct and indirect effects between variables, significance levels of these estimations and model fit results are included.

Descriptive Statistics

Table 2 demonstrates the mean scores belonging to factors (PU, PEU, PE and BI) in the research model. Mean scores of items are higher than the middle breakpoint of the scale, which is 3.00, and varies between 3.68 and 4.22. This shows that all the means acquired from measurement items are positive. And when we look at the standard deviation values all deviations are calculated to be lower than 1.00. In other words, it is seen that measurement score are around mean scores.

Table 2. Descriptive Statistics of the Study Constructs

Construct	Item	Mean	SD	Skewness	Kurtosis
PU	5	4.17	0.674	-0.295	-0.786
PU1		4.21	0.797	-0.540	-0.771
PU2		4.22	0.780	-0.643	-0.338
PU3		4.15	0.780	-0.564	-0.330
PU4		4.21	0.734	-0.491	-0.506
PU5		4.08	0.835	-0.581	-0.334
PEU	4	3.90	0.766	-0.092	-0.844
PEU1		3.83	0.897	-0.232	-0.825
PEU2		3.88	0.870	-0.270	-0.750
PEU3		3.94	0.840	-0.272	-0.745
PEU4		3.98	0.829	-0.312	-0.735
PE	4	3.81	0.797	-0.143	-0.675
PE1		3.91	0.877	-0.453	-0.483
PE2		3.68	0.914	-0.048	-0.778
PE3		3.86	0.866	-0.216	-0.797
PE4		3.82	0.862	-0.153	-0.794
BI	5	3.96	0.747	-0.293	-0.622
BI1		3.91	0.906	-0.365	-0.759
BI2		4.05	0.843	-0.462	-0.630
BI3		3.78	0.945	-0.297	-0.538
BI4		4.04	0.818	-0.356	-0.744
BI5		4.04	0.800	-0.418	-0.494

Code: PU, perceived usefulness; PEU, perceived ease of use; PE, perceived enjoyment; BI, behavioral intention.

In parameter estimations regarding measurement model maximum likelihood technique is mostly used. This technique necessitates fulfillment of multivariate normality hypothesis. In addition for multivariate normality, it is necessary for each of the observed variables to have univariate normality. For the assumption of univariate normality it is adequate for skewness and kurtosis values belonging to related variable to not to exceed values |3.0| and |10.0| respectively (Kline, 2005). It is seen that measurement tool items' and means' skewness varies in the range of -0.581 and -0.092 and kurtosis in the range of -0.844 and -0.033. These findings show that univariate normality can be assumed for all variables. And for multivariate normality test Mardia's (1970) normalized multivariate kurtosis coefficient is calculated to be 130.756. The critical value for multivariate normality is calculated according to the equation of $p(p + 2)$ which is suggested by Raykov and Marcoulides (2008) and found to be 342. In the equation p is the number of variables observed (scale items) and within the scope of the research model it is 18. Acquired coefficients to be lower than this critical value showed that multivariate normality could be assumed.

Convergent Validity

Fornell and Larcker (1981) suggest a method consisting of three phases in order to test the convergent validity regarding responses given to items of a scale. These phases are (1) reliability regarding items of each factor in the scale, (2) composite reliability regarding each factor and (3) average explained variance. Firstly, the reliability of an item is specified through its load value. According to Hair, Black, Babin, and Anderson (2010) if an item's factor load value is more than 0.50, it is adequate for being convinced about the reliability of the factor. And in this study, factor load values belonging to variables vary between 0.675 and 0.922. Thus, it is concluded that the convergence validity of each factor in the level of items is adequate. Secondly, composite reliability of each structure is examined. In some researches, although composite reliability is acquired from Cronbach's alpha coefficient, in structural equity modeling studies, in calculation of reliability of each structure composite reliability is suggested to be used (Hair et al., 2006; Teo & Fan, 2013). Nunnaly and Berstein (1994) pointed out that when the alpha value is 0.70 and higher, composite reliability is provided. In this study composite reliability, value calculated regarding each structure varies between 0.911 and 0.928. Mean variance extracted regarding convergent validity is calculated for values of each structure separately. It is adequate for this value to be 0.50 or higher (Fornell & Lacker, 1981). In the research all the mean variance values extracted regarding all the groups varies between 0.706 and 0.765. In Table 3, it is seen that factor structures regarding all groups provide convergent validity.

Discriminant Validity

Discriminant validity is evaluated through the comparison of the square root of the mean extracted variance belonging to the factor and that structure's correlation coefficient with other structures. Factors' correlation and average variance extracted (AVE) values are shown in Table 4. Values placed on the diagonal line and specified in brackets are square roots of each structure's average variance extracted (AVE). And values placed in the rows and columns that are outside of the diagonal line are correlations in between structures. For discriminant validity values on the diagonal line must be higher than the values that are placed in their row and columns (Fornell & Larcker, 1981). From discriminant validity, both in the level of item and structure, satisfying results are acquired.

Table 3. Results for the Measurement Model

Latent Variables	Item	Factor loading (>70)[a]	t-value	R^2	Average variance extracted AVE(>50) [a]	Composite reliability (CR)(>0.70) [a]
PU					0.744	0.915
	PU1	0.872	---	0.761		
	PU2	0.792	17.554***	0.628		
	PU3	0.913	22.879***	0.834		
	PU4	0.869	20.778***	0.756		
	PU5	0.675	13.692***	0.456		
PEU					0.726	0.914
	PEU1	0.834	---	0.695		
	PEU2	0.887	19.480***	0.788		
	PEU3	0.879	19.199***	0.773		
	PEU4	0.806	16.767***	0.649		
PE					0.765	0.928
	PE1	0.898	---	0.850		
	PE2	0.792	19.049***	0.774		
	PE3	0.880	25.395***	0.627		
	PE4	0.922	24.110***	0.806		
BI					0.706	0.911
	BI1	0.832	---	0.691		
	BI2	0.851	18,374***	0.724		
	BI3	0.769	15,749***	0.591		
	BI4	0.904	20,300***	0.818		
	BI5	0.736	14,790***	0.541		

[a] Indicates an acceptable level of reliability or validity.

*** t-value (critical ratio) shows whether the parameter is significant at the 0.001 level.

Notes: CR is computed by $(\Sigma\lambda)^2 / (\Sigma\lambda)^2 + (\Sigma\eta)$; AVE is computed by $(\Sigma\lambda^2) / (\Sigma\lambda^2) + (\Sigma\eta)$.

Table 4. Discriminant Validity for the Measurement Model

	PU	PEU	PE	BI
PU	(0.862[a])			
PEU	0.571**	(0.852[a])		
PE	0.690**	0.662**	(0.874[a])	
BI	0.756**	0.615**	0.792**	(0.840[a])

** $p < 0.01$.

[a] Diagonals in parentheses are square roots of the average variance extracted from observed variables (items); Off-diagonal are correlations between constructs.

Test of the Structural Model

In the literature, for model fit, different fit indices are used. Brown (2006) evaluated these fit indices under three categories, which are absolute fit, parsimony fit and comparative fit. Absolute fit indices test how well the suggested model measures the observed data. The most frequently used absolute fit indices are χ^2 and SRMR. χ^2 value is sensitive to sample size and has a tendency to vary significantly as the sample size increases. Hair et al., (2006) stated that the ratio of degree of freedom (DF) and χ^2 (χ^2/df) would also be a measure for adequacy and this value being 3 or lower points out that this ratio is acceptable fit. And parsimony fit indices are similar to absolute fit indices except it considers the complexity of the model. We can give RMSEA index as an example. At last, comparative fit indices are ones that look at the fit according to the basic model in order to evaluate an alternative model (Harrington, 2009). CFI and TLI indices are examples of comparative fit indices. In Table 5, all groups' results of structural mode and suggested values are shown.

Table 5. Fit Indices for the Research Model

Model fit indices	Values	Recommended guidelines	References
χ^2	236.716 p < 0.05	Nonsignificant	Klem (2000); Kline (2005); McDonald and Ho (2002)
χ^2/ df (degrees of freedom)	2.060	< 5	Byrne, 1998; Hu and Bentler (1999); Gefen, Karahanna, and Straub (2003)
SRMR	0.0356	< 0.05	Klem (2000); McDonald and Ho (2002)
RMSEA	0.059 (0.049, 0.069)	< 0.05 (good fit) < 0.08 (fair fit)	Kline (2005); McDonald and Ho (2002)
CFI	0.973	=>0.90	Hu and Bentler(1999); Klem (2000); McDonald and Ho (2002)
TLI	0.968	=>0.90	Hu and Bentler(1999); Klem (2000);McDonald and Ho (2002)

When we look at the results of the models tested in the research, as all indices other than χ^2 value are adequate fit of the models are accepted to be adequate. According to this, in the model, resulting calculations are χ^2 = 236.716, p<0.05; χ^2 /df = 2.060; TLI = 0.968; CFI= 0.973; RMSEA=0.059 (LO90= 0.049, HI90= 0.069); SRMR=0.035.

Hypothesis Test Results

Figure 2 shows the results of path analysis results regarding the research model. Four of the five hypotheses evaluated within the scope of the model are supported by the statistical data. Perceived ease of use variable's effect on behavioral intention is calculated to be insignificant (β=0.044, p>0.05). Accordingly, H5 hypothesis is rejected. But this variable's effect on perceived usefulness (β=0.657, p>0.05) and perceived enjoyment (β =0.744, p>0.05) is calculated to be significant. Thus H3 hypothesis is rejected and H4 is accepted respectively. And the effect of perceived usefulness varies on behavioral intention (β=0.466, p>0.05) is calculated to be significant. At last, the effect of perceived enjoyment variable on behavioral intention (β=0.535, p>0.05) is found out to be significant. Therefore H1 hypothesis is accepted and H2 hypothesis is rejected.

In the research model where three variables' effects on behavioral intention in total R^2 = 0.808 is calculated. The meaning of this is that variables of perceived usefulness, perceived enjoyment and perceived ease of use explained nearly 81% of the variance. In addition, variables of perceived ease of use, perceived usefulness and perceived enjoyment explained 43% and 55% of the variance in order.

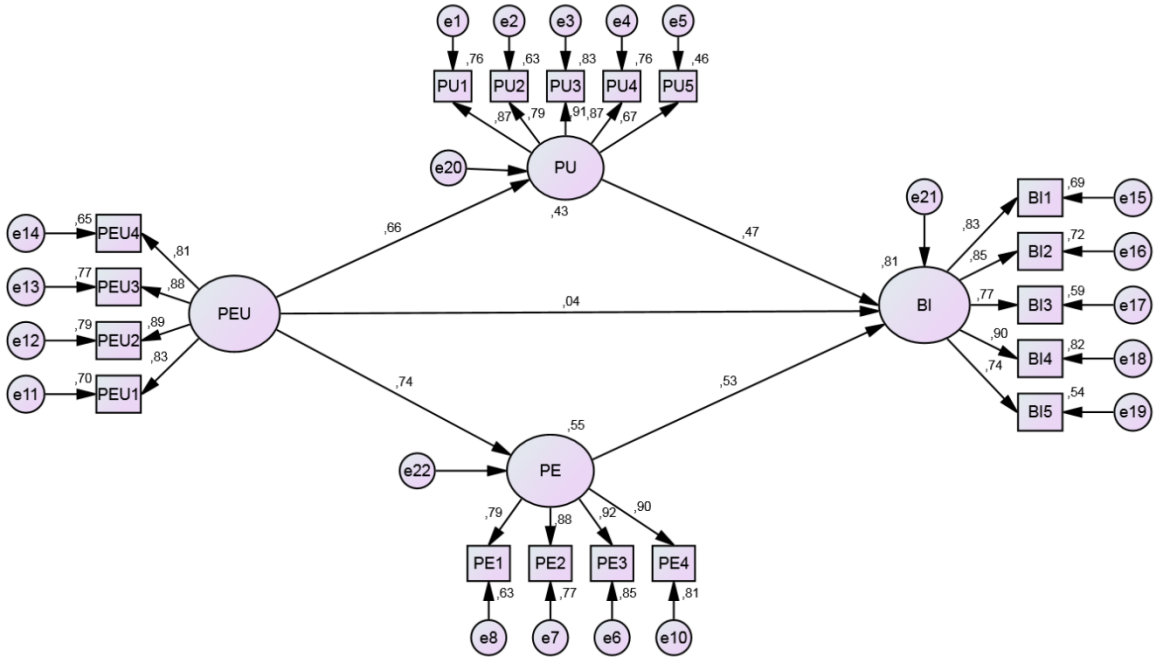

Figure 2. Hypothesis Test Results

In Table 6, path analysis results regarding the total, direct and indirect effect sizes belonging to dependent variable BI and mediator variables PU and PE. According to Cohen (1988), if the effect size reaches up to d=0. 1 it shows small effect and to d=0.3 moderate effect and to d=0.5 profound effect.

Table 6. Direct, indirect, and total effects of the research model

Estimated	Estimating	Standardized estimates		
		Direct	Indirect	Total
Behavioral intention (R^2 = 0.808)	PE	0.535***	-	0.535***
	PU	0.466***	-	0.466***
	PEU	0.044	0.701***	0.745***
Perceived enjoyment (R^2 = 0.546)	PEU	0.739***	-	0.739***
Perceived usefulness (R^2 = 0.431)	PEU	0.657***	-	0.657***

When we look at the results the most dominant precursor of behavioral intention is perceived ease of use with a total profound effect of 0.745. But perceived ease of use variable's direct effect on behavioral intention is calculated to be insignificant. This result shows if the fact that usage of technology is easy will effect the intention in café of high usefulness, in another word, in case of low usefulness, it will not affect the intention even if it is easy to use. Hence, this effect of it is indirect. This is followed by perceived enjoyment variable (d=0.535) and perceived usefulness (d=0.466).

Discussion, Conclusion and Suggestions

In addition to expression of contributions of mobile technologies to the learning process, especially it is emphasized that teachers, who are inexperienced in the use of technology, are in need of support towards using these devices and integrating these devices to the learning process (Liu, Navarrete, & Wivagg, 2014). In addition sharing of concrete examples about how tablet computers can be used in learning process is laid stress on. In this way, by providing teachers to improve their perception about how they can use this technology in their areas, adaptation process can be supported. Especially by expressing the potential of tablet PCs towards providing student-centered learning, at this point, the necessity of teachers reviewing their beliefs and philosophy related to learning becomes a current issue (Blackwell, 2013). Supports that will be given in this direction concerning creating a student-centered learning medium by using tablet PCs are considered important. On the other hand, teachers using technology in the learning process is associated with their perceptions, values and beliefs towards the effect of technology on the learning process (Hughes, 2005; Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010).

The aim of this research is revealing whether teachers' behavioral intentions towards the use of Tablet PC are influenced by their hedonic and utilitarian motivations. Generally results show that research model is valid and sensitive model, PU and PE variables directly, PEU variable indirectly and significantly affects BI. In addition to this, factors taking place in the model suggested (PE, PU, and PEU) explained 81% of the variance in teacher's behavioral intention towards Tablet PC use. In technology acceptance studies, studies' aspects that are criticized the most is model's explanatory power. Researches generally emphasize that, in original TAM, 40% of behavioral intention is explained, and because of that explanatory power must be increased with expanded models (Legris, Ingham, & Collerette, 2003). For example in recently finished expanded TAM studies explanation rates are 40%-53% in Venkatesh and Bala (2008), 43% in Ma, Anderson, and Streth (2005), 29% in Teo, Su-Luan, and Sing (2008), 27% in Teo (2009), 61.3% in Teo (2011), 51% in Teo, Ursavaş, and Bahçekapılı (2011), 15% in Teo and Noyes (2011), 61% in El-Gayar, Moran, and Haekes (2011), 50% in Terzis and Economides (2011), 61% in Terzis, Moridis, and Economides (2012), 39.4% in Teo, Ursavaş, and Bahçekapılı (2012), 87.2% in Cheon, Lee, Crooks, and Song (2012), 46.9% in Escobar-Rodrigez and Monge-Lozano (2012), 38.2% in Teo and Ursavaş (2012), 74.9% in Park, Son, and Kim (2012), 63% in Wang, Lin, and Liao (2012). This difference in the explanatory power shows that variables in TAM models are processed in different technologies and samples at different levels and also shows that the variables that are not included in models can be also effective. Besides showing that this model is open to include new variables, this result may also shows that the model needs researches about the scale invariance. On the other hand, high explanatory rate in the existing study shows that enjoyment variable should be included in model.

When we look from the point of hypotheses tested within the scope of the research, in order to test whether Tablet PC acceptance proceeds from teachers' hedonic or utilitarian motivations, H1 and H2 hypotheses are compared. In order to tell whether Table PC use is based on pleasure the effect of PE ($\beta = 0.535$, $p > 0.05$) on BI must be higher than the effect of PU ($\beta = 0.466$, $p > 0.05$). When we look at the research results, the effect of the perceived enjoyment variable on intention towards use is higher. And this finding is opposite to the researches (Igbaria, Livari, & Maraggah, 1995; Igbaria, Schiffman, & Wieckowshi, 1994) completed before; it is consistent with (Heijden, 2004; Pillai & Mukjeriee, 2011). Therefore, it is an indicator of the fact that it is easy for teachers to accept technology, but this acceptance would stay emotional and a situation contrary to utilitarian systems (based on functionality) aiming providing values that helps reaching the goal. Teachers using Tablet PCs in a way that they own a hedonic consumption motivation is a sign for the process of internalizing and adapting to this technology would be sooner. But when we think of the fact that hedonic Tablet PC use is shaped according to the emotional and experienced entertainment, this acceptance process can be mentioned to have the possibility to change in time, or even to be short-term. On the contrary to utilitarian systems that help users to reach the goal, hedonic systems aim to present values that get users to self-satiation (Heijden, 2004). And the meaning of the purpose of the use of technology in education is, in other words,

teachers to fulfill their missions and efficiency when using improvements. And this situation can be provided through teachers who own hedonic motivation. Again technologies being towards pleasure or functionality can be understood through looking at the methods related to presentation of technology. The aim of a utilitarian system is not only teachers to fulfill their missions, but also to encourage their efficiency at the same time. For example, while the teacher is meeting with this technology, teacher must be associated with the duties he/she has to fulfill. And taking things that would deflect him/her from his/her duties to the lowest level possible is an important subject. Venkatesh and Brown (2001) stated that the use of a service based on functionality is related to using it in an active and efficient way. If we look at another study conducted related to this situation, in Turkey, 97% of Tablet PC owners are stated to be using their tablets for personal purposes (IAB, 2013). Again, another research shows that teachers use the Tablet PC for different purpose in the class (Pamuk et al., 2013). This situation support the hedonic use found out at the results of the research.

Perceived ease of use of a technology and its effect on intention towards use are used in technology acceptance and use studies often. In this study, H3 and H4 hypothesis designed for variables of PU and PE, which are used in between PEU and BI as mediator variables are tested. The result of H4 hypothesis, which is written for the PU variable that directs the effect of PEU on BI, is ($\beta = 0.657$, $p > 0.05$), the results of H3 hypothesis, which is written for PU variable that mediated the effect of PEU on BI is ($\beta = 0.744$, $p > 0.05$). This shows that H3 is rejected and H4 is accepted. Thereby, we can mention that perceived ease of use has an important place for acceptance of hedonic systems. More importantly, it can be said that PEU is the proof for a system based on hedonic motivation has an increasing or decreasing impact on behavioral intention to use. PEU differ according to the type of technology used, representation style and experiences of technology use of individuals that will be used. More clearly, the effects of ease of use on intention tell us that the use of technology is easier rather than guaranteeing use of that technology. If we look from another angle as Ma, Andersson, and Streith (2005) also says, this can mean that technologies that are easier to use is more effective. Davis (1989) says that facts that the technology is easy to use and the contribution of it is observable are two factors in the acceptance of the technology. In order to be able to say that perceived ease of use is an important variable that effects intention towards behavior we also need to check the effectiveness of the technology for the user and the experience of the user about this technology (Davis, 1989; Morris & Dillon, 1997; Szajna, 1996) In the light of all this information, it can be said that perceived ease of use is expected to be high in inexperienced users. But we can say that teachers participated in the research can be said to have this experience from the aspect of Tablet PC use duration and ownership. Even though in researches completed before, indirect effects rather than direct effects of ease of use in guessing intention, in this research, the total effect of perceived ease of use on the intention is evaluated. Despite the fact that teachers have the usage experience of Tablet PC and use this technology, for the existence of the indirect effect of PEU on behavioral intention we can say that this arises from their hedonic motivations. Otherwise, it would be right to expect association of ease of use of a technology with the benefit that the technology provides for his/her job. And in this case we needed to talk about utilitarian motivation in spite of hedonic motivation.

The research has some limitations. Firstly, this research is performed by teachers who use a Tablet PC. But participants' field knowledge, personal properties (gender, computer usage experience) and the brand of Tablet PC used (hardware, software) may affect the results of the research. Hence, topic covered, content and technology may differ. Secondly, as data collected in the research are collected with the help of a measurement package, in other words, as they reflect their own evaluation, results can contain common method variance (CMV) error. Thirdly, the explanation rate of behavioral intention, which is a dependent variable, is 81%. Therefore, there is still 19% of behavioral intention that is not still explained. This situation can be resolved with other significant variables that would be included in the model.

Odabaşı (2006) specified that from now on individuals' buying behavior is changed, not only from need, but also it is directed to the satisfaction of desires. Therefore, it cannot be accepted that teachers serving in schools remain limited with technological opportunities provided to them only. For example, like the application of Bring Your Own Device, important projects concerning technology use in education in the level of K-12 are brought into being. Therefore, when it is thought that individuals not only aims to provide the only concrete advantage from the products they buy, the technology they use would give them pleasure and entertainment Tablet PC developers can be suggested to consider these respects in terms of software and hardware. For example for the new Tablet PCs that will be bought within the scope of FATIH project can be suggested to be evaluated about their hedonic and utilitarian properties. And in the researches that are thought to be conducted in the future, it is important for the model to be tested using different methods. Besides, intercultural comparisons can be made and measurement invariance studies can be conducted in terms of the variables such as gender, age and seniority group.

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