

## **PERCEPTIONS OF NURSES REGARDING ONLINE LEARNING ENVIRONMENTS AND SOCIALIZATION: A Cross-Sectional Study**

**Assist. Prof. Dr. Emine SENYUVA,  
Research Assistant Gönül BODUR, PhD, BSN  
Istanbul University  
Florence Nightingale Nursing Faculty  
Nursing Education Department  
Sisli, Istanbul, TURKEY**

### **ABSTRACT**

The study was planned based on descriptive and cross-sectional design method, in order to determine the relation between the perceptions of nurses regarding online learning environments and socialization in the online learning environment. While the population of the study was consisted of 10243 nurses who attend the program of completing undergraduate study in nursing that is conducted by Ataturk University Distance Education Application and Research Center with distance education. The sample was consisted of minimum 240 nurses by calculating the number of elements in the population with the familiar formula. Study was conducted with the participation of 454 nurses. "Information Form", "Online Learning Environments Scale" and "Scale of Socialization that is Perceived in the Online Learning Environment" were used as data collection tools.

Results showed that nurses have positive opinions about online learning environments, their perception regarding socialization in online learning environment is moderate and there is a positive and moderate relation between the perceptions of nurses regarding online learning environments and socialization in the online learning environment. In the lights of these results, there should be an emphasis on education activities applied with information and communication technologies, scientific studies, different methods and techniques in order to increase online learning environment and sociability in these environments that provide nursing education.

**Keywords:** Online Learning Environments, Perceived Sociability of Online Learning Environments, Distance Education in Nursing, Distance Education, Nursing, Turkey

### **INTRODUCTION**

Today education activities have gone beyond the physical boundaries of classes with the use of computer and internet for educational purposes, which resulted in online learning environment (Bilgiç, Doğan & Seferoğlu 2011, Kip & Aydın 2008, Ozkök 2009, Oztürk & Deryakulu 2011).

## **BACKGROUND**

### **Disadvantages**

The students feel themselves isolated and alone, their motivation might decrease and there is a limited socialization (Çalışkan 2002, Ilgaz & Aşkar 2009, Kip & Aydın 2008, Olpak & Çakmak 2009).

One of the ways to eliminate these disadvantages and enhance the success of online learning is to increase interaction level by enabling students and educators to participate in teaching-learning process actively and making them feel that they do exist in environment, in other words, by ensuring their sociability (Preece 2001).

Sociability, which was used as one of the dimensions of learning environments by Preece (2000) for the first time, is a process including the identification of social interaction level aimed to be achieved in the lines of learners and participants' interests and needs as well as goals of the community, the development of necessary policies and software and the applications (Bardakçı 2009, Preece 2001).

In this regard, sociability is described to be the scope that facilitates the formation of a strong and social interaction environment embodying trust, commitment and community spirit and also perceived by learners/participants.

On the other hand, perception of sociability of online learning environment is the measurement for the feeling of becoming a community that emerged out of learner experiences, the sense of co-existing in a social context with other people, the feeling of social presence and the extent that individuals make themselves known to be in the environment (Gunawardena & Zittle 1997). Rourke et. al (1999) postulates that perception of sociability is to encourage, maintain and support cognitive and affective learning goals through inviting and attractive group interactions. High levels of social presence perception enable learners to participate in the environment more eagerly and express themselves more comfortably and freely by making online learning environment comfortable for educators and other learners (Kip & Aydın 2008, Olpak & Çakmak 2009, Özarslan 2009, Özkök 2009). Relevant studies also emphasize the significance of sociability perception in online learning environments and demonstrate its positive effects on learners' joy in being in community, adjusting to the community, social presence, effective participation, satisfaction, enjoyment, trust and success levels (Bardakçı 2009, Kip & Aydın 2008, Özarslan 2009).

As stated by Whiteman, people around us feel more relaxed when they believe that we have similar beliefs (quoted by Bardakçı 2009). If online learning environments are deprived of social presence, learners fail to accommodate themselves to environment and the amount of information shared with others decreases. It causes learning to take place more superficially (Bardakçı 2009, Kip 2007, Özarslan 2009).

In today's world rapidly changing, evolving and increasingly complex area of a state health care services, nursing education from the issuing institution, advanced human and professional members of the advanced characteristics and has adopted the lifelong development of nurses are required to have graduated.

Resources in this direction was examined, the distance education of nurses after graduation various vocational courses, certificate programs until completion and graduate degree (master and PhD) education in maintaining the successful results to indicate (Adams & Timmis 2006, Atack & Rankin 2002, Carr & Farley 2003, Yu & Yang 2006).

In addition, it is emphasized in the sources that with distance education the nurses can get access to a distant program/university without any time or geographical restrictions, therefore many nurses can be trained simultaneously within a short period of time, they can improve their life-long professional and individual qualifications/roles, develop themselves and continue their training activities (Senyuva 2011).

Nursing, online learning/distance education practices can be said to be inadequate in Turkey. The distance education practice in nursing in Turkey was first conducted in 1982 with "Board of Health and Health Personnel Associate Degree" under the Faculty of Open University by Council of Higher Education law and the recommendations of Health Education General Directorate.

In parallel to this, with the agreement of Ministry of Health, "Associate Degree in Nursing" was founded under the Faculty of Open University with the law no. 496 Executive Order issued on 18 August, 1993.

It was intended for nurses who were graduates of vocational high school of health to complete their associate degree (Ökdem et. al. 2000, Kocaman 2004, Ergöl 2011, Şenyuva 2011).

Development and changes of today's society have made online learning/distance education practices indispensable and brought the organization of degree completion through distance education intended for such graduates into the agenda. As a result, Ministry of Health and Board of Higher Education cooperated as issued by the circular note by Ministry of Health Education General Directorate with the no. 9532 on August 5, 2009.

A protocol was signed with Erzurum Atatürk University and "Nursing Degree Completion Programme" was opened.

It has been serving students since Academic Year 2009-2010. 10727 nurses graduated at the end of Academic Year 2010-2011 and 13130 nurses continue their study (<http://atauzem.atauni.edu.tr/> 10.09.12).

Moreover, Surgical Diseases Distance Education Graduate Program without Dissertation was opened at the Institute of Medical Sciences in İnönü University in the academic year 2011-2012 (<http://inuzem.inonu.edu.tr/web/index> 10.09.2012, Şenyuva 2011). Despite these newly-opened programmes, it is worth of notice that there is not any research on nurses' perception in online learning environment.

It reveals the need to determine the correlation between nurses' online learning environment and their perceived of sociability of online learning environment. The study is of importance in terms of shedding light on relevant practices because of the absence of such studies.

## AIM AND RESEARCH QUESTIONS

The present study was conducted as a descriptive and cross-sectional type to determine the correlation between nurses' online learning environment and their perception of sociability in online learning environments. In this study has aimed to answer the following questions with this study:

- What are the opinions of nurses about online learning environment?
- What are their perceptions of socialization in online learning environment like?
- What is the correlation between nurses' online learning environment and their perception of sociability of online learning environment?

## METHODS

### Design and Sample

The study has been designed as a descriptive and cross-sectional type. The population of the study consists of all 10243 nurses who live in seven regions in Turkey and continue their education in academic year 2011-2012 at Nursing Degree Completion Programme through web-based distance education.

A sample group consisted of 454 nurses and incorporated a 95% (p) confidence interval and  $\pm 5\%$  sampling error margin at a 95% power level. The sample group was determined to be minimum 454 nurses through the calculation of a formula whose population size is known.

As for layer criteria, main regions of Turkey were chosen to be the basis. The number of nurses to be taken as sample by regions was calculated through stratified sampling. The number of nurses to be included in sample group from each region was calculated through random sampling (Şenocak 1998, Karataş 2002).

### Instrument

Data was collected with "Information Form", "Online Learning Environment Survey" and "Scale of Perceived Sociability of Online Learning Environment"

### Information Form

It was developed by researchers in the light of literature in order to determine certain socio-demographic characteristics of nurses. It consists of 9 questions about nurses' age, marital status, workplace, work experience, duty, whether they have computers or not, their primary purpose of using computer, internet connection spots and whether they desired to participate in a programme provided by distance education.

### Online Learning Environment Scale

Online Learning Environment Scale was designed by Trinidad, Aldridge & Fraser (2004), and its Turkish validity and reliability study was conducted by Özkök, Yurdagül and Askar (2011).

The total cronbach-alpha coefficient of the study is .97 and those of sub-dimensions are as follows (Table 1):

**Table 1.**  
**Online learning environment scale**  
**sub-dimension cronbach-alpha coefficient**

Online Learning Environment Survey Sub-dimensions	Cronbach Alpha
Computer-mediated interaction	.57
Computer-mediated learning	.63
Teacher support	.98
Student Interaction and collaboration	.95
Personal relevance	.89
Authentic learning	.93
Student autonomy	.89
Service equality	.94
Equality of opportunity	.92
Enjoyment	.94
Asynchronous communication tools with on-demand access	.73
Reflective thinking in asynchronous communication	.92

It was designed on a 5-point likert scale: Always (5), Often (4), Sometimes (3), Seldom (2) and Almost Never (1).

There is no reverse statement in the scale. The highest and lowest scores one can get are 265 and 53, respectively.

High scores that individuals get from each sub-dimension means that he/she has those characteristics that the relevant sub-dimension emphasizes.

Its cronbach-alpha coefficient ranges from .72 to .91 and its total cronbach-alpha coefficient is .94 (Özkök, Yurdağül & Aşkar 2011).

“Online Learning Environment Scale (OLES-TR)” consists of 12 sub-dimensions and 53 items: Computer-mediated interaction(3 items), computer-mediated learning (3 items), teacher support (8 items), student interaction and collaboration (6 items), personal relevance (5 items), authentic learning (5 items), student autonomy (4 items), service equality (3 items), equality of opportunity (3 items), enjoyment (7 items), asynchronous communication tools with on-demand access (2 items) and reflective thinking in asynchronous communication (4 items).

#### **Perceived Sociability of Online Learning Environment Scale**

It was designed by Kreijns et. al (2007) and its Turkish validity and reliability study was conducted by Bardakçı (2010).

“The Scale of Perceived Sociability of Online Learning Environment” consists of 10 items. The scale was designed on a 5-point likert scale:

Completely Agree (5), Agree (4), Agree to some extent (3), Don't Agree (2) and Completely Disagree (1). There is no reverse statement in the scale. The highest and lowest scores one can get are 50 and 10, respectively.

High scores that individuals get from the scale means that he/she has positive perceptions of sociability of online learning environments (Bardakçı 2010).

Its cronbach-alpha coefficient was found to be .92 and its total cronbach-alpha coefficient is .90.

#### **Ethical considerations**

Legal approval was issued on June 19, 2011, from the Ethics Committee of T.C Ministry of Health Bakırköy Dr. Sadi Konuk Training and Research Hospital. Each participant gave written and oral consent.

#### **Procedure**

Ethical approval was received from the distance education centre where participants attended ATAUZEM. Data was collected by online questionnaire and taking informed approval.

Questionnaire data was saved by creating link on support media which was presented in HELITAM programme run by distance education for 14 weeks by Atatürk University Distance Education Centre for Research and Practice (ATAUZEM).

#### **Data analysis**

SPSS for windows 16.0 programme was used for statistical analysis in data analysis. Socio-demographic characteristics of nurses were given as number, percentage, arithmetical average and standard deviation.

Mann-Whitney U and Kruskal-Wallis test were used in comparison of parameters that do not display a normal distribution.

In order to determine correlation level between scale scores, Pearson Correlation test was used. The results were evaluated at 95 % confidence interval and at  $p < 0,05$  significance level (Şenocak 1998, Karataş 2002).

## **RESULTS**

Results regarding nurses' socio-demographic characteristics and correlation between nurses' online learning environment and their perception of sociability of online learning environment are presented in tabulations.

#### **Nurses' Socio-Demographic Characteristics**

Of all the participants, the youngest and the oldest nurses were 31 and 54, respectively. Average age was  $39,41 \pm 4,50$  and 82,2 % of the nurses were married.

41,4 % of them work at tertiary healthcare services and 38,4 % are clinic nurses while 23,8 % are supervisor nurses. 12,6 % of them work as nurse trainer.

**Table 2.**  
**Nurses' socio-demographic characteristics (n: 454)**

<b>SOCIO-DEMOGRAPHIC CHARACTERISTICS</b>		<b>n</b>	<b>%</b>
<b>Age</b>	<b>31-35 ages</b>	<b>92</b>	<b>20,3</b>
	<b>36-40 ages</b>	<b>199</b>	<b>43,8</b>
	<b>41-45 ages</b>	<b>108</b>	<b>23,8</b>
	<b>46-50 ages</b>	<b>46</b>	<b>10,1</b>
	<b>51 ages and above</b>	<b>9</b>	<b>2,0</b>
<b>Age</b>		<b>39,41±4,50</b>	
<b>Work experience as a nurse</b>	<b>3-10 years</b>	<b>12</b>	<b>2,6</b>
	<b>11-16 years</b>	<b>109</b>	<b>24,0</b>
	<b>17-22 years</b>	<b>218</b>	<b>48,0</b>
	<b>23-28 years</b>	<b>92</b>	<b>20,3</b>
	<b>29 years and above</b>	<b>23</b>	<b>5,1</b>
<b>Marital status</b>	<b>Married</b>	<b>373</b>	<b>82,2</b>
	<b>Single</b>	<b>81</b>	<b>17,8</b>
<b>Workplace</b>	<b>Primary Healthcare Services</b>	<b>149</b>	<b>32,8</b>
	<b>Secondary Healthcare Services</b>	<b>117</b>	<b>25,8</b>
	<b>Tertiary Healthcare Services</b>	<b>188</b>	<b>41,4</b>
<b>Duty</b>	<b>Clinic nurse</b>	<b>175</b>	<b>38,4</b>
	<b>Supervisor nurse</b>	<b>108</b>	<b>23,8</b>
	<b>Policlinic nurse</b>	<b>67</b>	<b>14,8</b>
	<b>Nurse Trainer</b>	<b>57</b>	<b>12,6</b>
	<b>Service head nurse /service chief nurse</b>	<b>47</b>	<b>10,4</b>

**As for experience, 48 % of them have 17-22 years of experience and 24 % have 11-16 years of experience (Table 2). Computer and Internet use by nurses**

**Table 3.**  
**Computer and Internet use by nurses (n:454) More than one option chosen.**

COMPUTER AND INTERNET USE		n	%
Primary purpose for internet use*	Owner	376	82,8
	Non-owner	78	17,2
Internet connection spot*		454	100
	Course registration and gradefollow-up	433	95,4
	Research and access to information	405	89,2
	Send e-mail	253	55,7
	Download game, music andfilm	145	31,9
	Online shopping	86	18,9
	Chat	86	18,9
	Meeting new people	45	9,9
Another programme/education provided by distance education	Home	385	84,8
	Workplace	114	25,2
	Internet cafe	9	2,0
*	Willing to participate	400	88,1
	Not willing to participate	54	11,9

82, 8 % of the nurses have their own computer and all of them (%100) use internet. The majority of internet users stated to use internet for course registration and grade follow-up, doing research/access to information and sending e-mail. 84, 8 % connect to internet at home while 25, 2 % of them do so at workplace. 88, 1 % of the nurses expressed their willingness to participate in another programme/education provided by distance education (Table 3).

### **Nurses' Online Learning Environment And Their Perception of Sociability of Online Learning Environment**

**Table 4.**  
**Nurses' Online Learning Environment  
Scale and Sub-dimension Score Averages (n: 454)**

Online Learning Environment Sub dimensions	X± SS
Computer-mediated interaction	6,99±2,59
Computer-mediated learning	12,15±2,36
Teacher support	19,56±11,3
Student interaction and collaboration	22,03±6,52
Personal relevance	19,28±4,68
Authentic learning	17,20±5,48
Student autonomy	16,44±3,84
Service equality	9,42±4,55
Equality of opportunity	9,92±4,179
Enjoyment	26,79±7,74
Asynchronous communication tools with on-demand access	7,87±2,06
Reflective thinking in asynchronous communication	16,02±4,01
<b>Total</b>	<b>183,71±43,04</b>

Nurses were found to take the highest score from Enjoyment (26,79±7,74) sub-dimension from Online Learning Environment Scale (OLES-TR), followed by student interaction and collaboration (22,03±6,52) while the lowest scores are from Computer-mediated interaction (6,99±2,59) and Asynchronous Communication Tools With On-demand Access (7,87±2,06). Total score average of Online Learning Environment Survey was found to be 183,71±43,04. Survey analysis shows that nurses have positive views about online learning environment (Table 4).

**Table 5.**  
Perceived Sociability of Online Learning Environment Scale Score Averages (n: 454)

	X± SS
<b>Total</b>	39,98 ± 7,30

Nurses' total score average for the Perceived Sociability of Online Learning Environment Scale was found to be 39,98±7,30. Scale analysis shows that nurses have medium level perception of sociability of online learning environment (Table 5).

**Correlation Between Nurses' Online Learning Environment And Their Perception of Sociability Of Online Learning Environment**

A meaningful positive correlation at medium level was found between nurses' online learning environment and their perception of sociability of online learning environment (r= ,560 p>0,01).

**Table 6.**  
Correlation between Nurses' Online Learning Environment and their Perception of Sociability in Online Learning Environment (n: 454)

Online Learning Environment	Perception of Sociability of Online Learning Environment
Computer-mediated interaction	,049** ,000
Computer-mediated learning	,228** ,000
Teacher support	,345** ,000
Student interaction and collaboration	,556** ,000
Personal relevance	,485** ,000
Authentic learning	,430** ,000
Student autonomy	,423** ,000
Service equality	,302** ,000
Equality of opportunity	,346** ,000
Enjoyment	,495** ,000
Asynchronous communication tools with on-demand access	,341** ,000
Reflective thinking in asynchronous communication	,298** ,000

Pearson Correlation \* p>0,05, \*\* p>0,01

There was a weak positive correlation between nurses' online learning environment survey sub-dimensions and their perception of sociability of online learning environment (Table 6). Online learning environment and their perception of sociability of online learning environment in terms of socio-demographic characteristics No statistically meaningful correlation could be found between nurses' age, marital status, workplace, work experience, owning a computer or

nor, primary purpose for internet use, internet connection spots, willingness to participate in a programme provided by distance education, online learning environment ( $p>0,05$ ) and their perception of sociability of online learning environment ( $p>0,05$ ).

## **DISCUSSION**

The study is of importance in terms of evaluating online learning/distance education practices in nursing, which is in limited numbers. As nursing education is primarily related to clinic practices, findings were mostly discussed with online learning practices which are run in other units.

The results of the study whose aim was to determine correlation between nurses' online learning environment and their perception of sociability of online learning environment show that nurses have positive views about online learning environment, and they have the highest average from sub-dimension of enjoyment, student interaction and collaboration (Table 5).

This finding shows resemblance to those of Atıcı (2007), Şenyuva (2007), Arıkan (2006), McInnerney & Roberts (2004), Maor (2003), She & Fisher (2003), Atıcı & Gürol (2002), Demirli et. al, (2010), and Yılmaz & Aktuğ (2011).

It makes one think that online learning environment increases participants' level of enjoyment because it is student-centred, allows everybody to learn at his own pace, is not time and space-bound and they adopt a positive standpoint toward online learning environment.

It was found out that nurses' perception of sociability of online learning environment is at medium level (Table 6). This finding which is in parallel to that of what Kreijns et. al (2007) found in their study with participants from an open university in Holland was attributed to the fact practices/applications (facebook, twitter, blog, forum, virtual guest, online interviews, support services etc.) which would increase their socialization in online learning environment were heavily used and participants were encouraged to participate more eagerly thanks to organization of synchronous learning environment even though participants did not create face-to-face interaction.

There was a meaningful positive correlation at medium level between nurses' online learning environment and their perception of sociability of online learning environment.

However; there was a weak positive correlation between nurses' online learning environment survey sub-dimensions and their perception of sociability of online learning environment (Table 7). These findings show resemblance to related literature. It makes one think that increasing sociability and interaction in online learning environment which improves personal relevance and individual responsibility contributes to positive learning environment.

Sociability perceived in online learning environment is said to be of significance in literature in that it is a powerful variable in enhancing group dynamics, decreasing the feeling of loneliness and isolation, increasing individual social learning as well as participatory interaction and collaboration (Wang et al. 2012,

Oztürk & Deryakulu 2011, Pala & Erdem 2011, Atıcı 2007, Kip 2007, Kreijins et al. 2007, Şenyuva 2007, Çuhadar & Kuzu 2006, Walker & Fraser 2005, Maor 2003, Atıcı & Gürol 2002, Stacey & Rice 2002, Rourke et. al. 1999, Gunawardena & Zittle 1997).

According to the report of "Distance Education Graduate Degree Workshop in Nursing" organized by "Nursing Education Association" in 2011, web-based education programmes need to be coordinated with synchronous and interactive programmes because nursing education is an applied profession. It is also necessary to increase the number of methods such as face-to-face interviews and case studies in order to decrease professional associability.

These results gave rise to thought that increasing the use of social networking websites (facebook, twitter, friend feed), blog, forum, virtual guest, synchronous online interviews, and support services would encourage participants to participate in environment more eagerly. It is crucial for nurses' online learning environment and the increase of sociability in such environments.

Even though the fact that there is no correlation between nurses' age, marital status, workplace, work experience, owning a computer or nor, primary purpose for internet use, internet connection spots, willingness to participate in a programme provided by distance education, online learning environment and their perception of sociability of online learning environment bears resemblance to literature (Kip 2007, Wang et al. 2012), socio-demographic characteristics were thought not to affect online learning environment and perceptions of socialization in such environments. The study is constrained to nurses who continue to study at Nursing Degree Completion Programme run by ATAUEM in academic year 2011-2012 in Turkey. It cannot be generalized to all nurses.

## **CONCLUSION**

According to study results;

- nurses have positive views about online learning environments,
- their perception of sociability of online learning environment is at medium level,
- there is a meaningful positive correlation at medium level between online learning environments and their perception of sociability of online learning environment,
- there is a weak positive correlation between online learning environment scale sub-dimensions and their perception of sociability of online learning,
- No statistically meaningful correlation could be found between nurses' age, marital status, workplace, work experience, owning a computer or nor, primary purpose for internet use, internet connection spots, willingness to participate in a programme provided by distance education, online learning environment and their perception of sociability of online learning environment.

In the lights of these results, there should be an emphasis on education activities applied with information and communication technologies, scientific studies, different methods and techniques (forum, blog, virtual interview, small group

discussions, virtual guest, and support services) in order to increase online learning environment and sociability in these environments that provide nursing education. Nurses' opinions about online learning environments should be analysed with qualitative studies in depth.

#### **BIODATA and CONTACT ADDRESSES of AUTHOR**



**Emine (AKCIN) SENYUVA** was born in İstanbul in 1976. She completed her education at elementary, secondary and high school levels in Nisantasi, in Girls High School, İstanbul, Turkey. Emine Şenyuva completed her undergraduate study in İstanbul University Florence Nightingale High School of Nursing in 1997. She worked at Women and Child Bearing Service Vehbi Koç Foundation Private American Hospital between the years 1997-1998. She completed her post graduate titled "Nursing Activities Aimed at Patient Education in Inpatient Treatment Institutions" in 2000.

And her doctoral thesis titled "Web-Based Distance Education Application in Nursing Education: A Sample of the Lesson of Patient Training" in 2007. Among the subjects regarding the nursing education, she has a special interest in distance education, web-based distance education, information and communication technologies, learning/education and information sources, philosophy of nursing, healthy/patient training, in-service education, education of trainer and research methods in nursing. She is a member of the Turkish Nurses Society, Association of İstanbul University Florence Nightingale High School of Nursing Graduates, Turkish Informatics Association, Health Informatics Association and Medical Informatics Association. She sustains her service as a faculty in İstanbul University Florence Nightingale Nursing Faculty, where she started in 1999

**Emine ŞENYUVA, Assistant Professor, BSN, PhD (Corresponding Author)**  
Istanbul University Florence Nightingale Nursing Faculty, Turkey  
Nursing Education Department Sisli, 34381, İstanbul, TURKEY  
Tel: +90212 4400000/27066  
Mobile Tel: (0535) 6184488  
Fax: +90212 2244990  
Email: [esenyuva@istanbul.edu.tr](mailto:esenyuva@istanbul.edu.tr)



**Gönül BODUR** received her BSN (2007) and her MSN (2010) from the İstanbul University Florence Nightingale Nursing Faculty in Turkey. Her master thesis name is "Turkish Nursing Students' Views Toward Environmental Awareness". Now she is a PhD student in Nursing Education Department and her doctoral thesis name is "Nurses' and Nurse Educators' Perceptions Toward Future of Nursing".

She is a research assistant at İstanbul University Florence Nightingale Nursing Faculty at Nursing Education Department from 2009. Her research focus is on nursing education, environmental health, environmental education, and health care technology, future studies in health care and nursing education.

She has many oral and poster presentation and some research article. She was also worked at Memorial Hospital in Turkey in intensive care unit as a nurse (2007-2009). She is also a member of the Turkish Nurses Association, Istanbul University Florence Nightingale Nursing School Alumni Association (Board Member), Nursing Education Association, Turkish Futurism Association, Health Informatics Association, Nature Association, Turkish Environment Platform, Social Sciences for Health Association, Diabetes Nurses Association.

Gönül BODUR, Research Assistant, BSN, PhD Student  
Istanbul University Florence Nightingale Nursing Faculty, Turkey  
Nursing Education Department Sisli, 34381, Istanbul, TURKEY  
Tel: +90212 4400000/27150  
Email: [gnlbodur@istanbul.edu.tr](mailto:gnlbodur@istanbul.edu.tr)

## REFERENCES

Adams A, Timmis F (2006) Students views of integrating web-based learning technology into the nursing curriculum – A descriptive survey. *Nurse Education in Practice* 6, 2-21.

Arıkan D (2006) The effects of web-supported active learning activities on teacher trainees' attitudes towards course. *Educational Journal of Ege* 7 (1), 23-41.

Atack L, Rankin J.A. (2002) Descriptive study of registered nurses' experiences with web-based learning. *Journal of Advanced Nursing* 40, 457-465.

*Ataturk University Distance Education Centre*, Retrieved from:  
<http://atauzem.atauni.edu.tr>, 10.09.2012.

Atıcı B (2007) The efficiency of virtual learning environments based on social knowledge construction on learners' achievement and attitudes. *Education and Science* 32 (143), 42-54.

Atıcı B, Gürol M (2002) The efficiency of computer supported asynchronous cooperative learning on student achievement, *Education and Science* 27 (124), 3-12.

Bardakçı S (2010) The validity and reliability study of the scale of theperceived sociability of online learning environments. *Journal of Ankara University Educational Sciences Faculty* 43 (1), 17-39.

Bilgiç HG, Doğan D, Seferoğlu SS (2011) *Developing and changing of universities and online learning in higher education in Turkey*. International Higher Education: New Trends and Issues. (UYK2011) [Proceeding](http://www.uyk2011.org/kitap/pages/uyk2011_s_1365_1372.pdf) Book, 2 (11), Ankara, Turkey, Retrieved from:  
[http://www.uyk2011.org/kitap/pages/uyk2011\\_s\\_1365\\_1372.pdf](http://www.uyk2011.org/kitap/pages/uyk2011_s_1365_1372.pdf), 10.09.2012

Carr KC, Farley CL (2003). Redesigning courses for the world wide web. *Journal of Midwifery&Women's Health* 48, 407-417.

Calışkan H (2002) Student interaction in online education. *Open and Distance Education Symposium*, Anatolian University, Eskişehir, Turkey.

- Çelen KF, Çelik A, Seferoğlu SS (2011) Online education in higher education: Problems and Solutions. *Journal of European Education* 1 (1), 25-34.
- Cuhadar C, Kuzu A (2006) *Views of students on blog use for instruction and social interaction*. International Educational Technology Conference, 481-492.
- Demirli C, Demirkol M, Özdemir TY (2010) *The teachers' opinion about the effects of online learning communities on professional development*. IV. International Computer and Instructional Technologies Symposium, Konya, Turkey.
- Ergöl Ş (2011) Nursing education in higher education in Turkey. *Journal of Higher Education and Science* 1(3), 152-155.
- Gunawardena C, Zittle F (1997) Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American Journal of Distance Education* 11 (3), 8-26.
- Harasim LM (1990) *Online education: Perspectives on a new environment*. New York, Praeger.
- Ilgaz H, Aşkar P (2009) The development of a community feeling scale toward online distance education environments. *Turkish Journal of Computer and Mathematics Education* 1 (1), 27-35.
- Inonu University Distance Education Centre*. Retrieved from: <http://inuzem.inonu.edu.tr/web/index>, 10.09.2012.
- Karataş N (2002) *Araştırmada örnekleme (Sampling in Research)*. İ. Erefe (Ed), Hemsirelikte araştırma ilke süreç ve yöntemleri, Odak Publications, İstanbul, 125-138.
- Kip B (2007) The relationship between online learners' frequency of usage of various support environments and their perception of social presence. Anatolian University Social Sciences Institute Master Thesis. Eskişehir, Turkey.
- Kip B, Aydın CH (2008) *Social presence in e-learning environments*. 8. International Technology Conference, Anatolian University, Eskişehir. Retrieved from: [Ietc2008.Home.Anadolu.Edu.Tr/Ietc2008/37.Doc](http://ietc2008.Home.Anadolu.Edu.Tr/Ietc2008/37.Doc), 10.09.2012.
- Kocaman G (2004) Nursing education in Turkey, problems and search for solutions. *Journal of Nursing Research and Development*, Special press, 119-150.
- Kreijns K (2004) *Sociable CSCL environments social affordances, sociability, and social presence. maastricht: datawyse boek-en grafische producties*. Retrieved from: <http://www.ou.nl/eCache/DEF/13/252.html>, 10.09.2012.
- Kreijns K, Kirschner PA, Jochems W, VanBuuren H (2007) Measuring perceived sociability of computer- supported collaborative learning environments. *Computers & Education* 49, 176-192.
- Maor D (2003) The teachers' role in developing interaction and reflection in an online learning community. *Education Media International* 40 (1), 128-137.

McInnerney JM, Roberts TS (2004) Online learning: social interaction and the creation of a sense of community. *Educational Technology and Society* 7 (3), 73-81.

Olpak YZ, Çakmak EK (2009) Assessing social presence in e-learning environments: validity and reliability analysis. *Yüzüncü Yıl University Journal of Faculty of Education* 6 (1), 142-160. Retrieved from: <http://efdergi.yyu.edu.tr>, 10.09.2012.

Ökdem Ş, Abbasoğlu A, Doğan N (2000) *Nursing history, education and development*. Ankara University Vocational Health High School Year Book 1 (1), 5-11. Retrieved from: <http://dergiler.ankara.edu.tr/dergiler/28/39/350.pdf>, 10.09.2012.

Özarslan Y (2009) *Sosyal bulunuşluk algısına ilişkin uzaktan eğitimde telebulunuşluk çözümleri*. XI. Academic Informatics Conference Proceedings, Harran University, Şanlıurfa, Turkey. Available: 10.09.2012, [http://www.trainersineurope.org/ozarslan/files/2009/02/ab2009\\_telepresence.pdf](http://www.trainersineurope.org/ozarslan/files/2009/02/ab2009_telepresence.pdf), 10.09.2012.

Ozkök A (2009) *Interdisciplinary approaches in online learning environments*. XI. Academic Informatics Conference Proceedings, Harran University, Şanlıurfa, Turkey. [http://ab.org.tr/ab09/kitap/ozkok\\_AB09.pdf](http://ab.org.tr/ab09/kitap/ozkok_AB09.pdf), 10.09.2012.

Ozkök A, Yurdagül H, Aşkar P (2011) An examination of the factor structure of the Turkish version of the online learning environment survey. *Education and Science* 36 (161), 160-175. <http://egitimvebilim.ted.org.tr/index.php/EB/article/view/523/293>, 10.09.2012.

Oztürk E, Deryakulu D (2011) The effect of type of computer mediated communication tools on social and cognitive presence in online learning community. *Hacettepe University Journal of Education* 41, 349-359. <http://www.efdergi.hacettepe.edu.tr/pdf>, 10.09.2012.

Pala FK, Erdem M (2011) Investigation of participation in student-led online discussion with respect to management responsibility and learning styles. *Hacettepe University Journal of Education* 41, 360-371. <http://www.efdergi.hacettepe.edu.tr/201141.pdf>, 10.09.2012.

Preece J (2001) Sociability and usability in online communities: Twenty years of chatting online. *Behaviour & Information Technology* 20 (5), 347-356.

Rourke L, Anderson T, Garrison DR, Archer W (1999) Assessing social presence in asynchronous, text-based computer conferencing. *Journal of Distance Education* 14 (3), 51-70.

She HS, Fisher D (2003) *Web-based e-learning environments in Taiwan: The impact of the online science flash program on students' learning*. In: Swe, M. (Ed.), *Technology-rich learning environment*, World Scientific Publishing Company, Singapore, 343-364.

Stacey E, Rice M (2002) Evaluating an online learning environment. *Australian Journal of Educational Technology* 18 (3), 323-340.

**Senyuva E (2007) Implementation of web-based distance education in nursing education: a sample lesson in patient education. Istanbul University Health Sciences Institute Doctoral Thesis, Istanbul, Turkey.**

**Senyuva E. (2011) Trends towards distance education of nursing education in Turkey. *Turkish Online Journal of Distance Education-TOJDE* 12 (4), 147-156.**

**Walker SL, Fraser BJ (2005) Development and validation of an instrument for assessing distance education learning environments in higher education: the distance education learning environments survey, *Learning Environments Research* 8, 289-308.**

**Wang M, Sierra C, Folger T (2010) Building a dynamic online learning community among adult learners. *Educational Media International* 40, 1-2, 49-62.**

**Yıldırım F (2010) *Uzaktan eğitim sistemine geçişin esas öğeleri olan öğretim elemanları ve öğrencilerinin bakış açıları*. In: T. G. Yamamoto, U. Demiray & M. Kesim (Ed.), *Türkiye’de e-öğrenme: Gelişmeler ve uygulamalar*. Eflatun Publications, Ankara, 27-48., <http://tojde.anadolu.edu.tr/elearning.pdf>, 10.09.2012.**

**Yılmaz EO, Aktuğ S (2011) *Uzaktan eğitimde çevrimiçi ders veren öğretim elemanlarının, uzaktan eğitim üzerine görüşleri*. Academic Informatics Conference Proceedings, Inonu University, Malatya, Turkey. <http://ab.org.tr/ab11/bildiri/173.doc>, 10.09.2012.**

**Yu S, Yang KF (2006) Attitudes toward web-based distance learning among public health nurses in Taiwan: a questionnaire survey. *International Journal of Nursing Studies* 43, 767-774.**