

## The Role of Undergraduate Students' Satisfaction in the Transition to Online Education in Light of Teaching and Social Presence

Qadri Tayeh

Article Info	Abstract
<p><b>Article History</b></p> <p>Received: November 25, 2020</p> <p>Accepted: January 10, 2021</p> <hr/> <p><b>Keywords</b> Online learning, Undergraduate students, Satisfaction</p>	<p><i>The purpose of this study was to assess online course delivery satisfaction among undergraduate students at a Jordanian public university using an adapted Community of Inquiry (CoI) model. A cross-sectional survey was conducted with a group of students enrolled in an English language online course. The data was analyzed to determine whether teaching presence and social presence had significant effects on course satisfaction. The results showed that teaching presence significantly correlated with course satisfaction, followed by social presence. Teaching presence showed the strongest positive correlation, which would be considered a very large effect size, followed by social presence. These findings indicated that students were very likely to have high course satisfaction levels. The outcome of the analysis also indicated no statistically significant differences in the level of satisfaction based on average, major, or study year.</i></p>
<p><b>DOI:</b> 10.5281/zenodo.4430618</p>	

### 1. Introduction

In addition to progress in technology, COVID 19 pandemic has altered the systems of education and the various social aspects of life. Consequently, lecturers and students in higher education institutions become seriously affected by unprecedented changes (Chung, Mohamed Noor & Mathew, 2020). In 2020, the pandemic has accelerated the broader adoption of learning in a virtual environment. As a result, online education is no longer a future strategy for university administrations but has become a present necessity. In Jordan, all academic institutions are shifting to online learning in the second and summer semesters of the academic year 2019/2020 due to the massive plan implemented by the government due to the pandemic. With this sudden shift away from the classroom in many parts of the globe, some wonder whether the adoption of online learning will continue to persist post-pandemic and how such a shift would impact the worldwide education market.

All individuals, including those involved in the educational process, need to develop themselves to sustain and improve their performance constantly. Thus, online learning is one of the approaches which can be used, since it involves access to knowledge irrespective of time and place. Online learning also involves interaction with a synchronous or asynchronous teacher, and the use of internet technology through which the user tends to learn via self-direction. Online learning refers to the learner's knowledge, practice, and experience in building knowledge and supporting teaching and learning through any electronic tool (Tavangarian, Leypold, Nölting, Röser, & Voigt, 2004).

Several classes are now delivered online by higher education institutions. In 2013, for instance, more than seven million students were enrolled in at least one online course in the United States (Allen & Seaman, 2014). On the other hand, many online classes do not address the expectations and goals of students (Allen & Seaman, 2014; Conrad & Donaldson, 2012; Duffy & Kirkley, 2004; Rovai, 2008; Rovai & Downey, 2010). Factors that may enhance the quality of interaction in online training have been investigated by researchers for example, issues of isolation, boredom, withdrawal from or dropping courses (Bowers & Kumar, 2015; Rovai, 2008; Tirrel & Quick, 2012), and student dissatisfaction (Roblyer & Wiencke, 2003; Steinman, 2007; Swan, 2001).

According to Tessema, Ready, and Yu (2012), indirect performance assessments such as student satisfaction will determine the effectiveness of an instructional program. Student satisfaction is a significant measure of the quality of the learning experience. Student satisfaction is defined as "a concept that reflects outcomes and reciprocity that occur between students and an instructor" (Thurmond, Wambach, Connors, & Frey, 2002, p. 176). As evidenced by research (Bolliger & Martindale, 2004; Howell, Jeffrey, & Buck, 2012; Roblyer & Wiencke, 2003; Swan, 2001), student satisfaction is critical to the success of an online course and to reach the goals of the learning environment, instructors and institutions must meet the needs of their students.

Yükseltürk and Yildirim (2008) noted that higher education institutions should regard the students' satisfaction to develop the quality of online programs under today's conditions. High levels of e-learning

satisfaction could lower the institution's attrition rate, offer significant learning consistency, and increase the motivation for taking additional courses.

Teaching presence, which refers to the interaction between students and their online teachers, is one of the most fundamental issues that need to be studied more (Garrison et al., 2000, 2010b; Angelino, William, & Natvig, 2007; Rovai, 2008; Rovai & Downey, 2010; Spiro, 2012; Khalid & Quick, 2014a, 2014b). Several researchers (Bowers & Kumar, 2015; Andersen, 2013; Sher, 2009; Denson, Loveday, & Dalton, 2010; Moore, 1989) believe that the involvement in online courses by the e-instructor, identified by Garrison Anderson and Archer (2000) as teaching presence, plays an essential role in keeping the attention. Research has also associated students' satisfaction with social presence in online and blended classes (Richardson & Swan, 2003; Picciano, 2002; Swan & Shih, 2005).

Palmer and Holt (2009) observed that the level of convenience of a student with technology was crucial to online course satisfaction. Clarity of expectations and the student's self-assessment of how well they were doing in the online environment were monitored as secondary factors.

Cole, M. T., Shelley, D. J., & Swartz, L. B. (2014) found no statistically significant differences in the level of satisfaction based on gender, age, or study level. The study also showed that students considered hybrid or partially online courses as somewhat more satisfactory than fully online courses. Landrum, B. (2020) focused on students' confidence as the strongest positive predictor of satisfaction and usefulness of online classes. Dilling et al. (2020) explored if there was a variation in students' perceptions of teaching presence and social presence between online and conventional face-to-face learning environments using the CoI survey at a community college in the United States concluded that in the online learning environment, an equally strong teaching presence and social presence could be accomplished.

Kilis, S., & Yildirim, Z. (2019) investigated the posting patterns of students' social presence, cognitive presence, and teaching presence in an online learning setting Using the Community of Inquiry framework. Data were collected from 91 university students who participated in online activities on Moodle. Students' posting behaviors of the three aspects were at a substantially high level. The cause behind the findings was topics which based on real-life cases and scenarios and reflective course activities. Sharma et al (2020) assessed students' satisfaction towards online learning and its predictors. The study investigated 434 undergraduate and postgraduate students from various academic programs who had participated in the online classes started during this COVID-19 pandemic. Findings showed that the satisfaction of the students towards online classes appears good. Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020) investigated students' satisfaction in light of their interaction and engagement in online learning. All students in the study were in Faculty of Economics who registered in online learning at the first semester of 2018. The statistical findings showed that all types of interactions including interaction among students, interaction between students and teacher, and interaction between students and content had positive impact on student engagement. The results also showed that students' engagement had a positive impact on their satisfaction.

### **Problem statement and purpose**

The CoI model, proposed by Garrison et al. (2000) is probably one of the most widely cited and recommended models for guiding the design and delivery of online learning. The purpose of this study was to assess the role of undergraduate students' satisfaction in the transition to online education among undergraduate students at a Jordanian public university using an adapted Community of Inquiry (CoI) model in light of teaching presence and social presence.

### **Study questions**

1. What is the role of undergraduate students' satisfaction in the transition to online education in light of teaching presence and social presence?
2. Are there statistically significant differences at the level of significance ( $0.05 \geq \alpha$ ) for the role of undergraduate students' satisfaction in the transition to online education in light of teaching presence and social presence for the response of the students according to the variables of average, level, and major (study) fields?

### **Study limitations**

There are some limitations to this study. The small sample may not be entirely representative of the majority of students taking online classes. Related to the small sample size, only 128 of 240 students participated in the survey. Additionally, the survey was made available at the end of the summer semester when many students may not have been available to participate due to holiday plans.

## Methodology

### Participants

Undergraduate students at a large public university located in Amman, Jordan, were invited to participate in an online survey in the Summer of 2020. One hundred thirty-six Jordanian students met the study requirement of taking more than one online class in the 2019-20 academic year. They enrolled in a compulsory online course of general English language 102 in the summer semester. Eight subjects were identified as multivariate outliers through Mahalanobis distances ( $p < .001$ ; Tabachnick & Fidell, 2007) and removed from the dataset, reducing the sample size to 128 subjects. The valid responses of the study sample were evaluated. All participants were female. 59% were fourth year, 41% were first year; 51.6 were with the average of ( $>3/4$ ), 58.4% were with ( $<3/4$ ); 53.1 were from language and literature majors, while 46.9 were from education majors. See Table 1 for complete demographic information. The main reason for taking online courses had to do with the COVID-19 outbreak, which causes closure in all schools and universities in Jordan and across the planet as well.

**Table 1.** Demographic characteristics of the students

Variables	Field	N	%
<b>Study year</b>	First	56	43.8
	Fourth	72	56.2
<b>Average</b>	$<3/4$	66	51.6
	$>3/4$	62	48.4
<b>Major</b>	Language and literature	68	53.1
	Education	60	46.9

### Survey

The study used a modified framework of the Community of Inquiry (CoI) survey designed by Garrison et al. (2010a), Garrison et al. (2010b) to measure two of the CoI essential elements; teaching Presence and social presence, using scales which have been found to be a reliable and validated measure (Garrison et al., 2010a, 2010b; Wicks, Craft, Mason, Gritter & Bolding, 2015; Yu & Richardson, 2015;) and course satisfaction scales used by Arbaugh (2000), Artino (2008), Lee et al. (2011), and Keeler (2006) to guide, interpret, and analyze data. The scale consisted of 22 Questions based on a five-point Likert scale with response options ranging from strongly agree to strongly disagree. Students were also provided space to make comments at the end of the survey. Demographic information regarding student characteristics was also obtained.

CoI was found to be a reliable and valid instrument in previous studies (Swan et al., 2008; Arbaugh, 2008a, 2008b; Bangert, 2009; Garrison et al., 2010a, 2010b). To report the internal consistency, the value of reliability in this study was re-estimated by computing Cronbach's Alpha ( $\alpha$ ). The test-retest method was followed by applying the test and re-applying it after two weeks to a group outside the study. The alpha value was 0.96 in average; teaching Presence was 0.95, and social presence was 0.94. These percentages were considered appropriate for this study. Coefficients are shown in table 2.

**Table 2.** Cronbach alpha coefficients of internal consistency

Domain	Cronbach Alpha
<b>Teaching Presence</b>	0.95
<b>Social Presence</b>	0.94
<b>All items</b>	0.96

### Procedure

Immediately after the summer semester, Students were asked to anonymously complete the survey by clicking on the link within their online course. Emails with survey link were also sent to all course participants. The email explained the purpose of the survey and had instructions for accessing the link to the survey. Information about the survey was sent out in September 2020, just after finals week. The survey was available for two weeks. All variables were initially screened by checking regression assumptions, including linearity, homogeneity of variance, and multicollinearity as part of the data analysis process.

### The Community of Inquiry Framework

The features of effective online learning environments have been targeted successfully by researchers. (Aragon, 2003; Cleveland-Innes, Garrison & Kinsel, 2007). On the other hand, a more comprehensive review demands a conceptual framework to shed light on the challenges of online learning. The Community of Inquiry (CoI) framework developed by Garrison, Anderson, and Archer (2000) is one model that has earned a great deal of interest. It is a cooperating model of online and blended learning processes that can mark both research and practice. It postulates that active online learning demands the progress of a community of learning. The online learning experience is seen by the CoI framework as a result of the interaction between three core elements: social presence, teaching presence, and cognitive presence. The first two elements were targeted in this study.

Social presence refers to the social and emotional feelings that participants develop when they contact with each other in an online environment. Cognitive presence depicts the degree to which learners can build and affirm meaning through maintained reflection and discourse. The design, facilitation, and direction of cognitive social processes were described as teaching presence.

Social presence is characterized as the willingness of participants to project themselves socially and emotionally in an online class, and their ability to view other participants as "real" in that class (Swan & Shih, 2005). Three basic categories are embedded in the social presence; *affective expression*, the sharing of personal terms of emotions, feelings, beliefs, and values; *group cohesion*, learners' interaction around common intellectual activities and tasks; *open communication*, where learners create and keep a sense of group commitment. Research has associated students' satisfaction with social presence in online and blended classes (Richardson & Swan, 2003; Picciano, 2002; Swan & Shih, 2005).

Teaching presence refers to the design, facilitation, and direction of cognitive social processes (Garrison & Akyol, 2013). Anderson and colleagues (2001) stated three components to conceptualize teaching presence; *instructional design and organization*, which describes the planning and design of the structure, process, interaction, and evaluation aspects of the online course; *facilitating discourse*, the means by which students are engaged in interacting about and building upon the information provided in the course instructional materials; and *direct instruction*, the creation of leadership by the instructors by sharing their understanding of the subject with the students. Researchers have documented strong correlations between teaching presence and student satisfaction and the development of a sense of community in online courses (Shea et al., 2005).

### Findings of the Study

The role of undergraduate students' satisfaction in the transition to online education in light of teaching presence and social presence was assessed by computing the means and standard deviations of students' satisfaction levels, as presented below.

#### a. Teaching presence

**Table 3.** Students' satisfaction levels based on teaching presence and its sub-dimensions

Rank	Domain	Mean	Std. Deviation
1	Design & Organization	4.46	.665
2	Facilitation	4.35	.667
3	Direct Instruction	4.26	.763
	<b>Total</b>	4.37	.644

The levels of students' satisfaction with online learning in light of teaching presence appeared to be high in all subdimensions and in total, where the arithmetic mean is (4.37) and its standard deviation is (0.644). These results also indicate that students were satisfied and ready for online learning. As for the subdimensions, the analysis showed that "Design & Organization" came first with the highest mean of (4.46) and standard deviation of (0.665) regarding the degree of agreement, followed by "Facilitation" with the mean of (4.35) and standard deviation of (0.667) while "Direct Instruction" was ranked last with the mean of (4.26) and standard deviation of (0.763), as shown in (Table 3).

#### b. Social Presence

**Table 4.** Students' satisfaction levels based on social presence and its sub-dimensions

Rank	Domain	Mean	Std. Deviation
1	Group cohesion	3.84	1.007
2	Open communication	3.74	1.046
3	Affective expression	3.69	.987
	<b>Total</b>	3.76	.947

Table 4 shows the levels of students' satisfaction with online learning in light of social presence also appeared to be high in all subdimensions and in total, where the arithmetic mean is (3.76) and its standard deviation is (0.947). These results also indicate a high level of students' agreement on online learning. As for the subdimensions, the analysis showed that " group cohesion " came first with the highest mean of (3.84) and standard deviation of (.1.007) followed by " open communication " with the mean of (3.74) and standard deviation of (1.046) while " affective expression " was ranked last with the mean of (3.69) and standard deviation of (0.987).

To find out any statistically significant differences at the level of significance ( $0.05 \geq \alpha$ ) for the role of undergraduate students' satisfaction in the transition to online education in light of teaching presence and social presence for the response of the students according to the variables of average, level, and major, means and standard deviations were calculated as shown in table 5

**Table 5.** Students' satisfaction levels in light of teaching presence based on average, study year, and major variables

Variables	Field	Mean	Std. Deviation	N
<b>Study year</b>	First	4.40	.791	56
	Fourth	4.34	.507	72
<b>Average</b>	<3 / 4	4.38	.793	66
	>3 / 4	4.35	.441	62
<b>Major</b>	Language and literature	4.43	.714	68
	Education	4.29	.553	60

Table 5 shows a slight variance in the means of students' satisfaction in the transition to online education in light of teaching presence according to average, level, and major. To find out any statistically significant differences in these means, three-way ANOVA was conducted. The results are shown in Table 6

**Table 6.** Three-way ANOVA results of students' satisfaction in the transition to online education in light of teaching presence based on average, study year, and major

Source	Sum of Squares	df	Mean Square	F	Sig.
<b>Study year</b>	.016	1	.016	.037	.847
<b>Average</b>	.040	1	.040	.095	.758
<b>Major</b>	.541	1	.541	1.289	.258
<b>Error</b>	52.083	124	.420		
<b>Corrected Total</b>	52.728	127			

Table 6 indicated that Students' satisfaction in light of teaching presence had no statistically significant differences at ( $\alpha = 0.05$ ) due to the three variables; study year, average, and major.

#### A: Social presence

**Table 7.** Students' satisfaction levels in light of social presence based on average, study year, and major variables

Variables	Field	Mean	Std. Deviation	N
<b>Study year</b>	First	3.64	1.122	56
	Fourth	3.85	.782	72
<b>Average</b>	<3 / 4	3.71	.995	66
	>3 / 4	3.81	.898	62
<b>Major</b>	Language and literature	3.79	.923	68
	Education	3.73	.981	60

Table 7 shows a slight variance in the means of students' satisfaction in the transition to online education in light of social presence according to average, level, and major. To find out any statistically significant differences in these means, three-way ANOVA was conducted. The results are shown in Table 8.

**Table 8.** Three-way ANOVA results of students' satisfaction in the transition to online education in light of social presence based on average, level, and major.

Source	Sum of Squares	df	Mean Square	F	Sig.
--------	----------------	----	-------------	---	------

<b>Study year</b>	1.549	1	1.549	1.719	.192
<b>Average</b>	.476	1	.476	.528	.469
<b>Major</b>	.782	1	.782	.868	.353
<b>Error</b>	111.690	124	.901		
<b>Corrected Total</b>	113.953	127			

Students' satisfaction in light of social presence also showed no statistically significant differences at ( $\alpha = 0.05$ ) due to the three variables; study year, average, and major, as shown in Table 8.

## Discussion

The objective of this research study was to ascertain the role of undergraduate students' levels of satisfaction in the transition to online education in light of teaching presence and social presence and to determine any statistically significant differences at the level of significance ( $0.05 \geq \alpha$ ) for the response of the students according to the variables of average, study level, and major.

The study used a modified framework of the Community of Inquiry (CoI) survey to measure teaching presence and social presence using scales and course satisfaction scales to guide, interpret, and analyze data. The scale consisted of 22 Questions based on a five-point Likert scale. Students were also provided space to make comments at the end of the survey. Demographic information regarding student characteristics was also obtained.

Overall findings from this study indicated that students produced significantly high levels of satisfaction on social and teaching presence. This outcome suggests that online-learning environments that support social and teaching presence provide ideal conditions for fostering and preserving a high degree of satisfaction. As Liaw et al. (2007) stated, learners who agree that the e-learning environment is an important learning platform have a constructive outlook towards e-learning. The findings of the study also revealed that the quality of the course addressed students' expectations in terms of interaction with professor and classmates. Results from this study also provided empirical evidence and supported the notion that (CoI) survey is essential for establishing levels of satisfaction among students. Sharma et al (2020) who assessed students' satisfaction towards online learning and its predictors found that the satisfaction of the students towards online classes appears good.

The results of the study confirmed previous studies, which suggested that social and teaching presence are essential for creating and maintaining communities of online learners. Students achieve a more substantial and meaningful knowledge of essential course concepts as social and teaching presence variables, investigated in this study, are used to promote and sustain online communities of inquiry. Dilling et al. (2020) explored if there was a variation in students' perceptions of teaching presence and social presence between online and conventional face-to-face learning environments also concluded that in the online learning environment, an equally strong teaching presence and social presence could be accomplished.

### Teaching presence

This research has, therefore determined that the idea of teaching presence in the CoI framework is central to preserving course satisfaction. The findings of this study also correlated with the results of research conducted by other scholars who reported that the body of evidence attesting to the essential value of teaching presence for successful online learning is vast (Garrison & Cleveland-Innes, 2005; Meyer, 2003; Murphy, 2004; Swan & Shih, 2005; Vaughn & Garrison, 2005).

Garrison and colleagues (2000) argued that interactions between participants in virtual learning environments are not sufficient to ensure effective online learning. These types of interactions need to have a teaching presence. To facilitate discourse, instructors need to review and comment on student comments, and contribute to making observations to move discussions in the appropriate direction. They also need to retain the discussion moving effectively, attract inactive students, and restrict the activity of dominating posters (Anderson et al., 2001; Brower, 2003; Coppola, Hiltz, & Rotter, 2002; Shea, Fredericksen, Pickett, & Pelz, 2003).

The findings of this study also confirmed the concept that the quality of teaching presence happens when lecturers interact with learners in direct teaching practices by offering regular prompts and remedial guidance. Anderson and colleagues (2001) also contended that direct instruction is mainly concerned with the sharing of experience and assessing the discourse and the efficacy of the educational process. Instructors are responsible for facilitating reflection and discourse by using various means of assessment and feedback in presenting course content. Kilis, S., & Yildirim, Z. (2019) who investigated the posting patterns of students' social presence, cognitive presence, and teaching presence in an online learning found that students' posting behaviors of the three aspects were at a substantially high level.

### Social presence

In examining an association between social presence and course satisfaction in an online course, this study revealed that social presence was a significantly decisive positive factor associated with course satisfaction. This finding was consistent with researchers who found a connection between perceptions of social presence and student satisfaction in online courses using the CoI framework (Tu&McIsaac, 2002; Richardson & Swan, 2003). Muzammil, M., Sutawijaya, A., &Harsasi, M. (2020) who investigated students' satisfaction in light of their interaction and engagement in online learning also found that all types of interactions including interaction among students, interaction between students and teacher, and interaction between students and content had positive impact on student engagement. The results also showed that students' engagement had a positive impact on their satisfaction.

The study indicates that social presence alone would not guarantee the creation of critical discourses in online learning. However, it is incredibly hard for such a discourse to grow without the creation of social presence (Celani& Collins, 2005; Garrison & Cleveland-Innes, 2005; Molinari, 2004). On the other hand, a lack of meaningful interaction and, or a sense of presence can create a sense of unsatisfying learning experiences (Aragon, 2003; Moore &Kearsley, 2004).

The findings of this study supported previous research indicating that teaching presence must coexist with social presence to achieve the deepest levels of reflective inquiry for online learning communities (e.g., Bangert, 2008; Arbaugh, 2007; Arbaugh& Hwang, 2006). Social presence has an indirect impact on teaching presence by adjusting the environmental conditions for higher learning. Research has found that social presence serves as a mediating parameter between teaching presence and cognitive presence (Garrison, Cleveland-Innes & Fung, 2010; Shea&Bidjerano, 2009).

Students' satisfaction in light of teaching and social presence showed no statistically significant differences due to the three variables; study year, average, and major. These findings also correlated with the results of research conducted by other scholars who found no statistically significant differences in the levels of satisfaction based on gender, age, or study level (Cole, M. T., Shelley, D. J., & Swartz, L. B. 2014).DeveciTopal, A. (2016) also stated that there was no significant diversity in student satisfaction across gender and class year.

Future research should also explore other factors related to students' satisfaction and agreement for taking online courses that were not considered here. These include using broader groups of respondents from more different faculties. More online courses should also be included. Amidst the various hindrances facing online learning among university students in Jordan, Students in this study noted that poor internet connectivity and limited broadband data remained the biggest challenge. Therefore, the government needs to look into long term infrastructure investment to develop internet connectivity. Study findings could hopefully assist universities in the transition process to online learning. Additionally, the results of the survey could be further explored to determine how courses may be designed to meet the needs of both male and female students.

## References

- Allen, I. E., & Seaman, J. (2014). *Grade Change: Tracking Online Education in the United States*. Babson Survey Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- Anderson, T., Rourke, L., Garrison, D., & Archer, W. (2001). Assessing Teaching Presence in a Computer Conferencing Context. *Journal of Asynchronous Learning Networks*, 5. <https://doi.org/10.24059/olj.v5i2.1875>
- Andersen, J. C. (2013). *Learner satisfaction in online learning: An analysis of the perceived impact of learner-social media and learner-instructor interaction* (Doctoral dissertation). East Tennessee State University. Retrieved from *Electronic Theses & Dissertations: Full text* (Order No. 1115)
- Angelino, L., Williams, F., & Natvig, D. (2007). Strategies to Engage Online Students and Reduce Attrition Rates. *Journal of Educators Online*, 4. <https://doi.org/10.9743/JEO.2007.2.1>
- Aragon, S. (2003). Creating social presence in online environments. *New Directions for Adult and Continuing Education*, 2003, 57–68. <https://doi.org/10.1002/ace.119>
- Arbaugh, J. B. (2000). Virtual classroom characteristics and student satisfaction with Internet-based MBA courses. *Journal of management education*, 24(1), 32. <http://dx.doi.org/10.1177/105256290002400104>
- Arbaugh, J. B. (2007). An Empirical Verification of the Community of Inquiry Framework. *Journal of Asynchronous Learning Networks*, 11. <https://doi.org/10.24059/olj.v11i1.1738>
- Arbaugh, J. B., & Hwang, A. (2006). Does “teaching presence” exist in online MBA courses? *The Internet and Higher Education*, 9, 9–21. <https://doi.org/10.1016/j.iheduc.2005.12.001>
- Artino, A. R. (2008). Motivational beliefs and perceptions of instructional quality: Predicting satisfaction with online training. *Journal of computer assisted learning*, 24(3), 260-270. <http://dx.doi.org/10.1111/j.1365-2729.2007.00258.x>

- DeveciTopal, A. (2016). Examination of University Students' Level of Satisfaction and Readiness for E-Courses and the Relationship between Them. *European Journal of Contemporary Education*, 15. <https://doi.org/10.13187/ejced.2016.15.7>
- Bangert, A. (2008). The influence of social presence and teaching presence on the quality of online critical inquiry. *Journal of Computing in Higher Education*, 20, 34–61. <https://doi.org/10.1007/BF03033431>
- Bolliger, D., & Martindale, T. (2004). Key Factors for Determining Student Satisfaction in Online Courses. *International Journal on E-Learning*, 3, 61–67.
- Bowers, J., & Kumar, P. (2015). Students' Perceptions of Teaching and Social Presence: A Comparative Analysis of Face-to-Face and Online Learning Environments. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, 10(1), 27-44. <http://dx.doi.org/10.4018/ijwltt.2015010103>
- Brower, H. H. (2003). On emulating classroom discussion in a distance-delivered OBHR course: Creating an on-line community. *Academy of Management Learning & Education*, 2, 22-36.
- Brower, H. (2003). On Emulating Classroom Discussion in a Distance-Delivered OBHR Course: Creating an On-Line Learning Community. *Academy of Management Learning & Education*, 2, 22–36. <https://doi.org/10.5465/AMLE.2003.9324013>
- Celani, M., & Collins, H. (2005). Critical thinking in reflective sessions and in online interactions. *AILA Review*, 18, 41–57. <https://doi.org/10.1075/aila.18.05cel>
- Chung, E., Noor, N. M., & VloreenNity Mathew. (2020). Are You Ready? An Assessment of Online Learning Readiness among University Students. *International Journal of Academic Research in Progressive Education and Development*, 9(1), 301–317. <https://doi.org/10.6007/IJARPED/v9-i1/7128>
- Cole, M. T., Shelley, D. J., & Swartz, L. B. (2014). Online instruction, e-learning, and student satisfaction: A three year study. *The International Review of Research in Open and Distributed Learning*, 15(6). <https://doi:10.19173/irrodl.v15i6.1748>
- Conrad, R., & Donaldson, J. A. (2012). *Continuing to engage the online learner activities and resources for creative instruction* (1st ed.). San Francisco, CA: Jossey-Bass.
- Coppola, N. W., Hiltz, S., & Rotter, N. (2002). Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks. *J. of Management Information Systems*, 18, 169–190. <https://doi.org/10.1080/07421222.2002.11045703>
- Denson, N., Loveday, T., & Dalton, H. (2010). Student evaluation of courses: What predicts satisfaction? *Higher Education Research & Development*, 29(4), 339-356. <http://dx.doi.org/10.1080/07294360903394466>
- Dilling, J., Varga, M., & Mandernach, B. (2020b). Comparing Teaching and Social Presence in Traditional and Online Community College Learning Environments. *Community College Journal of Research and Practice*, 1–16. <https://doi.org/10.1080/10668926.2020.1752852>
- Duffy, T. M., & Kirkley, J. R. (Eds.). (2004). *Learner-centered theory and practice in distance education: Cases from higher education*. Mahwah, NJ: Erlbaum.
- Garrison, D., & Cleveland-Innes, M. (2005). Facilitating Cognitive Presence in Online Learning: Interaction Is Not Enough. *The American Journal of Distance Education*, 19, 133–148. [https://doi.org/10.1207/s15389286ajde1903\\_2](https://doi.org/10.1207/s15389286ajde1903_2)
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 2(2-3), 8-105. [http://dx.doi.org/10.1016/s1096-7516\(00\)00016-6](http://dx.doi.org/10.1016/s1096-7516(00)00016-6)
- Garrison, D. R., Anderson, T., & Archer, W. (2010a). The first decade of the community of inquiry framework: A retrospective. *Internet and Higher Education*, 13(1-2), 5-9. <http://dx.doi.org/10.1016/j.iheduc.2009.10.003>
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010b). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13(1-2), 31-36. <http://dx.doi.org/10.1016/j.iheduc.2009.10.002>
- Howell, G. F., Jeffrey, M., & Buck, J. M. (2012). The adult student and course satisfaction: What matters most? *Innovation High Education*, 37, 215-226. <http://dx.doi.org/10.1007/s10755-011-9201-0>
- Keeler, L. C. (2006). *Student satisfaction and types of interaction in distance education courses* (Doctoral dissertation), Colorado State University. Retrieved from ProQuest Dissertations & Theses: Full text (Order No. 3233345).
- Khalid, N. M., & Quick, D. (2014a, April). *Asynchronous Presences Online: A Conceptual Analysis*. Paper presented at the National Field Experience Conference, University of Northern Colorado, Greeley, CO.
- Khalid, N. M., & Quick, D. (2014b, October). *Factors Influencing Course Satisfaction: The Effects of Social, Teaching, and Cognitive Presences of Malaysian University Students*. Paper presented at The Seventh



- International Conference on e-Learning and Innovative Pedagogies, Pacific University Oregon, Forest Grove, OR.
- Kilis, S., & Yildirim, Z. (2019). *Posting Patterns of Students' Social Presence, Cognitive Presence, and Teaching Presence in Online Learning*. 23, 179–195. <https://doi.org/10.24059/olj.v23i2.1460>
- Landrum, B. (2020). Examining Students' Confidence to Learn Online, Self-Regulation Skills and Perceptions of Satisfaction and Usefulness of Online Classes. *Online Learning*, 24(3). <https://doi.org/10.24059/olj.v24i3.2066>
- Lee, S. J., Srinivasan, S., Trail, T., Lewis, D., & Lopez, S. (2011). Examining the relationship among student perception of support, course satisfaction, and learning outcomes in online learning. *The Internet and Higher Education*, 14(3), 158-163. <http://dx.doi.org/10.1016/j.iheduc.2011.04.001>
- Liaw, S.S., Huang, H.M.& Chen, G.D.(2007). Surveying Instructor and Learner Attitudes Toward E-learning, *Computers & Education*, 49(4), P. 1066-1080, ISSN 0360-1315. Retrieved from <http://dx.doi.org/10.1016/j.compedu.2006.01.001>
- Meyer, K. (2003). Face-to-Face Versus Threaded Discussions: The Role of Time and Higher-Order Thinking. *Journal of Asynchronous Learning Network*, 7, 55–65. <https://doi.org/10.24059/olj.v7i3.1845>
- Molinari, D. (2004). The Role of Social Comments in Problem-Solving Groups in an Online Class. *American Journal of Distance Education*, 18, 89–101. [https://doi.org/10.1207/s15389286ajde1802\\_3](https://doi.org/10.1207/s15389286ajde1802_3)
- Moore, M. G. (1989). Three types of interaction. *The American Journal of Distance Education*, 3(2), 1-6. <http://dx.doi.org/10.1080/08923648909526659>
- Moore, M., & Kearsley, G. (2004). *Distance education: A systems view*. Belmont, CA: Wadsworth Publishing Company.
- Murphy, E. (2004). Identifying and Measuring Ill-Structured Problem Formulation and Resolution in Online Asynchronous Discussions. *Canadian Journal of Learning and Technology*, 30. <https://doi.org/10.21432/T2Z012>
- Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020). Investigating Student Satisfaction in Online Learning: The Role of Student Interaction and Engagement in Distance Learning University. *Turkish Online Journal of Distance Education*, 21, 88–96. <https://doi.org/10.17718/tojde.770928>
- Palmer, S., & Holt, D. (2009). Examining Student Satisfaction with Wholly Online Learning. *Journal of Computer Assisted Learning*, 25. <https://doi.org/10.1111/j.1365-2729.2008.00294.x>
- Richardson, J. C., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks*, 7(1). Retrieved June 1, 2004, from <http://www.aln.org/publications/jaln/v7n1/index.asp>
- Roblyer, M. D., & Wiencke, W. R. (2003). Design and use of a rubric to assess and encourage interactive qualities in distance courses. *American Journal of Distance Education*, 17(2), 77-98. [http://dx.doi.org/10.1207/s15389286ajde1702\\_2](http://dx.doi.org/10.1207/s15389286ajde1702_2)
- Rovai, A. P. (2008). *Distance learning in higher education a programmatic approach to planning, design, instruction, evaluation, and accreditation*. New York, NY: Teachers College Press.
- Rovai, A. P., & Downey, J. R. (2010). Why some distance education programs fail while others succeed in a global environment. *Internet and Higher Education*, 13(3), 141-147. <http://dx.doi.org/10.1016/j.iheduc.2009.07.001>
- Sharma, K., Deo, G., Timalisina, S., Joshi, A., Shrestha, N., & Neupane, H. (2020). Online Learning in the Face of COVID-19 Pandemic: Assessment of Students' Satisfaction at Chitwan Medical College of Nepal. *Kathmandu University Medical Journal*, 18, 38–45.
- Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster “epistemic engagement” and “cognitive presence” in online education. *Computers & Education*, 52(3), 543–553. <https://doi.org/10.1016/j.compedu.2008.10.007>
- Shea, P. J., Fredericksen, E. E., Pickett, A. M., & Pelz, W. E. (2003). A preliminary investigation of “teaching presence” in the SUNY learning network. In J. Bourne & J. C. Moore (Eds.) *Elements of Quality Online Education: Into the Mainstream*, (pp. 279-312). Needham, MA: Sloan-C.
- Sher, A. (2009). Assessing the relationship of student-instructor and student-student interaction to student learning and satisfaction in Web-based online learning environment. *Journal of Interactive Online Learning*, 8(2), 102-120. Retrieved from <http://www.ncolr.org/jiol>
- Spiro, D. (2012). *Examining Instructor and student perspectives of online interaction through the community of inquiry model* (Doctoral dissertation, Nova Southeastern University). Retrieved from ProQuest Dissertations & Theses: Full text (Order No. 3492391)
- Steinman, D. (2007). Educational experiences and the online student. *TechTrends*, 51(5), 46-52.
- Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education*, 22(2), 306-331. <http://dx.doi.org/10.1080/0158791010220208>

- Swan, K., & Shih, L. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9, 115–136. <https://doi.org/10.24059/olj.v9i3.1788>
- Tavangarian, D., Leypold, M. E., Nölting, K., Röser, M., & Voigt, D. (2004). Is E-Learning the Solution for Individual Learning. *Electronic Journal of E-learning*, 2(2), 273-280. Retrieved from [http://www.researchgate.net/profile/Djamshid\\_Tavangarian/publication/228760112\\_Is\\_elearning\\_the\\_solution\\_for\\_individual\\_learning/links/02bfe51128e5b56575000000.pdf](http://www.researchgate.net/profile/Djamshid_Tavangarian/publication/228760112_Is_elearning_the_solution_for_individual_learning/links/02bfe51128e5b56575000000.pdf)
- Tessema, M.T., Ready, K. and Yu, W. W. (2012). Factors Affecting College Students' Satisfaction with Major Curriculum: Evidence from Nine Years of Data. *International Journal of Humanities and Social Science*, 2(2), 34-44. Retrieved from [http://www.ijhssnet.com/journals/Vol\\_2\\_No\\_2\\_Special\\_Issue\\_January\\_2012/5.pdf](http://www.ijhssnet.com/journals/Vol_2_No_2_Special_Issue_January_2012/5.pdf)
- Thurmond, V. A., Wambach, K., Connors, H. R., & Frey, B. B. (2002). Evaluation of student satisfaction: Determining the impact of a web-based environment by controlling for student characteristics. *American Journal of Distance Education*, 16(3), 169-190. [http://dx.doi.org/10.1207/s15389286ajde1603\\_4](http://dx.doi.org/10.1207/s15389286ajde1603_4)
- Tirrell, T., & Quick, D. (2012). Chickering's Seven Principles of Good Practice: Student Attrition in Community College Online Courses. *Community College Journal of Research and Practice*, 36(8), 580-590. <http://dx.doi.org/10.1080/10668920903054907>
- Tu, C.-H., & Mcisaac, M. (2002). The Relationship of Social Presence and Interaction in Online Classes. *American Journal of Distance Education*, 16, 131–150. [https://doi.org/10.1207/S15389286AJDE1603\\_2](https://doi.org/10.1207/S15389286AJDE1603_2)
- Vaughan, N., & Garrison, D. (2006). How blended learning can support a faculty development community of inquiry. *Journal of Asynchronous Learning Networks*, 10, 139–152. <https://doi.org/10.24059/olj.v10i4.1750>
- Wicks, D. A., Craft, B. B., Mason, G. N., Gritter, K., & Bolding, K. (2015). An investigation into the community of inquiry of blended classrooms by a Faculty Learning Community. *The Internet and Higher Education*, 25,53-62. <http://dx.doi.org/10.1016/j.iheduc.2014.12.001>
- Yu, T., & Richardson, J. C (2015). Examining reliability and validity of a Korean version of the Community of Inquiry instrument using exploratory and confirmatory factor analysis. *Internet and Higher Education*, 25, 45-52. <http://dx.doi.org/10.1016/j.iheduc.2014.12.004>
- Yukselturk, E., & Yildirim, Z. (2008). Investigation of Interaction, Online Support, Course Structure and Flexibility as the Contributing Factors to Students' Satisfaction in an Online Certificate Program. *Educational Technology & Society*, 11 (4), 51-65. Retrieved from [http://www.ifets.info/journals/11\\_4/5.pdf](http://www.ifets.info/journals/11_4/5.pdf)

---

#### Author Information

---

##### **Qadri Tayeh**

Lecturer, Department of English Language and Literature, Al-Balqa Applied University, Amman, Jordan

---