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VARIABLES EXPLAINING THE ONLINE LEARNING READINESS LEVEL OF STUDENTS: TURKISH VOCATIONAL COLLEGE EXAMPLE

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Abstract:
The purpose of the study was to investigate the relative importance of previous web-based course familiarity, computer ownership, computer use (years), amount of time spent on a computer (hours/day), social media use (Facebook), e-mail checking frequency, and smartphone use on online readiness of students. These are often provided as selective demographic characteristics in online learning readiness literature, yet their relative importance on online readiness has not been studied. The study was conducted on 633 male military vocational college students, involved in an online teaching environment. Online Learning Readiness Scale and a detailed information sheet were used for data collection purposes. The data were analyzed through a hierarchical linear regression analysis in four steps. According to results, nearly 17% of the variation in students' online learning readiness levels was explained by the predictor variables. First, as pre-entry characteristics, previous web-based course familiarity, computer ownership, texting and Internet use by a mobile phone explained 8%. In the second order, variables referring further engagement behaviors with technology, computer use in years and the amount of time spent on a computer (hours/day) explained an extra 4.5%. Third, the variables, corresponding to regular/habitual use, Facebook use and e-mail checking frequency, explained another 4.5%. The results indicated that previous web-based course familiarity, the computer use (years) and e-mail checking frequency were the significant variables, predicting students' readiness to online learning.

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Keywords: online learning readiness, military vocational college, technology access, social networks.

1. Introduction

In recent decades, technology has begun to enter everyday lives of more people from all ages at a tremendous pace. Looking through the history, we see that Personal Computers (PC) for home use were commercially available in 1980s and PCs equipped with Internet started around 1990s. In the early 2000s, not long after, mobile phones became widespread and smartphones followed them after 2007 with the introduction of Apple's IPhone. Without any doubt, Internet has an important place in the widespread use of information technologies. According to the teacher candidates in Basol and Cevik (2006), computers without an Internet connection resemble an empty box, a typewriter, or an introverted child, hence nothing positive.

The swirling technology madness affected the education profoundly. Before 1980s, attending to a college was regarded highly. In the early 2000s, online education became widespread throughout the universities around the world and literally, "distance education" brought the college to home. Working adults have benefited the most, they were both able to continue their jobs and complete their degrees. Many educational institutions have adapted their programs by either providing online courses or offering distance education programs. Most probably, the economical dimensions of online education have made it more popular for the liquid funding it brings to the colleges. Through the use of technology, it was possible to deliver lectures worldwide without worrying about a place to sit students. From the students' aspect, they no longer ended up having a large amount of debt when they received their diploma with the benefits of online learning at a much lower cost than a regular classroom-based education. The Massive Open Online Courses (MOOC) enabled students to attend colleges from the comfort of their homes. People with disabilities and single parents also benefited from online education. With a limited attendance fee, it was possible to attend education certificate programs available overseas.

As of 2006, one third of higher education students in U.S.A participate in online learning activities (Allen & Seaman, 2006). Hogo (2010) stated a dramatic growth in designing and implementing web-based education systems in the last decade.A relatively recent report by the Babson Survey Research Group (BSRG) (2014) indicated that the number of higher education students taking at least one distance education course in 2014 was up 3.7 percent from the previous year. Additionally, it was reported that the growth in online enrollments far exceeded that of overall higher education.

There are many terms corresponding to technology use in the classroom - distance education, online education, web-facilitated learning, blended learning, hybrid learning, e-learning, mobile learning etc. Online learning and e-learning are more likely to be used as the general name of all. With small differences among them, we see people use these terms interchangeably. As for distance education, you do not need a campus or classroom setting for it, learners can attend anytime, from anywhere, from

any distance. On the other hand, blended learning corresponds to a mixture of traditional face-to-face classroom learning enhanced with e-learning opportunities. Among the others, mobile learning was the one most recently introduced to the literature with the developments of smart phones and tablets. In the current study, the blended learning approach was followed by providing the college-based courses, supported with online learning through MOODLE.

With the benefits of blended learning, classroom based education has improved greatly by the technology. Through the new applications, teaching has evolved for the better and classes have started to be led by technological applications and devices. Without doubt, technology implemented learning designs improves teaching and learning (Franceschi, 2009). Veira, Leacock and Warrican (2014) stated the importance of directing students behind the classroom walls by providing opportunities for them to engage with others through the use of social media. As there is tremendous amount of research favoring technology supported learning, there are also opponent viewpoints. For example, learning management systems enable the instructor to share a variety of resources, e.g. course information, class notes, ppt files, handouts, audio-visual files, and pdf files for reading. However, against the best intentions of the instructors, the students might feel overwhelmed by the technology. Feeling intimidated, they could easily end up regarding online courses as a burden. Vincent and Ross (2001) also suggested providing a variety of resources yet allowing the learner to determine what to choose among (Cited by Bartley & Golek, 2004). According to Bartley and Golek (2004), there might be too much emphasis on the technology of online courses while the emphasis should be on the learning and design process.

Harrell (2008) stated that previous research has identified five broad categories, having a positive impact on student success in online learning. These are student readiness, orientation, instructor effect through preparation and support and course content. Online readiness was defined as the capacities of the organization to implement the electronic media to education in an effective and efficient way (Machado, 2007). Readiness is an important concept for the studies of online learning. Researchers have attempted to find out the variables related to the online learning readiness of students. Literature on online learning readiness seems more focused on inspecting the relation of students' online readiness to other variables such as structure and interaction of online learning (Kaymak and Horzum, 2013), student-directedness, computer self-efficacy (Robinson, 2008) rather than studying the relevance of important pre-entry characteristics to online readiness level of the users. As an important dynamic for student success in online-learning, readiness was at the core of the current study.

Anything new introduced to a blended learning environment e.g. flipped classroom, discussion boards, e-quizzes, workshops and etc., new studies have emerged looking at their effects on achievement. At the end, these studies aimed at directing students to more effective online learning strategies. Drawing broader implications from these studies -with participants at different age groups, cultural backgrounds, gender, or school levels- lowers their external validity. It would be interesting to know who would be more willing to take the advantage of online learning, which

characteristics are helping them to make a conscious decision to take full benefit of online learning. Investigating the relative importance of student characteristics on online readiness to e-learning may help us design our online instruction to make the most from online learning. While the user characteristics such as owning a computer, having a mobile phone with Internet connection directly affect students' ability to take more advantage of online learning, topics such as user preferences, inspired by marketing research to drive sales, have been studied. For example, the results of a survey study on Turkish people's use of smart phones indicated that regardless of the gender, there were users for all sorts of reasons; e.g. using social networks, talking on the phone, search of specific information on the Internet, and texting.

As another important and highly regarded factor in online learning literature, experience has been studied for its relation to academic achievement. Simply to say, having taken a previous web-based course could have an impact on students' online readiness. The reason they chose online learning might be that it actually had improved their learning once, in a previous course.

Owning a mobile phone with Internet connection could definitely mean more accessibility to process information. In the recent years, through the use of digital applications available on most smart phones, computers or tablets, Internet has dominated our lives by providing a mass of "intercultural and personalized" knowledge (Holmes & Gardner, 2006). Via an internet connection, a smartphone can almost take the place of a computer. According to the results of a research study, 64% of Americans own a smart phone and 63% of adult cell owners use their phones to go online (Pew Research Center, 2014). Turkish peoples' acquaintance with technology is no different from Americans as far as its time. Within the months introduced to the market, computers, laptops, mobile phones, Ipads and smartphones entered into every part of our lives, from schools to home. The results of a survey study indicated that 90% of Turkish smart phone users have access to Internet; of these, approximately 53% were male and 47% were female.

With daily use of IPhones, androids and digital tablets, online learning came into our lives in a fast speed, compared to any form of learning. One needs to be aware of the differences of new generation to understand how meaningful the online learning could be for them. As people become more opt to technology, substantial research suggested that learning profiles have changed over the years. The characteristics of technology-opted students were described by many (Dede, 2005; Frand, 2000; Oblinger & Oblinger, 2005; Prensky, 2001a; Prensky, 2001b; Tapscott, 2009). First, they are said to be "digitally literate", in the means of searching and creating information in more effective ways; being an active learner, they are ready to engage in online learning, use graphics to communicate, and thrive on instant pleasure and more rewards. They carry out social and professional interactions using technology, fast processing information, have a low tolerance, able to do many tasks at the same time, and like being in the community. The young generation, growing up with digital media (Rideout, Foehr, and Roberts, 2010) devotes countless hours both for leisure and learning; doing activities; such as, surfing the Internet, watching videos from YouTube, socializing on Facebook,

writing their thoughts via Twitter, sharing photos on Instagram, playing multiplayer games online and searching for information on Google and for many other reasons. The opposing views on the literature made us reconsider what it takes to be digitally literate. As the technology dominates our lives; the effect of certain factors needs to be studied.

It was suggested that to understand the concept, researchers should take into account the characteristics; such as age, socioeconomic status, availability of technology, prior experience, self-efficacy, education (Ng, 2012) and disciplinary differences. According to the literature, there are some characteristics, related to students' online learning; such as, owning a computer and dedicating longer time to computer use and having access to the Internet (Helsper & Eynon, 2010). There is substantial research suggesting the use of web as an instructional tool. According to McMullin (2005), a website can be considered as an easily accessible library for students. Leacock, Warrican and Veira (2013) reported that students used netbooks for a variety of activities both at home and at school and suggested educating them for safe and beneficial use of the material, rather than limiting their access to the Internet. Building an online course, designing instructional materials and maintaining it particularly takes time on the instructor's account. Needless to say, it can be a challenge for an instructor who is novice to technology or for those teaching several courses. This is also true for students who do not use digital technology as often as others. Therefore, it could be interesting to see the effect of certain characteristics of the online learners; their preferences in technology use related to their readiness to online learning.

2. Research Problem

The research problem is to find out the relative importance of pre-entry characteristics, further engagement behaviors with technology, and characteristics referring to the habitual/regular use on students' online readiness levels.

Most of the variables studied related to students' online readiness in the current study were provided as demographics in the previous studies. Considering their relevance to students' perceptions of computer and technology use, we decided to search the relative importance of these pre-entry characteristics (owning a computer, previous web-based familiarity, Internet use and texting), further engagement behaviors with technology (computer use as years and the hours of daily computer use), and characteristics referring to the habitual/regular use (Facebook use and e-mail checking frequency) on students online readiness levels.

3. Method

A descriptive correlational study model was applied in the current study. A Likert type scale and a detailed information sheet, including a number of demographic and personal information, were used as data collection tools. Availability sampling method was applied to collect data to draw a sample from a vocational college that one of the

researchers had worked at previously. Data were analyzed through a hierarchical linear regression model. Through cluster sampling, students coming from different departments were delivered the data collection measures online. The participation was voluntary and students were affirmed that at the end of the study, they were going to be informed about the findings in case they requested. For a total of seven predictors, the sample size was planned as 600. After adjusting Alpha as .017, for an effect size of .15 with a power of .8, the required number of people was found as 129 through a sample size calculation application. The analysis run at three steps (3*129) which sums up to 387 people. Therefore, the sample is large enough to run the current analysis. Out of 649 responses, 633 observations (98% valid scale rate) formed the data set of the analysis.

3.1. Participants

Data were collected across a military vocational college in Balıkesir, Turkey, in September 2013. All of 633 students, who participated in the study, were male. This can be considered as a major limitation of the study. Therefore, gender differences on participants online readiness level cannot be addressed in the current study. Using self-reported instruments for data collections can also be a limitation. While generalizing the results, these need to be kept in mind.

Students participating in the study represented each of four departments in different sizes: Business Administration (21%), Computer Technology (7.3%), Electronic and Communication (40.9%), and Mechatronic (30.9%). Students were taught by blended learning approach in some of their courses. In these courses, their learning was supported by MOODLE based online classes through college course portal in addition to classroom lectures.

We tried summarizing students ' technology use and found that two thirds of our students (69%) use social networks such as Facebook or Instagram, while one in five students (20.1%) use microblogs (primarily Twitter). Therefore, the social networks are preferred over Web 2.0 technologies by our students. The answers also indicated that students prefer following other people's posts rather than building their own sites, such as blogs, wiki, or online forums.

3.2. Data collection instruments

An online questionnaire was used as data collection tools. It was divided into three sections. The first section was related to demographical characteristics (i.e., age, type of high school graduated from) and computer experiences (i.e., technologies ownership and usage of Internet technologies). The second was access to technology, use of technology in studies in general. We used a part of the survey instrument, used in Australia by Kennedy, Judd, Churchward, Gray, & Krause (2008)'s study and additional questions were asked in order to adapt it to better to suit the vocational college context.

The third section of the questionnaire was Online Learning Readiness Scale (OLRS), validated by Hung, Chou, Chen, and Own (2010). In their study, Online

Learning Readiness Scale (OLRS)'s validity was achieved through a confirmatory factor analyses and the results indicated that OLRS has a five-factor structure as computer/Internet self-efficacy (CIS), self-directed learning (SDL), learner control (LC), motivation for learning (ML), and online communication self-efficacy (OCS). It included items such as "*I feel confident in my knowledge and skills of how to manage software for online learning."* in the computer/Internet self-efficacy subscale, "I manage time well" in the self-directed learning subscale, "*I can direct my own learning progress*" in the learner control subscale, "*I have motivation to learn*" for motivation in the learning subscale and "*I feel confident in posting questions in online discussions*" for online communication in the self-efficacy subscale. To determine internal consistency of OLRS in the current study, Cronbach Alpha coefficients were calculated and found as .87. The Cronbach Alpha coefficients for three CIS items were .72, .80 for five SDL items, .55 for three learner control, .76 for four motivation of learning items, .75 for three online communication self-efficacy items.

Pearson correlation coefficients for the variables were reported in Table1.

Table 1: Pearson Moments Correlation Coefficients among the Study Variables

Variables	**Computer ownership**	**Computer Use (Years)**	**The amount of time spent on**	**Facebook use frequency**	**E-mail checking frequency**	**Internet use (through a mobile**	**Texting (through a mobile device)**	**Online Readiness Score**
Previous web-based course familiarity	.157**	.103**	137**	-.52	.155**	.011	-.04	.226**
Computer ownership		.260**	.410**	.107**	.199*	.222**	.023	.134*
Computer use (years)			.33*	.131**	.181**	.199**	.061	.216**
The amount of time spent on computer (hours/day)				.279**	.244**	.228**	.164**	.216**
E-mail checking frequency						.341**	.227**	.141** .093*
Facebook use frequency								
Internet use (through a mobile device)							.199**	.110** .292**
Texting (through a mobile device)								.109** .138** .074

According to Table 1, the relationships ranged from -.52 to .41. Knowing that it could cause multicolinearity because of the high correlations among the predictor variables, online readiness in subscale levels (computer/Internet self-efficacy, self-directed learning, learner control, motivation for learning, self-efficacy) were not included in the analysis. Texting through a smart phone was not significantly related to the online readiness, since its importance for digital natives (60% of our students had previously taken a web-based course, so we considered them as digitally natives) we decided to include it as one of our predictor variables. There was no situation that could suggest colinearity, considering the very low intercorrelations among the predictor variables.

3.3. Procedure

Subjects were guaranteed confidentiality. They were told that the data would only be used for study purposes. In order to collect data for this study, the online questionnaire was utilized in college course portal at first two weeks of the fall semester of 2013-2014 school years.

4. Analysis and Results

4.1. Descriptive statistics

The participants were military vocational college students in Balıkesir, Turkey. Ages of the participants (n = 633) ranged from 17 to 21 (M = 19.23, SD = 1.23), meaning that they were the younger digital natives and all of them were born after 1990. The sample was restricted to the males, because the study was conducted in a military vocational college for males only.

4.1.1 Students' access to the technology

Around two thirds (68.9%) of the respondents had access to a laptop, a notebook or a desktop computer and 202 (31.2%) reportedly had no access to a desktop computer or a laptop. Student access to other devices was in some ways as predicted. Majority of students owned a mobile phone (94%) and two thirds of cell phones came with a camera (68.6%); a music player (68.6%); and over half with an Internet access (58.7%), above half were Wi-Fi (43.6%) and plain cell phones which had none of these features (26.7%). Thirty nine of our respondents (6.0%) reported that they did not have a cell phone. Around half of the students (48.8%) reported that they have a USB memory stick. Other devices were less common; such as a MP3 player (39.1%) and 60.9% of respondents reported no access to a MP3 player. Interestingly, 13.7% of students reported they had access to a game console.

4.1.2 Students' use of Internet technologies

Students were asked specifically about their use of Internet technologies and social networking websites such as Facebook and Twitter. Over two thirds (69.6%) of participants reported that they have used Facebook and majority of the students reportedly have never used other Internet technologies such as Twitter (80.6% non-user), blog (98.4% non-blogger), forum (93.7% non-writer), and chat (92.4% non-chatter).

4.2. Predictors of online readiness

We used hierarchical regression analysis in order to find out the best set of predictors to explain the online readiness level of students. Hierarchical regression analysis was preferred over stepwise regression analysis because of the following reasons. First, hierarchical regression produces more reliable statistical significance levels compared to the ones calculated from a stepwise regression. Second, hierarchical regression allows us to select the entry order of the predictors into the analysis as opposed to the stepwise

analysis choosing the order of the predictors by itself. This way, it was possible for us to seek the relative importance of each predictor variable in sets and in an order, hence easier to interpret. Therefore, hierarchical Multiple Regression Analysis was used to see the relative importance of each predictor on online readiness of students.

There are studies indicating a two-way relation between online learning readiness and digital nativeness. Therefore previous web-based course familiarity was decided to be entered to the regression model at the first step. Owning a computer, the length of time to use a computer in years, the amount of time spent on the computer in a day as hours, Facebook use, having access to the Internet through a mobile device and e-mail checking frequency were used as the additional predictor variables.

To prepare the data for the analysis, *z* scores for online readiness level were calculated to search for potential outliers. According to Tabachnick and Fidell (2007), anything over 3.29 and below -3.29 is considered as an outlier. Later, Mahalonobis distances were checked to identify multivariate outliers to see if there were any data points over X^2=24.32 (Stevens, 1996) and one data point was deleted with a Maholonobis distance of 27.53. Taking measures of standardized error points over $\pm$3, the remaining data set consisted of 633 participants.

Visual inspection of the histogram of students' online readiness scores indicated no problems with normality. The skewness and kurtosis levels also confirmed our visual consideration of the data points. The skewness and kurtosis values were both below the threshold of $\pm$1 and $\pm$3, respectively. In Figure 1 regression standardized residuals were plotted against regression standardized predicted values.

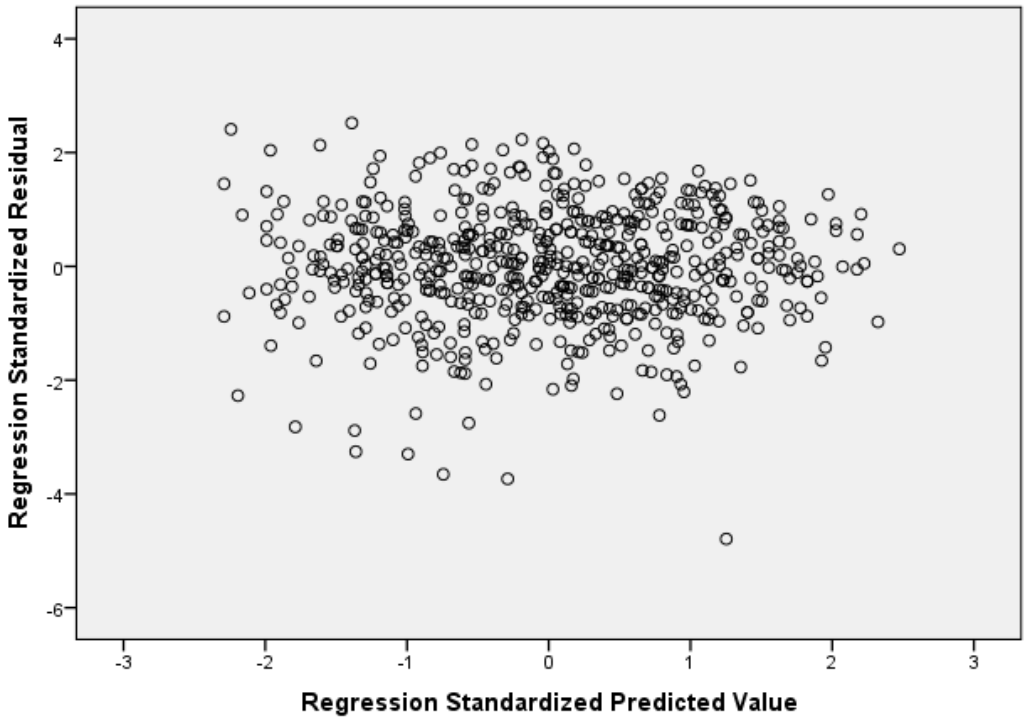

Figure 1: Scatterplot of Online Readiness Scores

According to Figure 1, the visual inspection of data points indicated that the assumptions of linearity, independence of errors and homocedasticity have been met. The data did not indicate problems with heterocedasticity. In the figure, one can easily notice the independent errors by a random pattern of dots.

A hierarchical regression analysis was carried out in three steps. At the first step, we entered the variables more likely to be considered as "pre-entry characteristics". Previous web-based course familiarity, owning a computer, reaching Internet through a mobile device and texting were the expected characteristics that students benefit the most from. The online courses are preferred mostly because of their ease of use via directing students to get online and follow the instructions. Computer use in years and hours of daily computer use, called as "further engagement behaviors" were also the potential variables that can explain students' online readiness and therefore, entered in the second order. On the last step, Facebook use and e-mail checking frequency, called "habitual/regular use", joined the analyses. These had relatively lower correlations with online readiness; nonetheless, were reported as the most preferred use of the information technologies by our students.

The question answered by the hierarchical regression analysis is as follows:
What is the relative importance of being introduced to an e-course before owning a computer, the length of time in computer use as years, the amount of time spent on the computer in a day as hours, Facebook use, accessing the Internet through a mobile device and the frequency of e-mail checking on online readiness level of students?
The results were provided in Table 2.

Table 2: Hierarchical Regression Analysis

Predictor Variables	**β**	**Standard Error**	**Standardized β**	***t***	***p***
First Level					
Previous web-based course familiarity	3.27	.724	.174	4.52	.001
Computer ownership	-.626	.806	-.032	-.776	.438
Internet (through a mobile device)	.915	.72	.05	1.27	.204
Texting (through a mobile device)	1.456	1.30	.043	1.12	.263
Second Level					
Computer use (years)	1.093	.301	.147	3.628	.001
The amount of Computer Use (hours/day)	.544	.268	.089	2.029	.043
Third Level					
Facebook use frequency	-.179	.252	-.029	-.710	.478
E mail checking frequency	1.533	.277	.227	5.530	.001

N=633, *p<.017, First Step R^2=.084, p=.001; Second Step, Change in R^2=.041, p=.001; Third Step, Change in R^2=.043, p=.001, Constant (61.54), Total R^2 =.168.

At the first step, the previous web-based course familiarity, computer ownership, Internet access through a mobile device and texting through a smart phone were entered and explained 8% of the variation in data ($F(4,609) = 13.87$, $p < .01$, $\eta 2 = .084$). Among these, the previous web-based course familiarity was the only predictor variable that reached significance. At the second step, computer use in years and the amount of computer use in a day as hours were entered and explained 4% of variation

in online readiness along with the significant variables at the first step ($F(2,607) = 14.28$, $p < .01$, $\eta 2 = .125$). The amount of computer use in years was significant with a standardized beta value of nearly .15. At the third and last step, frequency of Facebook use and e-mail checking frequency explained an extra 4% of the variation in online readiness levels of students ($F(2,605) = 15.69$, $p < .01$, $\eta 2 = .168$). E-mail checking frequency was a significant predictor of students' online readiness levels at the third step of the analysis.

According to the findings, e-mail checking frequency has the highest predictive power with a standardized beta value of .23. Interestingly, students with higher online readiness scores were the ones who were checking their e-mails more frequently compared to the others. Having taken a web-based course previously was the second most significant predictor of students' online readiness levels with a standardized beta value of .17. The amount of computer use in years was observed as the third predictor with a standardized beta value of nearly .15. Meanwhile, computer ownership, using a mobile device to go online, using it for texting, the amount of computer use in a day and Facebook use were the ones that did not reach statistical significance.

Our findings could mean that today's learners who are described as digital natives enter colleges with a greater knowledge and experience of computer technologies. They do use a mobile device for going online, using it for texting and they also use Facebook more often than their predecessors did, because they grew up with the technology. As a result of the continuing spread of computer, smart phones and Internet across the world and also in their lives and educational settings. Thereby, learners' computer/technology literacy has kept improving with the new technological developments, introduced almost on a daily base. This could explain why these variables; computer ownership, Internet use on mobile devices, using smart phones for texting, the amount of computer use in a day and Facebook use were not found to be related to online learning readiness. Computer ownership was the only variable, though it seemed puzzling, not related to online readiness of vocational college students. In all probability, had they been asked whether they owned a computer with an Internet connection, some of the fog here would have been cleared up. Hence, without an Internet connection, computer is no more than a word processor used for creating, editing and printing documents.

5. Discussion and Suggestions

The current study indicated that the vocational college students are heterogeneous considering their access and use of technology. Our findings are consistent with a variety of student profiles in other contexts (Kennedy et al., 2008; Corin, Bennet, & Locjyer, 2010; Jones & Healing, 2010; GU, Zhu, & Guo, 2013; Thinyane, 2010; Margaryan, Littlejhon, & Vojt, 2011). Whether it is on the military vocational college context or not, the studies indicated that students are more opt to be digitally native and have higher online readiness levels due to the fact that they grew up with technology. According to these studies, while some students have embraced a wide

range of technologies, others were ill-prepared to work with technology despite being born at the same time suggesting that age could not be a factor defining students' online readiness levels. This is against the belief that students born after the year 2000 were digitally native, more likely to have higher online readiness levels, therefore have better attitudes towards the technology use. On the contrary, Kennedy and Fox (2013) found that the first-year undergraduate students at Hong Kong University were intensely digitally native. According to their results, which were in line with ours, students did not use all technologies. Findings demonstrated that students had a high level of access to certain technologies, including computers and mobile phones, while other technologies, such as a USB memory stick, MP3 player and game console had significantly lower access rates. Considering technologies explored in this study, vocational college students have the highest accessibility to a mobile device. These findings were consistent with Brown and Czerniewicz (2010), Jones and Cross (2009), Thinyane (2010), Thompson (2013) and Yong and Gates (2014), studies showing that the range of technological tools used by students are more limited than those suggested by other researchers (Prensky, 2001a, b; Oblinger & Oblinger, 2005; Tapscott, 1998). It seems that mobile devices show higher usage rates, most likely due to the wide availability of applications for smart phones. It is found that majority of the students frequently use Facebook while other social networks, such as blogs, wikis and Twitter have limited usage. Similar to this, Jones and Cross (2009), Margaryan, Littlejhon and Vojt (2011), Nagler and Ebner (2009), Judd and Kennedy (2010) and Selwyn (2009) found that social networking sites were popular while media (video, photo etc.) sharing, social bookmarking, and personal web-publishing sites (blog, microblog) were found to be less popular among the young generation. In addition to this, Bennett, Bishop, Dalgarno, Waycott and Kennedy (2012) found that most students had little prior experience with relevant technologies. The current study suggested that Facebook use was also a main component explaining students' online readiness, along with the Internet use and texting through a mobile phone.

We conducted students' previous web-based course experience as a measure to predict online learning readiness. Online courses are known as a major part of military vocational colleges in Turkey. Because students are from different programs, they do not take online courses in the same semester/year. In the current study, 67% of the students reported that they had taken a web-based course previously. The present study indicated that having taken a web-based course is the most important factor in improving students' readiness to online learning. According to Oblinger and Oblinger (2005) the new generations born after the year 2000 are active experiential learners, proficient in multitasking, and dependent on communication technologies for accessing information and interacting with others. Bennet, Maton, and Kervin (2008) also emphasized the importance of new generations' upbringing and experiences with technology by stating that these generations have particular learning preferences/styles that differ from students of the past (Bennet, Maton, & Kervin, 2008). Therefore, it could be stated that having taken a previous web-based course can affect students' readiness to online learning in a positive manner. This finding was in line with the findings of

Helsper and Eynon (2010), claiming that experience of technology use was one of the significant descriptors of a person who was more opt to use technology.

Knowing the profile of online learners is crucial for designing and implementing more suitable instruction materials for these students. As the profile of upcoming generations changes, it is crucial for educational institutions to adapt their programs to be more flexible and answer their needs. We could say that these young people coming to the universities motivate educational institutions for drastic changes. Bonk (2004) noted that digital natives will enter the online learning environments looking for interactivity, videos, animations, and continuously rapid access to information. According to Wang, Zhu, Chen, and Yan (2009), online readiness is closely linked to students' success in online courses. Therefore, these are the features the educators should implement into their courses. One also needs to keep in mind that online learning may not be suitable for everyone, as it is important to know the factors increasing students' readiness.

6. Conclusions and future directions

One of the aims of the study was to find out whether military vocational college students had different learning styles by comparison with others as Prensky (2001a) suggested and if so, what defined this. As 60% of the students have reportedly taken an online course before and they were all born after 1990, well above the threshold of 1980 defined by many researchers along with Prensky (Oblinger & Oblinger 2005; Palfrey & Gasser, 2008; Prensky, 2001a; Tapscott, 1999), we considered our participants as digitally native. Prensky described digital natives as people living their lives immersed in the digital world therefore, they learn differently from previous generations. In conclusion, military vocational college students' online learning readiness was reported by means of the sources of technology and media use in their lives.

Our findings indicated that students' e-mail checking frequency and their previous web-based course familiarity were the most effective factors on their readiness to online learning. The amount of computer use was also an important factor, explaining the online readiness, as confirmed by Helsper and Eynon (2010). Considering its great impact on learning, future research on readiness can focus on additional student characteristics; such as gender and age rather than the ones searched in the current study. Moreover, pedagogic factors, interaction-related attributes and instructor characteristics can also be sought.

The study was carried out in a military vocational college sample, in which online courses are more common despite the fact that it is rarely employed in the universities. We hope to raise awareness on the importance of the characteristics predicting students' readiness to online learning through the current study. Owning a computer and a smart phone use was positively related to students' online learning readiness. We could say that the majority of students at the university in Turkey either own a computer or have access to a computer and most of the students have a mobile phone with internet connection. However, online classes are not as widespread as

needed in Turkey. The real problem here is to make online learning wide spread throughout the universities. We hope that through this awareness, the blended learning would draw more attention to Turkish higher education. We should also emphasize the importance of measuring online learning readiness based on the real life experiences, rather than a score, obtained from the answers to various statements. Therefore, literature on the topic could benefit from a qualitative study based on the observations and interviews with the students from a web-based course.

The impact of gender on students' online readiness could not be investigated in the current study due to the male-only sample restriction. Further research may look into gender differences in students' online readiness levels. The economic and social differences may reflect on students' online readiness, therefore, it could also be interesting to look for socio-economic factors affecting online readiness. Future studies may also explore the gender differences in the cross-cultural context. It could also be worth searching whether there is a gender bias against female students, as there is considerable literature suggesting better attitudes towards the computer/technology use by male students.

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