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The Relationship between Lifelong Learning Trends, Digital Literacy Levels and Usage of Web 2.0 Tools with Social Entrepreneurship Characteristics

Duygu Gür Erdoğan, Özlem Canan Güngören, Nazire Burçin Hamutoğlu, Gülden Kaya Uyanık and Tuğba Demirtaş Tolaman
Sakarya University, Faculty of Education

Abstract

This study aims to examine how lifelong learning trends, usage of Web 2.0 tools, and digital literacy levels affect social entrepreneurship characteristics. The study used the descriptive cross-sectional survey model. In this context, Social Entrepreneurship Qualifications Scale, Lifelong Learning Trends Scale, Digital Literacy Scale and the Frequency of Web 2.0 Usage Questionnaire were applied to the prospective teachers (N=809) studying at Sakarya University Faculty of Education. Two different models were created with Structural Equation Modeling based on the data obtained, and these two models were combined to be tested. It was concluded that lifelong learning trends, digital literacy levels and frequency of using Web 2.0 tools have a direct and indirect impact on social entrepreneurship.

Key words: *digital literacy; lifelong learning; social entrepreneurship; structural equation modelling (SEM); Web 2.0.*

Introduction

With the technological developments and social changes, social entrepreneurship has become an important concept that is nowadays often addressed. The European Commission defines social entrepreneurship as one of the lifelong learning skills. In the information decade, it is seen that within the context of lifelong learning, entrepreneurship, entrepreneurial individual, entrepreneurship education and similar concepts have been stressed as important (Yavuz-Konakman & Yanpar-Yelken, 2014).

Social entrepreneurship emphasizes that social responsibilities should be handled in an innovative way to create a social value in the society which offers solutions to social problems from the perspective of entrepreneurship (Kılıç-Kırılmaz, 2014; OECD, 1999). In terms of producing innovative social projects and increasing the productivity of the society (Eren, 2010), the role of education in bringing the concept of social entrepreneurship to individuals is considered important in the context of lifelong learning. Because education almost entirely surrounds a community, providing training for the next generation is an institute which has very comprehensive and critical values (Parlak, 2017). In addition, the model and content of education are also changing regarding the variety of technology. Educational institutions have to keep pace with changes and constantly improve the quality of education in order to educate the people the society needs. This is expressed as the training of the creative, innovative, learning to learn (Çalık & Sezgin, 2005), and entrepreneurial individuals who have competencies required with respect to the times (Akar & Aydın, 2015). It seems that technological developments have an effect on social entrepreneurship, where individuals are taught to support lifelong learning and develop entrepreneurial skills. Especially considering the recent technological advances, the integration of new technologies into education is necessary and the existence of technology in education becomes undeniable.

As evolving Web 2.0 tools become indispensable for individuals, they are used in education and for educational purposes. It is important to educate the community and future generations. However, in order to take part in education and establish oneself in society, effective use of Web 2.0 tools is necessary. Digital literacy is an important concept that comes to mind for effective use of technology by individuals. Considering the dynamic and prevalent use of Web 2.0 tools in today's educational environments, it is believed that effective use of Web 2.0 tools by students influences digital literacy skills. From these perspectives it is anticipated that social entrepreneurship, lifelong learning, digital literacy skills and the use of Web 2.0 technologies may be interrelated, and the framework of this paper is designed with this foresight.

Social Entrepreneurship

While creating innovative solutions to immediate social issues, social entrepreneurship mobilizes ideas, capacities, resources, and social mechanisms for a sustainable progress (Ladeira & Machado, 2013). Common ground of the definitions made for the concept of social entrepreneurship in the literature is the solution of a social issue in an innovate approach (Austin, Stevenson, & Wei- Skillern, 2006; İrengün & Arıkboğa, 2015; Thompson, 2002).

According to Katzenstein and Chrispin (2011), assuming a social mission and focusing on the emphasis of social benefit, social entrepreneurship is distinguished from entrepreneurship, which is based on capital. The main characteristic of social entrepreneurship which distinguishes it from capital-based entrepreneurship is

its altruism (Konaklı & Göğüs, 2013). Individuals show awareness in the social environment with their characteristics that feature the social values. Activities performed to find innovative and permanent solutions to the issues that are closely related to society such as unemployment, health, refugee problems, education, environmental problems, women, the elderly, the disabled, animals, etc. are addressed within the scope of social entrepreneurship. Individuals who perform such an activity are called "social entrepreneurs". According to Dees (1998), who is a pioneer of the social entrepreneurship concept, social entrepreneurs are the changing agents in the society. Urbano, Toledano, and Soriano (2010) describe social entrepreneurs who meet the social needs through social values as the accelerators of the transformation. Denizalp (2007) defines sensitive people who notice social problems in the society and lay persistent emphasis on the problems in an unattempted approach and have gained the confidence of the society with their realistic attitudes as social entrepreneurs. Given the definitions regarding the social entrepreneur individuals, it can be said that they all have a social mission. Abu-Saifan (2012) states that social entrepreneurs' primary goal is to achieve their social mission.

Changes within the society cause individuals to become more aware of the increasing/changing needs. Heimstra (1976) states that lifelong learning is an internal learning process that continues along individuals' lives in accordance with personal interests, needs and skills (see Coşkun & Demirel, 2012). It is thought that this definition regarding lifelong learning is related to the characteristics of a social entrepreneur individual who can notice the issues within the social environment in the society, creates a social value with his/her interests, skills and missions and can handle innovative points of view in the solutions to the problems. Havolli and Ahmeti (2008) state that improvement of entrepreneurship requires motivated and creative individuals who tend to solve problems through qualified education. Thus, how social entrepreneur individuals improve their lifelong learning skills is deemed important for the future of society. In the Decree of European Parliament and Council (2006) on "lifelong learning", the importance of the contribution to the support of enhancing the entrepreneurial spirit is stated among the general objectives of the lifelong learning program. Balay (2004) emphasizes that individuals with the ability to understand, interpret and develop information are lifelong learning individuals. It is thought that lifelong learning individuals would find solutions in meeting the social needs of society through a more innovative perspective.

Lifelong Learning

With the very rapid exchange of information, individuals have been feeling the need for continuous learning (Coşkun & Demirel, 2012). Another reason for this is that Internet and recent technologies have entered our lives very quickly. According to Perelman's (1992) new understanding of education, learning cannot be trapped between walls (see Erişti, 2010), and learning is not only limited to the school years,

but handled as a lifelong process (Erişti, 2010, p. 7). All these developments bring along the mentality that education cannot be limited to a certain period of human life. According to the Organization for Economic Cooperation and Development - *OECD* (1999), human's development occurs in an endless process throughout a life time.

Kahlert (2000) defines lifelong learning as individuals acquiring knowledge from several sources and learning opportunities for life. They must develop themselves for life to adapt to scientific, technological and cultural changes and meet their own needs. Lifelong learning covers several formal and informal forms of education and training which also include the obligatory skills to be brought to individuals such as searching for information, improving the found information, and using it independently and actively. In the Eighth Development Plan, lifelong learning is described as adapting to the improving life standards, using the manpower effectively in the step taken towards a globalizing economic world, transferring and disseminating information and communication technologies towards broad areas and as a novel approach that aims to raise humans in accordance with the need for a population possessing the knowledge and skills to be used in manufacturing and service industry. It is understood from all definitions regarding lifelong learning that what matters is that individuals continuously develop themselves.

Limited space or time of learning does not matter to lifelong learning individuals. Moreover, belief that education can be provided only by a teacher in the classroom has been abandoned. Individuals can actualize learning almost everywhere, independently and in an engaged way. Cisco (2008) articulates that the paradigm change in this century forms the objectives that need to be achieved by students, such as acquiring a series of skills, receiving a qualified education, communicating with diverse cultures and continuing lifelong learning to become successful in the modern world. With today's mobile technologies, individuals undoubtedly have the mission of learning brought along by lifelong learning. After all, learning is regarded as the condition of adapting to developments and vice versa (Edwards & Usher, 2008, p. 62).

Web 2.0 Tools

Advancing technology highly affects new generations (Mihalcea, Mitan, & Vitelar, 2012). As a ring of the technological chain, Web 2.0 technologies are defined as the second generation of Web technologies. Technological developments described as the accelerator of social transformation allow for the upbringing of a generation with high tendency of using technological tools. They grow and breathe with technology and do everything using technology (Tapscott, 2009). Described as "digital native", "y generation", "quick learner", "technophile", this generation is regarded as being very accustomed to technology (Hansen & Leuty, 2012; Shih, 2009; Twenge et al., 2010).

Development of Web 2.0 has changed the user roles. Web 2.0 tools have freed individuals from being pacificated and they have been effective for individuals in developing new contents and applications in accordance with their needs to become

more active and creative (Tonta, 2009). According to their nature, Web 2.0 tools have characteristics such as inherited structure, how users create individual products and contents and using the power and union of the crowd (Anderson, 2007). Web 2.0 tools include blogs, wikis, podcasts, RSS (Rich Site Summary), instant messaging, and social networks. Each of these tools are utilized in education in diverse ways with their characteristics. For instance, blogs are websites that are created by individuals or groups and involve texts, pictures and audio files preferred by individuals for introducing themselves and expressing their opinions while wikis allow users to add, delete or edit contents (Horzum, 2010). Accordingly, it can be said that blogs and wikis can be useful for expressing opinions on a given subject. Tavales and Skevoulis (2006) argue that podcasts are auxiliary tools for individuals to learn a given instructional material independently. Therefore, individuals can use podcasts for learning purposes without the limitation of time and space. Similarly, RSS, instant messaging, and social networks have the characteristics of Web 2.0 tools. Such tools provide individuals with independent learning. An individual can access the needed information independently. Discussion websites created by communities that are interested in a given issue give entrepreneurs the opportunity to grab a value, and entrepreneurs may find solutions to that issue by interacting with individuals or groups with similar opinions (Maltby, 2012). Individuals can reflect their social entrepreneurial spirits and lifelong learning trends using Web 2.0 tools, and these tools have the characteristic inherent structure, the power of union and activating the individuals to help them observe problems from different perspectives. It is expected that individuals who use Web 2.0 tools to access, create information and experience social environments, have improved lifelong learning trends and social entrepreneurship skills.

It is thought that individuals can take efficient roles in the solution to a problem by getting together with members and groups with which they interact through social media. Web technologies have an undeniable power for individuals to access required information to solve problems they experience in society. It is deemed important that individuals solve a given problem by handling it with proper information and in accordance with their needs. Yet, not every report shared or every account on social networks is true as is known. So many fake profiles and reports on social network websites require individuals to set their literacy skills to work, and it is emphasized that digital literacy skills are important in the awareness of the quality of shared reports and reliability of social network.

Digital Literacy

Digital literacy requires proper use of different technologies and the ability to access, produce and share the correct information and to use technology in learning-teaching processes (Hamutoglu, Canan-Güngören, Kaya-Uyanık, & Gür-Erdoğan, 2016). Several web technologies such as search engines, social networks, news websites, blogs, wikis, etc. can be utilized. However, all pieces of information obtained from

these web technologies may not be correct and reliable. Information acquired from unreliable sources may misguide social entrepreneur individuals. It is expected that social entrepreneur individuals who interact with members and groups for a given purpose have improved digital literacy skills. Otherwise, production and sharing of abusing and misleading information would have an efficient role in creating risk among the society (Çubukçu & Bayzan, 2013). Individuals with advanced digital literacy skills differentiate from others in terms of solving problems they face and expressing themselves. Tornero (2004) reports that digital literacy skills improve students' creativity and ability to express themselves. Creativity is of importance for social entrepreneurs to solve social problems through different perspectives. The use of Web 2.0 tools also requires advanced digital literacy skills, which have been defined as accessing the correct information by using different technologies (Çubukçu & Bayzan, 2013).

Aim of the Study

It is emphasized in this study that lifelong learning tendencies, usage of Web 2.0 tools and digital literacy skills are important in individuals' characteristics of social entrepreneurship. It is thought that lifelong learning tendencies, usage of Web 2.0 tools, and digital literacy levels have a correlation with social entrepreneurship characteristics. It is worth to note that in the literature there is a limited number of studies that investigate the direct effect of individuals' lifelong learning trends, the use of Web 2.0 tools, and the level of digital literacy variables on social entrepreneurship characteristics (Abu-Saifan, 2012; Balay, 2004; Khalid, 2010), the relationship between entrepreneurship and Web 2.0 tools (Hughes, 2016), the effect of ICT use on entrepreneurship level (Yavuz-Konakman & Yanpar-Yelken, 2014), the relationship between lifelong learning trends and social entrepreneurship characteristics (Sezen-Gültekin & Gür-Erdoğan, 2016). In addition, the relationship between lifelong learning trends of Web 2.0 tools (Hew & Cheung, 2013; Scalater, 2008) and the relationship of Web 2.0 tools with digital literacy (Bates, 2002; Çubukçu & Bayzan, 2013) are present in the literature. In this context, this study looks for the answer to the question whether lifelong learning, Web 2.0 tools, and digital literacy directly affect social entrepreneurship, or whether Web 2.0 tools have an indirect effect on social entrepreneurship through lifelong learning and digital literacy. Hence, this study aims to find direct effects of lifelong learning, Web 2.0 tools, and digital literacy on social entrepreneurship, and indirect effects of Web 2.0 tools on social entrepreneurship through the lifelong learning and digital literacy, and comparing these two different models. Therefore, in the light of obtained findings, the present study is important in terms of revealing the variables that are effective in educating social entrepreneurial individuals and emphasizing the importance of these variables in education.

Methodology

The aim of the present study is to find out direct and indirect effects of digital literacy, lifelong learning trends, and Web 2.0 tools on social entrepreneurship. In this context, the study was designed by descriptive cross-sectional survey model, used to determine the unique and specific characteristics of obtained data (Fraenkel & Wallen, 2008).

Participants

The participants in the conducted study were prospective teachers (N=809) studying at Sakarya University, Faculty of Education in the spring term of the 2016-2017 academic year. The sample were chosen randomly among the prospective teachers. The socio-demographic characteristics of the participants are presented in Table 1.

Table 1

Socio-demographic characteristics of the participants

		Frequency (f)	Percent (%)
Gender	Female	614	75.9
	Male	195	24.1
Social activity	Yes	412	50.9
	No	397	49.1
Age	20-24	483	59.7
	25-29	191	23.6
	30 and above	135	16.7

As shown in Table 1, the study group consisted of 75.9% (f = 614) female and 24.1% (f = 195) male participants. The age range of participants was from 20 to 60 (df = 5.07); 50.9% (f = 412) were interested in social activity while 49.1% (f = 397) were not interested in any social activity.

Instruments

Social Entrepreneurship Qualifications Scale

The Social Entrepreneurship Qualifications Scale (SEQ-S) was developed by Konakli and Gogus (2013). The scale was a 5-point Likert-type, consisting of 21 items with three main sub-scales, namely self-confidence, personal creativity and risk taking. The self-confidence sub-scale comprised eight items, for example, "It is easy for me to make new environment / friends". The personal creativity sub-scale consisted of six items, and "Before I start doing a job, I think there are different ways I can do this job" is an example. Finally, the risk-taking sub-scale included seven items, for example, "It's exciting for me to start a hard job". While the Cronbach's Alpha reliability coefficient was reported at .85 for the total score of the scale, the reliability for self-confidence, personal creativity, and risk taking sub-scales was

.77,.70, and 72, respectively. The CFA results of the SEQ-S indicated good fit indices ($\chi 2$ = 427. 15, df=186, $\chi 2$ /df= 2.29; RMSEA= 0.63; SRMR=.60, NFI= .90; NNFI=.95; CFI=.95; GFI=.90; AGFI=.86) (Hooper, Coughlan & Mullen, 2008; Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müler, 2003). The total score of 21 items is the measure of the person's social entrepreneurship qualification. If the person's score on the scale is lower than 42 then the qualification is low, if the score is between 42 and 63 it is medium, and if the score is above 63 then high social entrepreneurial features are mentioned.

Lifelong Learning Trends Scale (LLLT-S)

This scale was developed by Gur-Erdogan and Arsal (2016), and consisted of 17 items, assessed on a 5-point Likert scale with a two factor-structure. The factors were determined as "willingness to learn" and "openness to improvement". Within the dimensions of willingness to learn, there were 11 items, for example, "I prefer to be self-motivated during the learning process", and the openness to improvement dimension comprised six items. "It is important for me to advance in my career" is an example for the dimension of openness to improvement. A total exposition of the factors was 43.44%, and Cronbach's alpha internal consistency coefficient was calculated as .86 while ω value was found to be .89. The fit indices of the scale, found that $\chi 2$ value is significant ($p < 0.05$), RMSEA=0.07, RMR=0.02, GFI=0.93, AGFI=0.90, NFI=0.93, NNFI=0.93, CFI=0.94. The total score of 17 items is the measure of the lifelong learning trends. If the score on the scale is lower than 34, social entrepreneurship features are low; if the score is between 34 and 51, they are medium, and if the score is above 51, they are high.

Digital Literacy Scale

The Digital Literacy Scale (DL-Q), which was developed by Ng (2012) and adapted to Turkish by Hamutoglu et al. (2016), was administered in the study. The scale was a 5-point Likert type scale, ranging from 1 "Strongly Disagree" to 5 "Strongly Agree", and had a total of 17 items. The original form of the scale comprised four dimensions such as attitude, technical, cognitive and social-emotional dimension. Within the dimension of attitude, there were seven items, for example "I like using ICT for learning". The technical dimension included six items, and "I can learn new technologies easily" is an example. "I am familiar with issues related to web-based activities e.g. cyber safety, search issues, plagiarism" is an example for the cognitive dimension, which included two items, and finally, "ICT enables me to collaborate better with my peers on project work and other learning activities" is an example for the social dimension which comprised two items, as well. The adapted scale explained 65.78% of total variance, and the fit indices were examined and found for $\chi 2$=268.45 (n=113, p=0.00), RMSEA=.071, GFI=.93, AGFI=.91, CFI=.98, NFI=.96, NNFI=.97, and SRMR=.05. The reliability of the scale was computed with Cronbach Alpha correlation coefficient,

which was calculated for the whole scale at .93; attitude dimension .88; technical dimension .89; cognitive dimension .70 and social dimension .72. The total score of 17 items is the measure of the digital literacy level. If the score on the scale is lower than 34, social entrepreneurship features are low; if the score is between 34 and 51, they are medium, and if the score is above 51, they are high.

The Frequency of Web 2.0 Usage Questionnaire

The questionnaire looked into the frequency of Web 2.0 tools such as Facebook, MSN, Wiki, Blogs, VPS, and Podcast, and ranged namely 1 "Never", 2 "Once in a month or a few days in a month", 3 "Once in a week or a few days in a week", and 4 "Every day" by Horzum (2010). Views from different experts in the educational technology department (5), assessment and evaluation department (2), and teachers (20) had been taken into consideration in terms of clarity, content and face validity of the items.

Statistical Analyses

The analysis of the data included descriptive statistical analysis and correlations conducted using SPSS 23.0 (The Statistical Package for the Social Sciences). In addition to this, structural equation modelling (SEM) was utilized to evaluate model fit and performed via AMOS 23.

Results

The correlation analyses were first performed in the research to show the mean and standard deviation values of the variables and the relationship between the variables. The findings obtained are given in Table 2.

Table 2

Descriptive Statistics

	N	Min	Max	Mean	SD	SE	LLL	DL	Web 2.0
Social Entrepreneurship Qualifications (SE)	809	60	105	85.71	9.34	-			
Lifelong Learning Trends (LLL)	809	54	85	72.47	6.74	.67**	-		
Digital Literacy (DL)	809	46	85	67.50	8.35	.54**	.40**	-	
The Frequency of Web 2.0 Usage (Web 2.0)	809	6	17	11.54	2.26	.15**	.11**	.10**	-

**p<.01

As can be seen in Table 2, the mean values of social entrepreneurship, lifelong learning, digital literacy and frequency of using Web 2.0 tools are equal to or higher than the median. Accordingly, it can be concluded that the participants are social entrepreneurs, inclined to lifelong learning, competent in terms of digital literacy and use Web 2.0 tools at an average frequency.

The Pearson's correlation coefficient was used to examine the relationships between variables. The findings show that social entrepreneurship has a moderate positive

correlation to lifelong learning (0.67), to digital literacy (0.54) and has a weak positive correlation to frequency of using Web 2.0 tools (0.15). Moreover, lifelong learning has a moderate positive correlation to digital literacy (0.40) and a weak positive correlation to the frequency of using Web 2.0 tools (0.11). The relationship between digital literacy and frequency of using Web 2.0 tools is weak and positive (0.10). All relationships were found significant, and based on this finding, Structural Equation Models were set between the variables.

Two different models were compared and tested with Structural Equation Modeling (SEM) in the study. The first model measures the direct effects of individuals' lifelong learning skill, digital literacy levels, and frequency of using Web 2.0 tools on their social entrepreneurship statuses. This model was named "model one". The second model, how frequency of using Web 2.0 tools affects lifelong learning skills and digital literacy levels was investigated, and the contribution of this mutual effect to social entrepreneurship statuses was evaluated. The model examining the indirect effects was named "model two". Path analysis diagrams of the two models are shown in Figure 1.

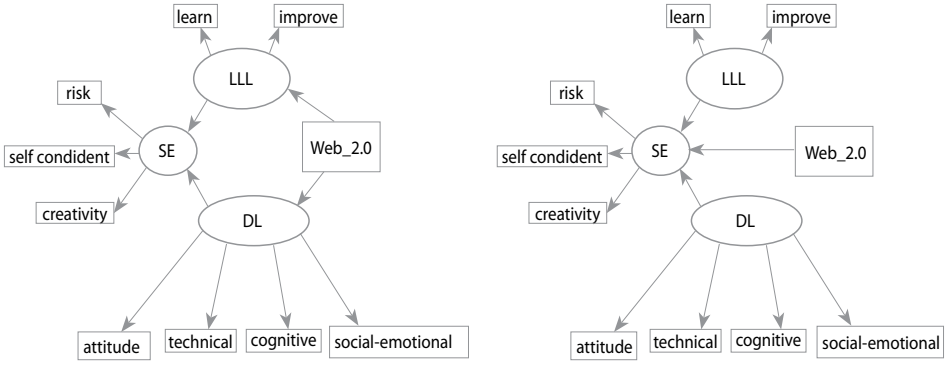

Figure 1. Path diagrams of models

Fits of the models regarding the social entrepreneurship variable and direct and indirect effects of lifelong learning, digital literacy and frequency of using Web 2.0 tools were examined. Table 3 shows the fit coefficients of the two models.

Table 3

Fit indexes of the first and second model

Values	First model	Second model
GFI	.98	.99
CFI	.99	.99
NFI	.98	.98
AGFI	.96	.96
RMSEA	.05	.05
SRMR	.03	.03

As for the criteria to be considered for fit indexes, 0.90 refers to acceptable fit and 0.95 refers to perfect fit for the GFI, CFI and NFI indexes (Bentler, 1980; Bentler & Bonett, 1980; Marsh, Hau, Artelt, Baumert, & Peschar, 2006), .85 refers to acceptable fit and .90 refers to perfect fit for AGFI (Schermelleh-Engel & Moosbrugger, 2003). For RMSEA, .08 is acceptable fit and .05 is perfect fit criteria (Browne & Cudeck, 1993; Byrne & Campbell, 1999). Finally, for SRMR, .05 refers to perfect fit and .10 refers to acceptable fit (Schermelleh-Engel & Moosbrugger, 2003). Given all these values, it is seen that all of the values regarding the two models in Table 3 refer to perfect fit.

These two models of perfect fit were compared. As it would have led to error to evaluate the two models separately in the comparison, the direct and indirect effects of two models were combined to draw one single model. The model of the variables affecting the social entrepreneurship variable is given in Figure 2.

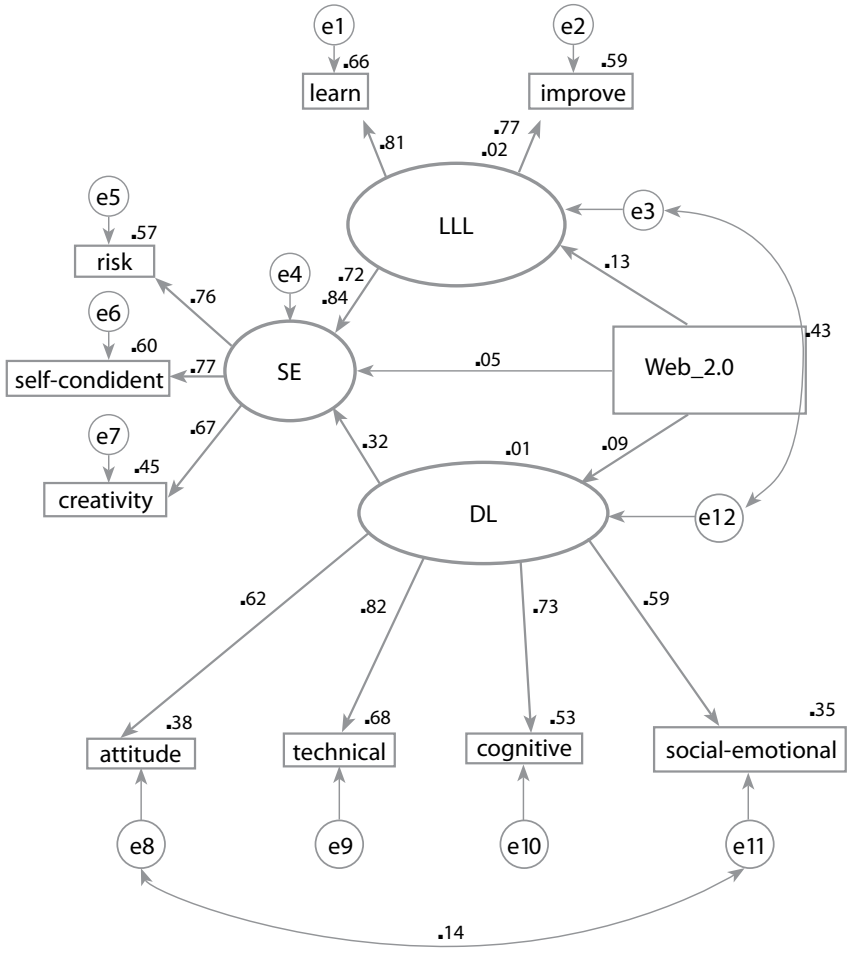

Figure 2. The model of the variables affecting the social entrepreneurship variable

As seen from the model in Figure 2 social entrepreneurship variable has three subdimensions and these can be listed according to their effect size as follows: self-confidence (β=0.77, p<0.001), risk taking (β=0.76, p<0.001) and personal creativity (β=0.67, p<0.001). It is clear that lifelong learning appears to be the most important variable that affects social entrepreneurship (β=0.72, p<0.001). The second most important independent variable affecting social entrepreneurship is digital literacy (β=0.32, p<0.001). The effect of usage frequency of Web 2.0 tools on social entrepreneurship is lower and insignificant considering other variables (β=0.05, p>0.001). These independent variables explain 84% of the variance in the social entrepreneurship variable. In addition to these direct effects, the model includes indirect effects. As illustrated in Table 4, total effects are decomposed into direct and indirect effects.

Table 4

Decomposition of total effects for Social Entrepreneurship

Predictor variable	Dependent variable	Total effect	Direct effect	Indirect effect	Standard error	Critical ratio (t)
Lifelong learning	Social entrepreneurship	0.718	0.718	0.00	0.040	14.585***
Digital literacy	Social entrepreneurship	0.324	0.324	0.00	0.053	8.026***
Frequency of using Web 2.0 tools	Social entrepreneurship	0.168	0.045	0.123	0.038	1.609
Frequency of using Web 2.0 tools	Lifelong learning	0.130	0.130	0.00	0.066	3.255**
Frequency of using Web 2.0 tools	Digital literacy	0.091	0.091	0.00	0.041	2.302*

*p<0.05 ** p<0.01 ***p<0.001

According to Table 4, lifelong learning and digital literacy directly and significantly affect social entrepreneurship (p<0.001). While frequency of using Web 2.0 tools has a low direct effect on social entrepreneurship (β=0.05, p>0.001), it has a higher indirect effect through lifelong learning (β=0.72, p<0.001) and digital literacy (β=0.32, p<0.001).

In all these findings, social entrepreneurship variable was highly and directly influenced by lifelong learning and digital literacy variables, and indirectly from the frequency of using Web 2.0 tools. The frequency of using Web 2.0 tools highly and directly affect the lifelong learning trends and digital literacy levels of prospective teachers.

Discussion and Conclusion

Social entrepreneurship is one of the concepts that have gained importance recently. Furthermore, lifelong learning, digital literacy and effective usage of Web 2.0 tools are among other prominent characteristics alongside the social entrepreneurship characteristics of today's human. In this context, this study aimed to examine if there is a relation between lifelong learning trends, digital literacy levels, frequency of using Web 2.0 tools, and social entrepreneurship characteristics. To this end, mean and standard deviation values of the variables and the relationship between the variables were first shown in correlation analyses in the study that uses the descriptive, cross-sectional survey model. Next, two different models were compared and tested with Structural Equation Modeling (SEM) in the study. It was found according to mean and standard deviation values of social entrepreneurship, lifelong learning, digital literacy and frequency of using Web 2.0 tools that the means of the values are equal to or higher than the median. Based on the means, it was concluded that the participants are social entrepreneurs, inclined to lifelong learning, competent in terms of digital literacy and use Web 2.0 tools at an average frequency.

Pearson's correlation coefficient was applied to examine the relationships between the variables, and the analysis showed that social entrepreneurship has a moderate positive correlation to lifelong learning, and digital literacy, and a weak positive correlation to frequency of using Web 2.0 tools. Furthermore, lifelong learning has a moderate positive correlation to digital literacy and weak positive correlation to frequency of using Web 2.0 tools, and a weak positive correlation was found between digital literacy and frequency of using Web 2.0 tools.

Based on the fact that all relationships were found to be significant in the correlation analysis, structural equation models were created between the variables. The fit indices of the models were examined and they are a perfect fit in both models. These two models of perfect fit were compared. As it would have led to error to evaluate the two models separately in the comparison, the direct and indirect effects of two models were combined to draw one single model.

The mentioned model established that lifelong learning and digital literacy directly and significantly affect social entrepreneurship, and the frequency of using Web 2.0 tools weakly and indirectly affects social entrepreneurship.

The results show a direct relationship between social entrepreneurship and lifelong learning. The European Parliament and Council (2006) mentions the importance of entrepreneurial spirit in lifelong learning, and American Consortium of Entrepreneurship Education defines entrepreneurship training as the process of lifelong learning and lists the stages of creating the entrepreneurial spirit (Noruzi, Westover, & Rahimi, 2010). The social entrepreneurship process involves change to support social, economic and environmental performances. This change can be examined in five aspects: social vision, sustainability, social networking, innovation, and financial yields (Nga & Shamuganathan, 2010). Actualization of social entrepreneurship aspects

requires a continuous learning process. Lifelong learning involves implicit and explicit knowledge, and individuals put their skills and experiences into practice to play a critical role in the actualization of continuous learning. Compared to the younger, it is observed that older individuals are more inclined to entrepreneurship in this learning process (Arenius & Minniti, 2005; Beugelsdijk & Noorderhaven, 2005; Weber & Schaper, 2004). Social entrepreneurship is regarded as one of the lifelong learning opportunities (Morfopoulos & Tyrie, 2011). In this context, the fact that individuals who are more active in the process of lifelong learning have higher levels of social entrepreneurship was proven with the findings of this study, too.

The study also shows that digital literacy has a direct effect on social entrepreneurship. Digital literacy is among the concepts that are included in the definition of citizenship (İşman & Canan Güngören, 2014). It also covers the new form of learning, which is digital learning (Sefton-Green & Erstad, 2013). Accordingly, digital literacy provides both content and access. With digital age, digital learning and digital literacy, the concept of entrepreneurship has also started to change. As individuals interact with others and go online, digital literacy which involves learning these steps plays a critical role in the emergence of social entrepreneurship (Souza, Okada & Silva, 2014). Creating the entrepreneurial spirit is considered within the main objectives of developing digital literacy skills (Alberta Education, 2010). It is understood that the research results are analogous with the literature.

A higher indirect effect of frequency of using Web 2.0 tools on social entrepreneurship is one of the research results. Web 2.0 which is the second generation of web technologies has caused individuals to differentiate and acquire diverse knowledge, skills and attitudes. In this sense, Web 2.0 has allowed for further development of digital literacy and lifelong learning skills. As Web 2.0 is among the indispensable technologies of today, digital literacy and lifelong learning skills are also one of today's critical skills. Web 2.0 tools are used in many stages of education, and there are contents for providing the digital literacy and lifelong learning skills. With the usage of Web 2.0 tools in education, it has been observed in the studies that levels of cooperation (Khalid, 2010), motivation (Adrian, 1998), student learning and achievement (Hew & Cheung, 2013), information literacy skills (Ata, 2011), digital literacy skills (Hamutoglu, Canan Güngören, Gür-Erdoğan, & Kaya Uyanık, 2017; Ng, 2012; Williams & Chinn, 2009) and lifelong learning skills (Scalater, 2008; Torres Kompen, Edirisingha, & Mobbs, 2008) have increased. According to the research results, Web 2.0 has an impact on digital literacy and lifelong learning skills, while digital literacy and lifelong learning skills affect social entrepreneurship, which is a finding that coincides with studies in the literature.

Considering the direct effects of lifelong learning trends and digital literacy skills on the increase of social entrepreneurship skills of prospective teachers, in the light of the obtained findings it is suggested that the programs within the context of lifelong learning and digital literacy accompany educational policies. It is believed

that these supplements will increase these skills. Furthermore, another result of the study also implies that the frequency of using Web 2.0 tools indirectly affects social entrepreneurship. Through this finding the more frequent use of Web 2.0 tools in the education programs for students will increase lifelong learning trends and digital literacy, and indirectly contribute to social entrepreneurship skills.

An experimental study can be designed with variables of lifelong learning, digital literacy and usage frequency of Web 2.0 tools, which influence social entrepreneurship to support and generalize the results obtained from this study. Thus, it is possible to observe the interaction of these variables on the individuals. In addition, research with another sample of participants, is suggested for further studies.

Finally, it may be concluded that lifelong learning trends, digital literacy levels and frequency of using Web 2.0 tools have a direct and indirect impact on social entrepreneurship. Putting forth the variables that have an impact on social entrepreneurship as an important concept in our era, other characteristics that should be considered for raising social entrepreneur individuals were determined. Lifelong learning, digital literacy, and frequency of using Web 2.0 tools are the effect variables in this study. Other variables which remain important, are deemed to be gaining further importance and affect social entrepreneurship can be utilized in future studies, and the model can be further expanded.

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Duygu Gür Erdoğan
Sakarya University, Faculty of Education,
Hendek, Sakarya 54300, Turkey
dgur@sakarya.edu.tr

Özlem Canan Güngören
Sakarya University, Faculty of Education,
Hendek, Sakarya 54300, Turkey
ocanan@sakarya.edu.tr

Nazire Burçin Hamutoğlu
Sakarya University, Faculty of Education,
Hendek, Sakarya 54300, Turkey
bhamutoglu@sakarya.edu.tr

Gülden Kaya Uyanık
Sakarya University, Faculty of Education,
Hendek, Sakarya 54300, Turkey
guldenk@sakarya.edu.tr

Tuğba Demirtaş Tolaman
Sakarya University, Faculty of Education,
Hendek, Sakarya 54300, Turkey
tdemirtas@sakaray.edu.tr

Korelacija trendova cjeloživotnoga učenja, razina digitalne pismenosti, učestalosti upotrebe Web 2.0 alata i karakteristika socijalnog poduzetništva

Sažetak

Cilj je ovoga rada istražiti kako trend cjeloživotnoga učenja, upotreba Web 2.0 alata i razina digitalne pismenosti utječu na karakteristike socijalnog poduzetništva. Istraživanju se pristupilo koristeći se deskriptivnim modelom ankete. U tom kontekstu budući učitelji (n=809) koji studiraju na Učiteljskom fakultetu Sveučilišta Sakarya ispunili su sljedeće upitnike: Skala osposobljenosti za socijalno poduzetništvo (eng. Social Entrepreneurship Qualifications Scale, Lifelong Learning Trends Scale), Skala digitalne pismenosti (eng. Digital Literacy Scale) i Upitnik o učestalosti upotrebe Web 2.0 (eng. Frequency of Web 2.0 Usage Questionnaire). Putem podataka dobivenih strukturalnim modeliranjem, dobivena su dva različita modela koja su objedinjena za potrebe istraživanja. Zaključeno je da trendovi cjeloživotnoga učenja, razine digitalne pismenosti i učestalost upotrebe Web 2.0 alata imaju izravan i neizravan učinak na socijalno poduzetništvo.

Ključne riječi: *cjeloživotno učenje; digitalna pismenost; socijalno poduzetništvo; strukturalno modeliranje; Web 2.0.*

Uvod

S razvojem tehnologije i društvenim promjenama socijalno poduzetništvo postaje važan koncept o kojemu se u današnje vrijeme često raspravlja. Europsko vijeće definira socijalno poduzetništvo kao jednu od vještina cjeloživotnoga učenja. U informacijskom desetljeću koncept cjeloživotnoga učenja podrazumijeva i poduzetništvo, poduzetnog pojedinca, obrazovanje u poduzetništvu i druge sintagme koje nalazimo u literaturi (Yavuz-Konakman i Yanpar-Yelken, 2014). Socijalno poduzetništvo naglašava da se sa socijalnom odgovornošću mora postupati na inovativne načine kako bi se stvorile socijalne vrijednosti u društvima koja nude

rješenja za probleme iz perspektive poduzetništva (Kılıç-Kırılmaz, 2014; OECD, 1999). Kada je riječ o stvaranju inovativnih projekata i povećanju produktivnosti društva (Eren, 2010), uloga obrazovanja u osvještavanju koncepta socijalnog poduzetništva kod pojedinaca vrlo je važna u kontekstu cjeloživotnoga učenja. S obzirom na to da obrazovanje u potpunosti okružuje zajednicu, osposobljavanje za buduće generacije institucija je koja mora sadržavati cjelovite i ključne vrijednosti (Parlak, 2017). Nadalje, model i sadržaj obrazovanja također se mijenja u svijetlu raznovrsne tehnologije. Obrazovne institucije moraju ići u korak s promjenama i moraju nuditi kvalitetno obrazovanje kako bi obrazovali ljude koji su potrebni društvu. To podrazumijeva osposobljavanje pojedinaca koji su kreativni, inovativni, koji uče kako učiti (Çalık i Sezgin, 2005), i pojedince poduzetnike koji imaju kompetencije potrebne za vrijeme u kojemu žive (Akar i Aydın, 2015). Čini se da je razvoj tehnologije imao učinak na socijalno poduzetništvo u kojemu se pojedinci osvještavaju o važnosti cjeloživotnoga učenja i razvijaju poduzetničke vještine. U svjetlu nedavnog napretka tehnologije integracija tehnologije u obrazovanje također je potrebna, a postojanje tehnologije u obrazovanju je neosporno.

Web 2.0 alati postaju neophodni za pojedince, a koriste se i u obrazovanju, doduše u obrazovne svrhe. Važno je obrazovati zajednicu i buduće generacije. Međutim, za uključenost u obrazovanje i društvo potrebna je učinkovita upotreba Web 2.0 alata. Digitalna pismenost važan je koncept koji je povezan s učinkovitom upotrebom tehnologije od pojedinca. S obzirom na u današnje vrijeme dinamičnu i raširenu upotrebu Web 2.0 alata u obrazovanju, vjeruje se da učinkovita upotreba Web 2.0 alata učenika utječe na vještine digitalne pismenosti. Iz te perspektive, predviđa se da socijalno poduzetništvo, cjeloživotno učenje, digitalna pismenost i upotreba Web 2.0 alata mogu biti u međusobnoj povezanosti, a okvir ovoga rada temelji se na toj premisi.

Socijalno poduzetništvo

Dok stvara inovativna rješenja za trenutna društvena pitanja, socijalno poduzetništvo mobilizira ideje, potencijale, resurse i društvene mehanizme za održivi razvoj (Ladeira i Machado, 2013). Zajednički nazivnik definicija koncepta socijalnog poduzetništva jest rješenje društvenoga problema inovativnim pristupom (Austin, Stevenson i Wei-Skillern, 2006; İrengün i Arıkboğa, 2015; Thompson, 2002).

Prema Katzenstein i Chrispin (2011), prihvaćajući društvenu misiju i usredotočujući se na naglašavanje društvene koristi, socijalno poduzetništvo razlikuje se od poduzetništva koje se zasniva na kapitalu. Glavna karakteristika socijalnog poduzetništva po kojoj se ono razlikuje od kapitalnog poduzetništva jest altruizam (Konaklı i Göğüs, 2013). Pojedinci pokazuju osviještenost u društvenom okruženju karakteristikama čija su svojstva društvene vrijednosti. Aktivnosti koje se izvode kako bi se iznašla inovativna i trajna rješenja za probleme koji su tijesno vezani uz društvo poput nezaposlenosti, zdravstva i problema izbjeglica, obrazovanja, ekoloških problema, pitanje žena, starijih osoba, onesposobljenih, životinja itd. rješavaju su

unutar djelokruga socijalnog poduzetništva. Pojedince koji sudjeluju u takvim aktivnostima nazivamo „socijalnim poduzetnicima". Prema Dees (1998), koji je uveo koncept socijalnog poduzetništva, socijalni poduzetnici su agenti promjena u društvu. Urbano, Toledano i Soriano (2010) opisuju socijalne poduzetnike, koji zadovoljavaju potrebe društva putem društvene vrijednosti, kao akceleratore promjena. Denizalp (2007) definira socijalne poduzetnike kao osjetljive ljude koji uočavaju probleme u društvu, uporno naglašavaju rješavanje problema putem neisprobanih pristupa i svojim su realnim stavovima zadobili povjerenje društva. Uzimajući u obzir definicije socijalnog poduzetnika, može se reći da je u svima sadržana društvena misija. Abu-Saifan (2012) tvrdi da je osnovni cilj socijalnog poduzetnika ostvariti društvenu misiju.

Promjene unutar društva izazivaju pojedince na to da postanu osviješteniji o različitim i učestalim potrebama. Heimstra (1976) tvrdi da je cjeloživotno učenje unutarnji proces učenja koji se nastavlja tijekom života pojedinca u skladu s osobnim interesima, potrebama i vještinama (*vidi* Coşkun i Demirel, 2012). Smatra se da je ta definicija cjeloživotnoga učenja povezana s karakteristikama socijalnog poduzetnika, točnije pojedinca koji može primijetiti probleme u društvenom okruženju, koji stvara društvenu vrijednost vlastitim interesima, vještinama i misijom te može prihvatiti inovativne pristupe rješavanju problema. Havolli i Ahmeti (2008) tvrde da unapređenje poduzetništva zahtjeva motivirane i kreativne pojedince koji kroz obrazovnu kvalifikaciju naginju k rješavanju problema. Stoga se za budućnost društva važnim smatra način na koji socijalni poduzetnici mogu poboljšati svoje vještine cjeloživotnoga učenja. U Uredbi europskoga parlamenta i vijeća (Decree of European Parliament and Council, 2006) o „cjeloživotnome učenju" važnost davanja podrške za obogaćivanje poduzetničkog duha navodi se među općim ciljevima programa za cjeloživotno učenje. Balay (2004) naglašava da su pojedinci sa sposobnošću razumijevanja, interpretiranja i stvaranja informacija pojedinci koji su cjeloživotni učenici. Smatra se da pojedinci, cjeloživotni učenici, mogu iznaći rješenja za društvene potrebe posredstvom inovativnijih vidika.

Cjeloživotno učenje

Brzom izmjenom informacija pojedinci osjećaju potrebu za stalnim učenjem (Coşkun i Demirel, 2012). Internet i moderne tehnologije ubrzano su ušle u svakodnevni život i na taj način također potaknule spomenutu situaciju. Prema Perelmanovu (1992) novom shvaćanju obrazovanja učenje se ne može zatvoriti unutar zidova (vidi Erişti, 2010) i učenje nije ograničeno samo na godine provedene u školi, nego je to cjeloživotni proces (Erişti, 2010, str. 7). Sve te razvojne promjene sa sobom su donijele promišljanje da se obrazovanje ne može ograničiti na određeno razdoblje u čovjekovu životu. Prema Organizaciji za ekonomsku suradnju i razvoj – *OECD* (1999), čovjek se razvija u beskonačnom procesu tijekom života.

Kahlert (2000) definira cjeloživotno učenje kao usvajanje znanja pojedinaca iz nekoliko izvora i prilika za učenjem tijekom života. Pojedinci se moraju i sami razviti

kako bi se prilagodili znanstvenim, tehnologijskim i kulturološkim promjenama i zadovoljili vlastite potrebe. Cjeloživotno učenje pokriva nekoliko formalnih i neformalnih oblika obrazovanja i osposobljavanja koja također uključuju obvezne vještine kojima se pojedinci moraju poučiti poput traženja informacija, unapređivanja nađenih informacija, i njihove neovisne i aktivne upotrebe. U Osmome razvojnome planu cjeloživotno se učenje opisuje kao prilagodba boljim životnim standardima, učinkovita upotreba ljudskih potencijala u iskoraku prema globalnom ekonomskom svijetu, transfer i diseminacija informacijskih i komunikacijskih tehnologija za šira područja te kao novi pristup odgoju čovjeka u skladu s potrebama populacije koja posjeduje znanja i vještine koje se mogu koristiti u proizvodnji i uslužnoj djelatnosti. Iz spomenutih definicija cjeloživotnoga učenja uočljiv je naglasak na kontinuiranom razvoju pojedinca.

Ograničeni prostor ili vrijeme za učenje nije od velike važnosti za cjeloživotnoga učenika. Štoviše, uklonjeno je mišljenje da se obrazovanje može provesti samo s nastavnikom unutar razreda. Pojedinci mogu svoje učenje ostvariti gotovo svugdje, neovisno i uključeno. Cisco (2008) tvrdi da je promjena paradigme u ovome stoljeću oblikovala ciljeve koje učenici moraju usvojiti kako bi bili uspješni u modernome svijetu. Primjerice, usvajanje niza vještina, dobivanje kvalitetnoga obrazovanja, komunikacija s različitim kulturama i kontinuirano cjeloživotno učenje. S današnjim mobilnim tehnologijama pojedinci, bez sumnje, imaju misiju učenja putem cjeloživotnog učenja. Konačno, učenje se smatra stanjem prilagodbe razvoju i obrnuto (Edwards i Usher, 2008, str. 62).

Web 2.0 alati

Napredak tehnologije ima velike utjecaje na nove generacije (Mihalcea, Mitan i Vitelar, 2012). Kao prsten u tehnologijskom lancu, Web 2.0 tehnologije definiraju se kao druga generacija Web-tehnologija. Razvoj tehnologije opisan kao akcelerator društvenih promjena omogućuje odgoj generacije s vrlo visokom tendencijom upotrebe tehnologijskih alata. Oni rastu i sazrijevaju s tehnologijom i s njom sve odrađuju (Tapscott, 2009). Opisujući ih kao „digitalne urođenike", „generaciju y", „brze učenike", „tehnofile", tu generaciju smatramo naviknutom na tehnologiju (Hansen i Leuty, 2012; Shih, 2009; Twenge i sur., 2010).

Razvoj Web 2.0 promijenio je uloge korisnika. Web 2.0 alati pretvorili su pasivne korisnike u učinkovite pojedince koji stvaraju nove sadržaje i aplikacije u skladu sa svojim potrebama te kako bi postali aktivniji i kreativniji (Tonta, 2009). S obzirom na svoju prirodu Web 2.0 alati imaju karakteristike poput svojstvene strukture, način na koji korisnici stvaraju proizvode ili sadržaje i uporabu moći i zajedništva mase (Anderson, 2007). Web 2.0 alati uključuju blogove, wikije, podcastove, RSS (*Rich Site Summary*), instant poruke i društvene mreže. Svaki od spomenutih alata koristi se u obrazovanju na različite načine s obzirom na svoje karakteristike. Primjerice, blog i web-stranice koje stvaraju pojedinci ili skupine, uključuje tekst, slike i audiozapise kojima se pojedinci koriste uglavnom da bi se predstavili i iskazali

svoje mišljenje, a wikiji omogućuju korisnicima dodavanje, brisanje ili uređivanje sadržaja (Horzum, 2010). Prema tome, moglo bi se reći da blog i wiki mogu biti korisni za iskazivanje mišljenja o nekoj temi. Tavales i Skevoulis (2006) smatraju da su podcastovi pomoćni alati kojima se pojedinci koriste kako bi samostalno naučili određeni nastavni sadržaj. Stoga pojedinci mogu upotrebljavati podcastove sa svrhom učenja bez vremenskoga i prostornoga ograničenja. Slično tome RSS, instant poruke i društvene mreže imaju karakteristike Web 2.0 alata. Takvi alati omogućuju pojedincima samostalno učenje. Pojedinac neovisno može pristupiti potrebnim informacijama. Web-stranice za rasprave koje kreiraju zajednice sa zajedničkim interesom ili temom daju poduzetnicima mogućnost da „ugrabe" priliku ili im ponude rješenja za problem putem interakcije s pojedincima ili grupama sa sličnim mišljenjima (Maltby, 2012). Pojedinci mogu iskazati vlastite poduzetničke sadržaje i trendove cjeloživotnoga učenja koristeći se Web 2.0 alatima, a ti alati imaju svojstvene strukture, moć udruživanja i poticanja pojedinaca da osvijeste probleme iz različitih perspektiva. Smatra se da pojedinci koji se koriste Web 2.0 alatima i time pristupaju informaciji, stvaraju informaciju i imaju iskustvo društvenog okruženja, imaju bolji trend cjeloživotnoga učenja i vještine socijalnog poduzetništva.

Smatra se da pojedinci mogu preuzeti učinkovite uloge u rješavanju problema na način da se sastanu s članovima i skupinama s kojima su putem društvenih medija u interakciji. Web-tehnologije imaju nedvojbenu moć omogućavanja pristupa informacijama kako bi se riješili problemi na koje pojedinci nailaze u društvu. Smatra se važnim da pojedinci riješe problem na način da imaju valjanu informaciju koja je u skladu s njihovim potrebama. Ipak, nije svaki izvještaj ili svaki prikaz na društvenim mrežama istinit. Postoje mnogi profili ili prikazi na društvenim mrežama koji su lažni. Stoga je potrebno osvijestiti pojedince o važnosti pismenosti i vještine digitalne pismenosti ne bi li se prepoznala kvaliteta podijeljenih izvještaja i povećala pouzdanost društvene mreže.

Digitalna pismenost

Digitalna pismenost podrazumijeva odgovarajuću upotrebu različitih tehnologija i sposobnost pristupa, stvaranja i dijeljenja sadržaja, kao i upotrebu tehnologije u procesu učenja i poučavanja (Hamutoglu, Canan-Güngören, Kaya-Uyanık, i Gür-Erdoğan, 2016). Nekoliko web- tehnologija poput tražilica, društvenih mreža, web-stranica s vijestima, blogova, wikija itd. može se koristiti s tom svrhom. Međutim, svi dijelovi informacije dobiveni putem te web-tehnologije ne mogu biti točni i pouzdani. Informacija dobivena iz nepouzdanog izvora može zavesti socijalnog poduzetnika. Očekuje se da socijalni poduzetnik koji je u interakciji s članovima i grupama različitih interesa ima razvijenu digitalnu pismenost. U protivnom, produkcija i dijeljenje uvredljivih i varljivih informacija imali bi učinkovitu ulogu u stvaranju rizika u društvu (Çubukçu i Bayzan, 2013). Pojedinci s visokim stupnjem digitalne pismenosti razlikuju se od ostalih s obzirom na rješavanje problema s kojima se suočavaju i s obzirom na način na koji se izražavaju. Tornero (2004) izvješćuje da digitalna pismenost poboljšava kreativnost učenika i omogućuje im da se bolje

izraze. Kreativnost je važna za socijalne poduzetnike prilikom rješavanja problema iz drukčijih perspektiva. Nadalje, upotreba Web 2.0 alata zahtijeva poboljšane vještine digitalne pismenosti. S obzirom na to, digitalna pismenost definira se kao pristup točnoj informaciji upotrebom različitih tehnologija (Çubukçu i Bayzan, 2013).

Cilj istraživanja

U ovom je istraživanju naglasak na tendencijama cjeloživotnoga učenja, upotrebi Web-2.0 alata i vještini digitalne pismenosti kao važnom obilježju socijalnog poduzetništva pojedinca. Smatra se da su trend cjeloživotnoga učenja, upotreba Web 2.0 alata i razina digitalne pismenosti u korelaciji s karakteristikama socijalnog poduzetništva. Vrijedno je napomenuti da postoji ograničen broj istraživanja koja se bave izravnim učinkom trenda cjeloživotnoga učenja pojedinaca, upotrebom Web 2.0 alata i razinom digitalne kompetencije kao varijablama na karakteristike socijalnog poduzetništva (Abu-Saifan,2012; Balay, 2004; Khalid, 2010); odnosom između poduzetništva i Web 2.0 alata (Hughes, 2016), učinkom upotrebe IKT-a na razinu poduzetništva (Yavuz-Konakman iYanpar-Yelken, 2014), odnosom između cjeloživotnoga učenja i karakteristika socijalnog poduzetništva (Sezen-Gültekin i Gür-Erdoğan, 2016). Nadalje, u literaturi također nailazimo na istraživanja povezanosti tendencije cjeloživotnoga učenja i Web 2.0 alata (Hew i Cheung, 2013; Scalater, 2008) i povezanosti Web 2.0 alata i digitalne pismenosti (Bates, 2002; Çubukçu i Bayzan, 2013). U tom kontekstu ovo istraživanje pokušat će odgovoriti na pitanje utječu li cjeloživotno učenje, Web 2.0 alati i digitalna pismenost izravno na socijalno poduzetništvo ili imaju li Web 2.0 alati neizravan učinak na socijalno poduzetništvo putem cjeloživotnog obrazovanja i digitalne pismenosti. Ovo istraživanje pokušat će istražiti izravne utjecaje cjeloživotnoga učenja, Web 2.0 alata i digitalne pismenosti na socijalno poduzetništvo i neizravan utjecaj Web 2.0 alata na socijalno poduzetništvo putem cjeloživotnog obrazovanja i digitalne pismenosti i usporedbom dva različita modela. U svjetlu dobivenih rezultata ovo je istraživanje važno s obzirom na dobivene varijable koje su učinkovite za obrazovanje socijalnih poduzetnika i s obzirom na važnost tih varijabli u obrazovanju općenito.

Metodologija

Cilj ovoga istraživanja jest otkriti izravne i neizravne učinke digitalne pismenosti, cjeloživotnoga obrazovanja i Web 2.0 alata na socijalno poduzetništvo. U tom je kontekstu istraživanje postavljeno kao deskriptivna presječna studija putem ankete kako bi se iz dobivenih podataka dobile jedinstvene i specifične karakteristike (Fraenkel i Wallen, 2008).

Uzorak ispitanika

Ispitanici u ovome istraživanju (n=809) studenti su Sveučilišta Sakarya, Fakulteta za obrazovanje učitelja. Ispitivanje je provedeno u proljetnom semestru akademske godine 2016./17. Uzorak je među budućim učiteljima biran nasumično. Socio-demografske karakteristike ispitanika u uzorku prikazane su u Tablici 1.

Tablica 1

Kao što prikazuje Tablica 1, skupina ispitanika sastojala se od 75,9% (f = 614) žena i 24,1% (f = 195) muškaraca. Dob ispitanika bila je od 20 do 60 (df = 5,07); 50,9% (f = 412) bilo je zainteresirano za društvenu aktivnost, a 49,1% (f = 397) nije bilo zainteresirano za društvenu aktivnost.

Instrumenti

Skala osposobljenosti za socijalno poduzetništvo (Social Entrepreneurship Qualifications Scale)

Skalu osposobljenosti za socijalno poduzetništvo (SEQ-S) razvili su Konakli i Gogus (2013). Skala se naslanja na Likertovu skalu od 5 stupnjeva i sadrži 21 česticu s tri glavne podskale, samopouzdanje, osobna kreativnost (6 čestica) i preuzimanje rizika (7 čestica). Podskalu samopouzdanje čini osam čestica, npr.: „Lako se mogu sprijateljiti i biti u novome okruženju." Podskala osobna kreativnost sastojala se od šest čestica poput: „Prije nego što započnem posao, promislim postoje li drukčiji načini na koje ovaj posao mogu napraviti.". Na kraju podskala preuzimanje rizika čini sedam čestica poput: „Meni je uzbudljivo upustiti se u težak posao.". Dok je Cronbach Alpha koeficijent pouzdanosti za ukupan rezultat skale bio 0,85, pouzdanost za podskale samopouzdanje, osobna kreativnost i preuzimanje odgovornosti bili su 0,77, 0,70, i 0,72 pojedinačno. Rezultati CFA iz upitnika SEQ-S ukazuju na prikladnost modela ($\chi 2$ = 427,15, df=186, $\chi 2$ /df= 2,29; RMSEA= 0,63; SRMR=0,60, NFI= 0,90; NNFI=0,95; CFI=0,95; GFI=0,90; AGFI=,86) (Hooper, Coughlan, i Mullen, 2008; Hu i Bentler, 1999; Schermelleh-Engel, Moosbrugger, i Müler, 2003). Ukupan rezultat za 21 česticu izračun je socijalnog poduzetništva osobe. Ako je rezultat na skali niži od 42, u tom je slučaju ono nisko; ako je rezultat između 42 i 63, onda je srednje, a ako je iznad 63, onda je razina osposobljenosti za socijalno poduzetništvo osobe visoka.

Skala trendova cjeloživotnoga učenja (eng. Lifelong Learning Trends (LLLT-S))

Skalu su razvili Gur-Erdogan i Arsal (2016), a sastoji se od 17 čestica na Likertovoj skali od pet stupnjeva i dvofaktorske strukture. Unutar dimenzije volja za učenjem nalazimo 11 čestica, primjerice: „Prilično sam samomotiviran za vrijeme trajanja procesa učenja", a unutar dimenzije otvorenost za poboljšanje nalazimo šest čestica. „Važno mi je napredovati u karijeri." Primjer je dimenzije otvorenost za poboljšanje. Ukupna ekspozicija faktora je 43,44%, Cronbach alpha koeficijent unutarnje konzistentnosti je 0,86 a vrijednost je ω ,089. Indeks prikladnosti skale pokazao je da je vrijednost $\chi 2$ značajna ($p < 0,05$), RMSEA=0,07, RMR=0,02, GFI=0,93, AGFI=0,90, NFI=0,93, NNFI=0,93, CFI=0,94. Ukupan rezultat za 17 čestica izračun je trenda cjeloživotnoga učenja. Ako je rezultat na skali manji od 34, onda je nizak; ako je rezultat između 34 i 51, onda je srednji, a ako je rezultat viši od 51, onda je prisutnost socijalnog poduzetništva visoka.

Skala digitalne pismenosti

U ovom se istraživanju koristila skala digitalne pismenosti (DL-Q) koju je razvio Ng (2012), a na turski su je prilagodili Hamutoglu i sur. (2016). Spomenuta skala je skala Likertova tipa od pet stupnjeva u rasponu od 1 „u potpunosti se ne slažem" do 5 „u potpunosti se slažem", a sastoji se od 17 čestica. Originalna skala sadržavala je četiri dimenzije: dimenzije stav i tehnika, kognitivnu dimenziju i socio-emocionalnu dimenziju. Dimenzija stav sadrži sedam čestica poput „Volim upotrebljavati IKT za učenje". Tehnička dimenzija sadrži šest čestica, npr.: „Lako naučim koristiti se novim tehnologijama". „Upoznat sam s pitanjima vezanima uz aktivnosti na mreži, npr. kibernetičkom sigurnosti, pitanjima pretraživanja, plagiranja" primjeri su kognitivne dimenzije koja sadrži dvije čestice i „IKT mi omogućuje suradnju s vršnjacima kada imamo projekt ili neke druge aktivnosti učenja" primjer je socijalne dimenzije koja se također sastoji od dviju čestica. Prilagođena skala objašnjava 65,78% ukupne varijance, a kakvoća prikladnosti ispitana je i dobivena za $\chi 2=268,45(n=113, p=0,00)$, RMSEA=0,071, GFI=0,93, AGFI=0,91, CFI=0,98, NFI=0,96, NNFI=0,97, i SRMR=0,05. Pouzdanost skale izračunata je koristeći se Cronbach Alpha koeficijentom korelacije za cijelu skalu koja iznosi 0,93; za dimenziju stava 0,88; za dimenziju tehnologija 0,89; kognitivnu dimenziju 0,70 i socijalnu dimenziju 0,72. Ukupan rezultat za 17 čestica izračun je razine digitalne pismenosti. Ako je postignuće na skali niže od 34, onda je on nizak; ako je postignuće između 34 i 51, onda srednji, a ako je postignuće iznad 51, onda je prisutna visoka razina socijalnog poduzetništva.

Upitnik – Učestalost upotrebe Web 2.0

Upitnikom se ispitivala učestalost upotrebe Web 2.0 alata poput Facebooka, MSN-a, Wikija, bloga, VPS-a, i podcastova, u rasponu od 1 „nikada", 2 „jednom mjesečno ili nekoliko dana u mjesecu", 3 „jednom tjedno ili nekoliko dana u tjednu" i 4 „svakodnevno" prema Horzumu (2010). Razmatrana su stajališta različitih stručnjaka iz područja obrazovne tehnologije (5), vrednovanja i ocjenjivanja (2) i učitelja (20) s obzirom na jasnoću, sadržaj i stvarnu valjanost čestica.

Statističke analize

Analiza podataka provedena je s pomoću deskriptivne statističke analize i korelacije iz programa SPSS 23.0 (statistički paket za društvene znanosti). Uz to je primijenjeno strukturalno modeliranje (SEM) da bi se procijenila prikladnost modela upotrebljavajući AMOS 23.

Rezultati

Korelacijske analize napravljene su najprije da bi se prikazale srednje vrijednosti i standardne devijacije varijabli i odnosi među varijablama. Rezultati su prikazani u Tablici 2.

Tablica 2

Kao što je prikazano u Tablici 2, srednje vrijednosti za socijalno poduzetništvo, cjeloživotno učenje, digitalnu pismenost i učestalost upotrebe Web 2.0 alata jednake su ili veće od medijana. Prema tome, može se zaključiti da su ispitanici socijalni poduzetnici, skloni cjeloživotnome učenju, kompetentni u smislu digitalne pismenosti koji Web 2.0 alate s obzirom na učestalost upotrebljavaju prosječno.

Pearsonov koeficijent korelacije koristio se za ispitivanje povezanosti među varijablama. Rezultati pokazuju da socijalno poduzetništvo ima srednje pozitivnu korelaciju s cjeloživotnim učenjem (0,67) i digitalnom pismenošću (0,54), a slabu pozitivnu korelaciju s učestalošću upotrebe Web 2.0 alata (0,15). Štoviše, cjeloživotno učenje ima umjerenu pozitivnu korelaciju s digitalnom pismenošću (0,40) i slabu pozitivnu korelaciju s učestalošću upotrebe Web 2.0 alata (0,11). Povezanost digitalne pismenosti i učestalost upotrebe Web 2.0 alata je slaba i pozitivna (0,10). Sve veze bile su značajne i na osnovi tog nalaza primijenjeno je strukturalno modeliranje među varijablama.

U ovome istraživanju uspoređena su i testirana dva različita modela koristeći se strukturalnim modeliranjem (SEM). Prvi model mjeri izravne učinke vještine cjeloživotnoga učenja pojedinaca, razinu digitalne pismenosti i učestalost upotrebe Web 2.0 alata na status njihova socijalnog poduzetništva. Taj model nazvan je „model jedan". Drugi model ispituje kako učestalost upotrebe Web 2.0 alata utječe na vještine cjeloživotnoga učenja i razine digitalne pismenosti, a ispitivan je doprinos tog zajedničkog učinka na status socijalnog poduzetništva. Model koji ispituje neizravne učinke nazvan je „model dva". Analiza dijagrama oba modela prikazana je na Prikazu 1.

Prikaz 1

Ispitana je prikladnost modela s obzirom na varijablu socijalno poduzetništvo, izravni i neizravni učinci cjeloživotnoga učenja, digitalne pismenosti i učestalosti upotrebe Web 2.0 alata. Tablica 3 pokazuje koeficijente prikladnosti tih dvaju modela.

Tablica 3

Kriteriji koji su uzeti u obzir za indekse prikladnosti 0,90 smatraju se prihvatljivom prikladnošću a 0,95 smatra se najboljom prikladnošću za GFI, CFI i NFI indekse (Bentler, 1980; Bentler i Bonett, 1980; Marsh, Hau, Artelt, Baumert i Peschar, 2006). 0,85 smatra se prihvatljivom prikladnošću, a 0,90 smatra se najboljom prikladnošću za AGFI (Schermelleh-Engel i Moosbrugger, 2003). Za RMSEA 0,08 je prikladnost prihvatljiva, a 0,05 je prikladnost najbolja za kriterije (Browne i Cudeck, 1993; Byrne i Campbell, 1999). Na kraju se 0,05 za SRMR odnosi na najbolju, a 0,10 na prihvatljivu prikladnost (Schermelleh-Engel i Moosbrugger, 2003). Uzimajući u obzir sve vrijednosti, razvidno je da sve vrijednosti vezane uz dva modela u Tablici 3 imaju najbolju prikladnost.

Uspoređena su dva modela s najboljom prikladnošću. S obzirom na to da bi neovisna procjena dva modela usporedbi dovela do pogreške, izravni i neizravni učinci dvaju modela objedinjeni su ne bi li se dobio jedan model. Model varijabli koje utječu na socijalno poduzetništvo prikazan je na Prikazu 2.

Prikaz 2

Kao što je prikazano na Prikazu 2, varijabla Socijalno poduzetništvo ima tri poddimenzije koje se mogu nabrojati s obzirom na veličinu učinka prema sljedećem: samopouzdanje (β=0,77, p<0,001), preuzimanje rizika (β=0,76, p<0,001) i osobna kreativnost (β=0,67, p<0,001). Jasno je da se cjeloživotno učenje smatra najvažnijom varijablom koja utječe na Socijalno poduzetništvo (β=0,72, p<0,001). Druga najvažnija nezavisna varijabla koja utječe na Socijalno poduzetništvo jest Digitalna pismenost (β=0,32, p<0,001). Učinak učestalosti upotrebe Web 2.0 alata na Socijalno poduzetništvo je manji i beznačajan s obzirom na druge varijable (β=0,05, p>0,001). Te nezavisne varijable objašnjavaju 84% varijance u varijabli Socijalno poduzetništvo. Uz izravne učinke, model uključuje i neizravne učinke. U Tablici 4 prikazani su ukupni učinci koji su raščlanjeni na izravne i neizravne učinke.

Tablica 4

Prema Tablici 4, cjeloživotno učenje i digitalna pismenost izravno i značajno utječu na socijalno poduzetništvo (p<0,001). S druge strane, učestalost upotrebe Web 2.0 alata ima niski izravni učinak na socijalno poduzetništvo (β=0,05, p>0,001) i viši neizravni učinak na cjeloživotno učenje (β=0,72, p<0,001) i digitalnu pismenost (β=0,32, p<0,001).

U svim pokazateljima varijabla Socijalno poduzetništvo visoko je i izravno pod utjecajem cjeloživotnoga učenja i digitalne pismenosti, a neizravno je pod utjecajem učestalosti upotrebe Web 2.0 alata. Učestalost upotrebe Web 2.0 alata visoko i izravno utječe na trendove cjeloživotnoga učenja i razinu digitalne pismenosti budućih učitelja.

Rasprava i zaključak

Socijalno je poduzetništvo koncept koji u posljednje vrijeme dobiva na važnosti. Nadalje, cjeloživotno učenje, digitalna pismenost i učinkovita upotreba Web 2.0 alata uz socijalno su poduzetništvo neke od važnih karakteristika čovjeka današnjice. U tom je kontekstu ovo istraživanje pokušalo istražiti postoji li poveznica između trendova cjeloživotnoga učenja, razine digitalne pismenosti, učestalosti upotrebe Web 2.0 alata i karakteristika socijalnoga poduzetništva. S tom svrhom prikazane su srednje vrijednosti, vrijednosti standardne devijacije varijable i povezanost među njima u korelacijskim analizama. Istraživanje je provedeno primjenom deskriptivnog, presječnog modela ankete. Nadalje, dva različita modela uspoređena su i testirana koristeći se strukturalnim modeliranjem (SEM). S obzirom na srednje vrijednost i vrijednosti standardne devijacije za socijalno poduzetništvo, cjeloživotno učenje, digitalnu pismenost i učestalost upotrebe Web 2.0 alata srednje su vrijednosti jednake ili više od medijana. S obzirom na srednje vrijednosti zaključujemo da su ispitanici socijalni poduzetnici, skloni cjeloživotnome učenju, kompetentni s obzirom na digitalnu pismenost i da srednje često upotrebljavaju Web 2.0 alate.

Pearsonov koeficijent korelacije ispitao je povezanost među varijablama, a analiza je

pokazala da socijalno poduzetništvo ima umjerenu pozitivnu korelaciju s cjeloživotnim učenjem i digitalnom pismenošću, a slabu pozitivnu korelaciju s učestalošću upotrebe Web 2.0 alata. Nadalje, cjeloživotno učenje ima umjerenu pozitivnu korelaciju s digitalnom pismenošću i slabu pozitivnu korelaciju s učestalošću upotrebe Web 2.0 alata. Slaba pozitivna korelacija uočena je između digitalne pismenosti i učestalosti upotrebe Web 2.0 alata.

S obzirom na činjenicu da su sve povezanosti bile značajne u korelacijskoj analizi, strukturalno modeliranje primijenjeno je među varijablama. Indeksi prikladnosti modela provjereni su i oba modela imaju dobru prikladnost. Uspoređena su dva modela koja imaju dobru prikladnost. S obzirom na to da bi usporedba tih dvaju modela zasebno dovela do greške, izravni i neizravni učinci tih dvaju modela objedinjeni su u jedan model.

Sa spomenutim modelom ustanovljeno je da cjeloživotno učenje i digitalna pismenost izravno i značajnu utječu na socijalno poduzetništvo, a učestalost upotrebe Web 2.0 alata slabo i neizravno utječe na socijalno poduzetništvo.

Rezultati pokazuju izravnu povezanost socijalnog poduzetništva i cjeloživotnoga učenja. Europski parlament i vijeće (2006) spominju važnost poduzetničkog duha u cjeloživotnome učenju, a Američki konzorcij za obrazovanje u poduzetništvu definira osposobljavanje u poduzetništvu kao proces cjeloživotnoga učenja i daje popis faza stvaranja poduzetničkog duha (Noruzi, Westover i Rahimi, 2010). Proces socijalnog poduzetništva uključuje promjenu koja će podržati socijalna, ekonomska i ekološka djelovanja. Ta promjena može se ispitati u pet aspekata: socijalna vizija, održivost, društvena umreženost, inovacija i financijski prinos (Nga i Shamuganathan, 2010). Ostvarenje aspekata socijalnog poduzetništva nalaže stalan proces učenja. Cjeloživotno učenje uključuje implicitno i eksplicitno znanje, a pojedinci svoje vještine i iskustva uključuju u praksu i time imaju ključnu ulogu u realizaciji cjeloživotnoga učenja. U usporedbi s mladima, uočeno je da su stariji pojedinci skloniji poduzetništvu u takvom procesu učenja (Arenius i Minniti, 2005; Beugelsdijk i Noorderhaven, 2005; Weber i Schaper, 2004). Socijalno poduzetništvo smatra se jednom od prigoda cjeloživotnoga učenja (Morfopoulos i Tyrie, 2011). U tom je svjetlu činjenica da pojedinci koji su aktivniji u procesu cjeloživotnoga učenja imaju više razine socijalnog poduzetništva dokazana i rezultatima ovoga istraživanja.

Istraživanje je također pokazalo da digitalna pismenost ima izravan učinak na socijalno poduzetništvo. Digitalna je pismenost koncept koji je sadržan u definiciji građanstva (İşman i Canan Güngören, 2014). Taj koncept pokriva i novi oblik učenja koji nazivamo digitalno učenje (Sefton-Green i Erstad, 2013). Shodno tome, digitalna pismenost nudi i sadržaj i pristup. S digitalnim dobom i digitalnom pismenošću koncept poduzetništva također se počeo mijenjati. Kako pojedinci međusobno komuniciraju kada su *online* dio je digitalne pismenosti, a poznavanje tih koraka ima kritičnu ulogu za stvaranje socijalnog poduzetništva (Souza, Okada, i Silva, 2014). Stvaranje poduzetničkog duha smatra se jednim od glavnih ciljeva u razvoju vještina

digitalne pismenosti (Alberta Education, 2010). Smatra se da su rezultati istraživanja u skladu s literaturom.

Viši i neizravni učinak upotrebe Web 2.0 alata na socijalno poduzetništvo jedan je od rezultata istraživanja. Web 2.0, odnosno druga generacija web-tehnologija, omogućila je pojedincima da se istaknu i usvoje različita znanja, vještine i stavove. U tom smislu Web 2.0 je omogućio daljnji razvoj digitalne pismenosti i vještina cjeloživotnoga učenja. S obzirom na to da je Web 2.0 jedna od neophodnih tehnologija današnjice, digitalna pismenost i vještine cjeloživotnoga učenja također su ključne vještine današnjice. Web 2.0 alati koriste se u više razina obrazovanja, a postoje i sadržaji koji omogućuju učenje vještina digitalne pismenosti i cjeloživotnog učenja. Istraživanja su pokazala da upotreba Web 2.0 alata u obrazovanju poboljšava razine vještina suradnje (Khalid, 2010), motivacije (Adrian, 1998), učenja i postignuća učenika (Hew i Cheung, 2013), informacijske pismenosti (Ata, 2011), digitalne pismenosti (Hamutoglu, Canan Güngören, Gür-Erdoğan i Kaya Uyanık, 2017; Ng, 2012; Williams i Chinn, 2009) i vještina cjeloživotnoga učenja (Scalater, 2008; Torres Kompen, Edirisingha i Mobbs, 2008). Prema rezultatima istraživanja Web 2.0 alati imaju učinak na digitalnu pismenost i vještine cjeloživotnoga učenja, a digitalna pismenost i vještine cjeloživotnoga učenja imaju učinak na socijalno poduzetništvo, što je rezultat koji se podudara s istraživanjima u literaturi.

S obzirom na izravne učinke trenda cjeloživotnog učenja i vještina digitalne pismenosti na povećanje vještina socijalnog poduzetništva kod budućih učitelja, u svjetlu dobivenih rezultata predlaže se da programi u kontekstu cjeloživotnog učenja i digitalne pismenosti prate obrazovnu politiku. Smatra se da bi ti dodaci poboljšali spomenute vještine. Nadalje, drugi rezultat istraživanja također implicira da učestalost upotrebe Web 2.0 alata neizravno utječe na socijalno poduzetništvo. Tim pokazateljem učestala upotreba Web 2.0 alata u obrazovnim programima za studente povećat će trendove cjeloživotnoga učenja, digitalne pismenosti i neizravno doprinijeti vještinama socijalnog poduzetništva.

Eksperimentalno istraživanje može se planirati s varijablama cjeloživotno učenje, digitalna pismenost i učestalost upotrebe Web 2.0 alata, što utječe na socijalno poduzetništvo kako bi se podržali i generalizirali rezultati dobiveni u ovome istraživanju. Stoga je moguće uočiti interakciju tih varijabli na pojedince. Za buduća istraživanja preporuča se provedba na drugom uzorku ispitanika.

Na kraju je zaključeno da trendovi cjeloživotnoga učenja, razine digitalne pismenosti i učestalost upotrebe Web 2.0 alata imaju izravan i neizravan utjecaj na socijalno poduzetništvo. Ističući varijable koje imaju učinak na socijalno poduzetništvo kao važan koncept današnjega vremena, druge karakteristike koje bi trebalo uzeti u obzir za razvoj pojedinca – socijalnog poduzetnika također su određene. Cjeloživotno učenje, digitalna pismenost i učestalost upotrebe Web 2.0 alata varijable su učinka u ovome istraživanju. Dobivene su i druge bitne varijable koje dobivaju na važnosti, utječu na socijalno poduzetništvo i mogu se koristiti u budućim istraživanjima i tako proširivati model istraživanja.