

Original Paper

The Relationship of Teaching, Social and Cognitive Presence with Course Satisfaction in a TESL Programme Course in a Public University in Sabah, East Malaysia

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Abstract

The purpose of this study was to examine whether teaching presence, social presence and cognitive presence were significant predictors of course satisfaction in a blended learning course at a public university in Sabah, East Malaysia. The research design was based on the Community of Inquiry framework survey involving 32 third-year undergraduates majoring in TESL (Teaching of English as a Second Language). Pearson r correlational analysis was used to determine the relationship between teaching presence, social presence, cognitive presence and course satisfaction. The findings of this study showed that both social presence and cognitive presence were significantly associated with course satisfaction, but not with teaching presence.

Keywords

Community of Inquiry, Teaching Presence, Social Presence, Cognitive Presence, Course Satisfaction

1. Introduction

During this COVID-19 pandemic, blended learning gained fresh impetus in higher education offering support and guiding students learning whilst maintaining social distancing. With blended learning being offered on a wider scale, it has become even more expedient to evaluate the pedagogical basis for this mix of traditional classroom and online instruction. This study looks at the Community of Inquiry (COI) framework as an instrument for evaluating blended learning among third-year undergraduates in

University Malaysia Sabah (UMS) in Sabah, East Malaysia. The study seeks to answer the following questions:

1. Is there any significant correlation between teaching presence and course satisfaction among third-year undergraduates undertaking a blended learning course in UMS?
2. Is there any significant correlation between social presence and course satisfaction among third-year undergraduates undertaking a blended learning course in UMS?
3. Is there any significant correlation between cognitive presence and course satisfaction among third-year undergraduates undertaking a blended learning course in UMS?

The adoption of the COI framework as a valid research model to understand the online learning outcome provides new avenues for research to further the discussion on enhancing blended learning experience in Malaysia. In Malaysia, Khalid (2014) had conducted a study involving Open University Malaysia students and examined the relationship of the COI framework with course satisfaction in fully online courses. This study has extended the scope to understanding the relationship between course satisfaction and the COI framework in a blended learning setting. Blended learning is viewed as an important modality that is predisposed towards collaborative learning which works as an essential tenet in understanding the workings of the COI model.

It is anticipated that this study will bring a fresh perspective for evaluating blended learning in Sabah. Firstly, this study is designed to analyse the relationship between variables of COI and course satisfaction in UMS. Secondly, the study may also help in the exploration of students' perception and value of blended learning and contribute to the wider corpus of research on the COI framework.

In countering the thorns of high attrition rates in fully online learning environments, blended learning offers institutions a tenable alternative. Several studies have shown that blended learning has been outperforming fully online learning in terms of reduced attrition rates and better learning outcomes (Owston, 2018). However, the picture is not always so. Research from Bonk, Wisner, and Orvis (2002) found that replication of the ineffective practices found in many online learning environments has resulted in students experiencing difficulties with this new modality. It is therefore paramount that blended learning should not just offer an alternative mode of learning, but also be able to enhance course satisfaction and learning. Indeed, the criticism for many years has been, "the field lacks a theoretical framework to guide educational design, pedagogies and use of online technologies" (Harasim, 2012).

To fill this void, the COI model was conceptualized and emerged as a theoretical framework to assess online learning (Garrison & Arbaugh, 2007). Its wide acceptance among scholars makes it a suitable framework to investigate the primary determinants affecting course satisfaction in a blended learning environment (Shea & Bidjerano, 2009). The COI framework presupposes three overlapping processes that act in concert to bring about learning. It is the interaction of "teaching presence", "social presence" and "cognitive presence" that defines the learning experience in a blended learning environment. The hotspot of learning happens at the point where the right levels and mix of these "presences" are

achieved to stimulate active engagement and deep learning. The underlying principle of this framework is rooted in the belief that a community of learning that harnesses collaborative synergy will bring out the best of student engagement and active learning. The COI framework is built on an understanding that technology provides a collaborative platform to advance knowledge through networking, pursuit of shared interests and goals between peers and instructors. When learning under guidance occurs in the context of meaningful social relationships, the community of learning so formed will be able to foster cooperative approaches which replace competition with collaboration, resulting in deeper learning and course satisfaction (Darling-Hammond et al., 2002).

Figure 1 illustrates a conceptual framework with the three presences in the COI model (Garrison et al., 2000) in online discussion and its association with course satisfaction in a blended learning module.

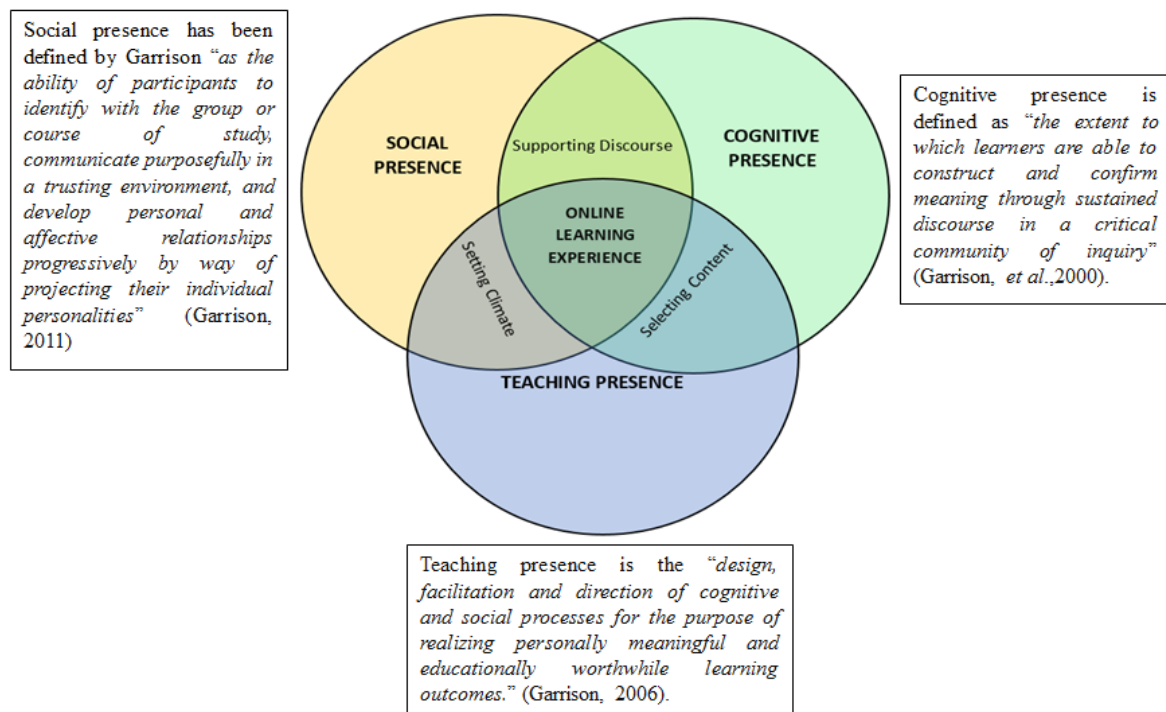


Figure 1. COI Framework and Students' Online Learning Experience

Note. Adapted from "Critical Inquiry in A Text-Based Environment: Computer Conferencing in Higher Education," by Garrison et al. (2000)

Teaching presence is the designing, planning, delivering of course materials and contents, facilitating, evaluating, and directing of learning for the purpose of empowering and guiding the learner towards constructing new knowledge (Garrison & Arbaugh, 2007). Teaching presence is also a widely accepted factor for influencing course satisfaction in an online environment (Battalio, 2007).

Social presence is the ability of students to communicate with peers as if they were physically present, such that personalities are projected and recognizable in the online medium of communication (Garrison et al., 2000). Social presence is important because it allows individuals to relate to each other as real

persons even though physically separated. This point of contact creates a pathway for relationships to develop and form a community of its own and realize a sense of belonging. This social platform with its network of relationships opens channels for free exchange of communication which does not discriminate between social and academic topics. This relationship-rich environment then becomes the place for building trust, collaboration, and learning. Research has shown that social presence is a powerful construct for online learning environments because of its strong influence on teaching and learning success (Bentley et al., 2015; Beuchot & Bullen, 2005) on students' satisfaction (Swan & Shih, 2005; Picciano, 2002), and on students' participation and engagement (Cui et al., 2013; Garrison & Arbaugh, 2007).

Cognitive presence is the extent to which students take ownership of learning and engage in sustained discourse and higher order thinking to construct meaning (Garrison et al., 2001). It is perceived as the act of transforming the information until it has been internalized. Higher order thinking is summoned in this process to construct new knowledge and make it transferrable or applicable to real life situations.

Traditionally, the success of the learning process has been narrowly defined in terms of academic achievement (Barnard-Brak et al., 2010). Whilst this is necessary to assess the effectiveness of teaching practice, research has shown that grades are not necessarily accurate measures of learning or development in cognitive capabilities (Arum & Roksa, 2011). Solely relying on grades to define academic success may result in drawing conclusions that are not generalizable and could also result in diminishing student interest in learning, reducing academic risk taking, and decreasing the quality of thinking (O'Connor & Wormeli, 2011). In recognizing the limitations of this narrow perspective on assessment, scholars have been able to identify other approaches to assess learning outcome or success (Levy, 2007).

In charting a different approach, a more subjective and psychological perception of learning outcomes has been employed to provide an alternative way of measuring success in online settings. Research has found that course satisfaction is linked to higher successful completion rates and successful completion of the course (Yukselturk & Yildirim, 2008). Course satisfaction has also been recognized as a key factor for measuring the effectiveness of online learning (Levy, 2007), greater persistence (Allen & Seaman, 2008), improved learning and better motivation (Khiat, 2013). Many higher education institutions now accept course satisfaction as one of the baseline measurements to assess the quality of their online learning courses (Kuo et al., 2010). Ultimately, course satisfaction is measured in this study.

2. Methodology

This was a study that adopted a quantitative approach via correlational research design. Questionnaire utilising 6-point Likert-scale survey and open-ended questions were used to investigate the relationship between the three constructs of the COI framework and course satisfaction. After analysing with SPSS software, the COI variables and course satisfaction were found to be normally distributed. Furthermore, the assumption of linearity was not markedly violated. Pearson correlations

analyses were then computed to examine the relationship between the variables.

The study targeted third-year undergraduate students from the Faculty of Psychology and Education, University Malaysia Sabah. In this study, thirty two students ($n = 32$) volunteered and submitted their completed survey. Beside the COI survey, three open-ended questions for interviews are as follow:

1. What would you recommend to improving learning on blended learning courses?
2. What factors contributed to your dissatisfaction with blended learning?
3. What factors contributed to your satisfaction with blended learning?

The original COI questionnaire adopted a four-point response scale. For this study and to improve reliability, it has been extended to a six-point scale (Preston & Colman, 2000). The independent variables were student responses to each of the COI constructs measured on a 6-point Likert scale, with Strongly Disagree = 1 and Strongly Agree = 6.

For the instrument to capture and analyse course satisfaction, the supplementary course satisfaction scale was added. Strachota (2006) had developed the student satisfaction scale which has been used for studying online research and a modified version of Strachota's student satisfaction scale was adapted for this study. Students were informed that participation in this study was voluntary and that they were able to withdraw or discontinue participation at any time. Students were also informed that their responses would be kept confidential.

3. Findings and Discussions

3.1 Research Question One: Relationship between Teaching Presence and Course Satisfaction

This study revealed that teaching presence was not significantly associated with course satisfaction, $r = .336$ ($p > .05$). This showed that students with high teaching presence scores were not associated with high course satisfaction scores. This result was inconsistent with a substantial portion of earlier research which showed teaching presence was a powerful predictor of course satisfaction (Giannousi & Kioumourtzoglou, 2016). There were plausible reasons for the dissonance which could be caused by differences in the research context such as learning styles, level of studies and ambiguity in interpretation of the questionnaire (Lowenthal & Dunlap, 2014; Swan & Shih, 2005).

One example of this divergent finding is found in a study by Kozan (2016). The study showed that cognitive presence was a full mediator between teaching and social presence and revealed a complexity in the interaction within the COI framework. His study found that instructors initially worked on raising students' level of cognitive presence. The increased cognitive presence prompted a subsequent effect on increasing social presence. This means that participants who are more conversant with the topic of discussion are better prepared and able to contribute to an online discussion.

This then improves the quality of interaction and "other" viewpoints are better received. When this happens, collaboration is meaningful and social presence is enhanced as a by-product of the interaction. Ultimately, this chain of interactions starting with teaching presence and cognitive presence is followed by social presence near the end of the process and thus being more closely associated with the perception

of course satisfaction. Kozan's study demonstrated that the operation of the three COI presences is dynamic and could develop differently according to the variation in the context of the students' environment and climate.

In addition to divergences caused by group dynamics, the research of Geng et al. (2019) show that the design of blended learning favours student autonomy and learning facilitation; which means the instructor plays less of a teacher role as a content expert and assumes greater facilitator role as a process expert. At the same time, the literature shows that first-year undergraduates are more reliant on stronger teacher presence; meaning they look for a greater amount of teacher involvement in teaching, guidance, direction, feedback, and goal setting (Farley et al., 2011). However, this should change with time as students gain greater confidence and independence after entering their third year. There is thus a potential clash of opposing factors when an autonomy biased blended learning module is implemented in the first year of an undergraduate course where students prefer greater teacher presence.

In this study, third-year undergraduates were selected, but the results show that some third-year undergraduates still found it challenging to adapt to this autonomous and student-centred blended learning environment. These students continued to heavily rely on teacher-centred learning. Given this predisposition for stronger teacher presence, they felt unprepared for a blended learning course requiring autonomy and self-directed learning. This could explain the students feeling dissatisfied which would also coincide with the lack of significant association between teaching presence and course satisfaction found in this study. These results are supported by the study of Alias and Jamaludin (2005) who reported that the high attrition rates in University Teknologi MARA's (UiTM) online distance learning program was attributed to students lacking skills in independent and self-directed learning.

Consistent with this observation, this present study disclosed that most students were satisfied with the blended learning program (93%) but gave significantly lower satisfaction ratings (60%) for online discussions as a teaching medium compared with traditional classroom learning. In investigating this lower satisfaction level with the online teaching medium, it is interesting to note that the two subscale items on teaching presence that were rated the lowest in this construct related to instructor guidance and feedback:

1. Subscale item TP12 – Instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.
2. Subscale item TP13 – Instructor provided feedback in a timely fashion.

When comparing this result with the open-ended questions, it was found that the above two subscale item responses were also mirrored in the open-ended questions. A group of students from the main sample (n = 32) was interviewed with open-ended questions. One of the respondent remarked:

"The factor that contributed to my dissatisfaction with blended learning is because sometime when doing online discussion I'm not very clear with the question but cannot ask the lecturer to explain."

In recommendations to improve learning on blended learning courses, some of the comments recorded

were:

“Tutors should be more attentive towards the student’s needs.”

“Feedback is regularly given from the instructor”

“More interactive discussion platform”

“Improve instructor skills in conducting online course”

The open-ended responses showed the importance of interaction in the online learning environment and the data from this study imply that student-instructor interaction is one of the most critical factors in enhancing course satisfaction in an online course. The findings also highlight the importance of equipping students with the skills and strategies to learn independently so that they can adapt to the reduced teaching presence in blended learning.

3.2 Research Question Two: Relationship between Social Presence and Course Satisfaction

Social presence was significantly correlated with course satisfaction $r = .624$ ($p < .001$). Social presence showed a high positive correlation according to Gignac and Szodorai (2016). The correlation was high and positive, indicating that participants who perceived a high level of social presence were highly satisfied with the course that they were taking. This aligns with findings from other researchers (Zhan & Mei, 2013; Sorden & Munene, 2013; Cobb, 2011).

The observations indicated that most students were comfortable conversing and participating in an online environment and that participants were able to project themselves and perceive others as real people. However, interview results also indicated that some students did not feel comfortable when disagreements surfaced during course discussions. Subscale items SP7 and SP8 scored the lowest mean ratings in the social presence construct and are described below. The questions for SP7 and SP8 are as followed:

1. SP7 – I felt comfortable disagreeing with other course participants while still maintaining a sense of trust
2. SP8 – I felt that my point of view was acknowledged by other course participants

These results indicated that there was a certain level of discomfort in handling disagreements or feeling their views were not accepted by others. This sense of unease could hamper the progress of building trust (a desired component of social presence), especially with the expressed purpose of advancing a springboard for collaborative activity.

In this blended learning course, the opportunity to communicate asynchronously online was made available to everyone. It is interesting to note that two participants (7%) felt that an online community was not formed, hence disagreeing on subscale item CS4 (“This course created a sense of community among students”). It would be reasonable to infer that these respondents did not feel the online program could provide an adequate platform for community formation. This is supported in the open-ended questions, where a few respondents (12%) mentioned that they preferred face-to-face meetings for better communication and presenting ideas. Furthermore, in the open-ended questionnaire which asked what contributed to student satisfaction in blended learning, only 10% had indicated the online facility

provided a medium for communicating and freely expressing ideas and only 6% felt the online discussions were genuine. Some of them expressed preferring non-face-to-face discussions which are attributed to avoiding the pressure of directly communicating in a face-to-face setting, especially with the instructor.

A possible explanation for this mixed feeling on the sense of community is illuminated by Swan and Shih (2005) where they described two types of students: high social presence and low social presence. The contrast revealed in the interviews between these two types of students showed significant differences in the way they thought about peer-to-peer learning. High social presence types believe they could learn from their peers and value group discussions, postings, and interaction with peers. Low social presence students do not place the same value on peer-to-peer support and instead place greater confidence on their own individual learning and initiatives.

Students in the high social presence category embraced the social construction of knowledge that the community of learners offers, whereas students in the low social presence group did not. These findings from student interviews revealed significant differences between these two categories of students. The differences stemmed from their perspective on the benefit and purposes of online discourse. Students in the high social presence group welcomed the social construction of knowledge and community building, whereas students in the low social presence group did not. These views were in agreement with findings by Ke (2010). He reported that adult learners adopted a preference for individualistic learning in their cognitive learning activities. Although they valued discussions which were meaningful and productive, they expressed mixed feelings about learning from online discussions and raised concerns on the quality of discussion being affected by “chatty and talkative” peers, which were considered a waste of time.

In the context of this study, those who felt that community is lacking represent a relatively small percentage. Interview items SP7 and SP8 suggest a few individuals, not the majority, were uncomfortable disagreeing in an online environment or felt their views were not being acknowledged by others. The following were some of the comments:

“Excellent medium for social interaction and easy to discuss a topic and access to online resources”

“Increase my interest and motivation in learning”.

“The factors that contributed to my satisfaction in blended learning is that interaction / collaboration between myself and my peers. Discussions were complemented through blended learning.”

A total of seven students’ (23%) expressed satisfaction with blended learning providing interaction and collaboration between peers that promoted a ‘sense of community’ in their online discussions. Overall, the survey data showed that participants in this study felt they could realize a sense of community via the comfort of communicating, conversing, and participating in discussions online, interacting with other course participants and developing a sense of collaboration based on results from item SP9 (100%) which showed all respondents believed online discussions helped them to develop a sense of collaboration. Participants were also very satisfied with the blended learning course (subscale item CS7: 97%).

In the open-ended question testing relating to recommendations for improving learning in a blended learning environment, only three respondents (representing 8% of total respondents) raised social presence issues. Most probably the combination of classroom with face-to-face interactions in the blended learning setting helped to cement the relationships needed for online discussions or collaboration. These findings are consistent with the larger body of research that indicates social presence is correlated with course satisfaction (Richardson & Swan, 2003)

3.3 Research Question Three: Relationship between Cognitive Presence and Course Satisfaction

This study revealed that cognitive presence was significantly correlated with course satisfaction with $r = .467$ ($p < .01$). This indicated there was a high positive correlation found between cognitive presence and course satisfaction and was consistent research findings by Hosler and Arend (2012). Cognitive presence was generally perceived not only as the desired goal of the learning process, but also the main factor that influenced students' satisfaction (Kucuk & Richardson, 2019).

This survey allowed students in this study to rate how important their active participation in course activities, brainstorming and discussion and reflection on course content were in helping them think deeply about the course content and apply their knowledge to other contexts. The "strongly agree" percentage was relatively low between 10% and 13%.

In general, respondents appear contented with their surface level cognitive achievement and place greater importance on getting model answers from the instructor. This might be due to this method has secured their passage through exams in the past. If so, this may have less to do with technology or the medium of communication than the 'learning culture' that has been handed down. The dependency on instructors and the need for fast answers plus ready access to materials and past exams infer that students are generally not committed to going beyond tasks other than the fulfilment of a passing grade or completion of an assignment (Alias & Jamaludin, 2005). It suggests that students do not seek to dig into a subject matter more than is needed for the test or completion of the assignment. The higher order thinking level of learning outcomes associated with collaborative approaches are more challenging to cultivate as long as typical course grades derived from exam-oriented approaches dominate the assessment process.

4. Conclusion

The data in this study showed that most respondents were comfortable with online learning and satisfied with the contribution of the online discussions toward their learning. Results of the survey confirmed that dissatisfaction was strongly associated with aspects of student-instructor interactions. It also clarified that perceptions of the reduced quality and the amount of the instructor's contributions in the group discussions, together with the instructor's delayed response to the respondent's postings, were strongly associated with perception of dissatisfaction of blended learning. Most respondents felt that blended learning offered a viable platform for communicating and contributing to learning in the online discussions. However, the study also suggested that several students exhibited a preference for

strong teacher presence which may mean they are not yet fully conversant or confident with autonomous and self-directed learning.

References

- Alias, N. A., & Jamaludin, H. (2005). The Aches of Online Distance Learning : A Synthesis of. *Asian Journal Of Distance Education*, 3(2), 48-54.
- Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. University of Chicago Press.
- Barnard-Brak, Lucy, Lan, William & Paton, Valerie. (2010). Profiles in Self-Regulated Learning in the Online Learning Environment. *International Review of Research in Open and Distance Learning*. <https://doi.org/11.19173/irrodl.v11i1.769>
- Battalio, J. (2007). Interaction online: A reevaluation. *Quarterly Review of Distance Education*, 8(4), 339-352.
- Bentley, K. J., Secret, M. C., & Cummings, C. R. (2015). The centrality of social presence in online teaching and learning in social work. *Journal of Social Work Education*, 51(3), 494-504. <https://doi.org/10.1080/10437797.2015.1043199>
- Beuchot, A., & Bullen, M. (2005). *Interactions and interpersonalit in online discussion forums*. *Distance Education*, 26(1), 67-87. <http://doi.org/10.1080/01587910500081285>
- Bonk, C. J., Olson, T. M., Wisner, R. A., & Orvis, K. L. (2002). Learning from focus groups: An examination of blended learning. *Journal of Distance Education*, 17(3), 97-118.
- Cobb, S. C. (2011). Social presence, satisfaction, and perceived learning of RN-to-BSN students in Web-Based nursing courses. *Nursing Education Perspectives*, 32(2), 115-119. <https://doi.org/10.5480/1536-5026-32.2.115>
- Cui, G., Lockee, B., & Meng, C. (2013). Building modern online social presence: A review of social presence theory and its instructional design implications for future trends. *Education and Information Technologies*, 18(4), 661-685. <https://doi.org/10.1007/s10639-012-9192-1>
- Darling-Hammond, L., Ancess, J., & Ort, S. W. (2002). Reinventing high school: Outcomes of the Coalition Campus Schools Project. *American Educational Research Journal*, 39(3), 639-673. <https://doi.org/10.3102/00028312039003639>
- Farley, A., Jain, A., & Thomson, D. (2011). Blended learning in finance: Comparing student perceptions of lectures, tutorials and online learning environments across different year levels. *Economic Papers*, 30(1), 99-108. <https://doi.org/10.1111/j.1759-3441.2010.00094.x>
- Garrison, D. R. (2000). Theoretical challenges for distance education in the 21st century: A shift from structural to transactional issues. *International Review of Research In Open and Distance Learning*, 7(1). <https://doi.org/10.19173/irrodl.v1i1.2>
- Garrison, D. R. (2011). *E-Learning in the 21st century: A framework for research and practice* (2nd Edition). London: Routledge/Taylor and Francis.

- Garrison, D. R., & Arbaugh, J. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, 10(3), 157-172. <https://doi.org/10.1016/j.iheduc.2007.04.001>
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7-23. <https://doi.org/10.1080/08923640109527071>
- Geng, S., Law, K. M. Y., & Niu, B. (2019). Investigating self-directed learning and technology readiness in blending learning environment. *International Journal of Educational Technology in Higher Education*, 16(1). <https://doi.org/10.1186/s41239-019-0147-0>
- Giannousi, M., & Kioumourtzoglou, E. (2016). Cognitive, Social, and Teaching Presence as Predictors of Students' Satisfaction in Distance Learning. *Mediterranean Journal of Social Sciences*, 7(2), 439-447. <https://doi.org/10.5901/mjss.2016.v7n2s1p439>
- Gignac, Gilles, & Szodorai, Eva. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, 102, 74-78. <https://doi.org/10.1016/j.paid.2016.06.069>
- Harasim, Linda. (2012). Learning Theory and Online Technologies. *Learning Theory and Online Technologies*, 1-192. <https://doi.org/10.4324/9780203846933>
- Hosler, K. A., & Arend, B. D. (2012). The importance of course design, feedback, and facilitation: Student perceptions of the relationship between teaching presence and cognitive presence. *Educational Media International*, 49(3), 217-229. <https://doi.org/10.1080/09523987.2012.738014>
- Ke, F. (2010). Examining online teaching, cognitive, and social presence for adult students. *Computers & Education*, 55, 808-820. <https://doi.org/10.1016/j.compedu.2010.03.013>
- Khalid, Nasir M. (2014). *Factors affecting course satisfaction of online Malaysian university students* (Doctoral Dissertation). Colorado State University. Retrieved from <http://www.pqdtopen.proquest.com/doc/1651562937.html?FMT=ABS>
- Khiat, H. (2013). An analysis of the relationship between learning satisfaction and academic achievement of nontraditional learners in Singapore. *International journal of research studies in education*, 3(1). <https://doi.org/10.5861/ijrse.2013.559>
- Kozan, K. (2016). A comparative structural equation modeling investigation of the relationships among teaching, cognitive and social presence. *Journal of Asynchronous Learning Network*, 20(3), 210-227. <https://doi.org/10.24059/olj.v20i3.654>
- Kucuk, S., & Richardson, J. C. (2019). A structural equation model of predictors of online learners' engagement and satisfaction. *Online Learning Journal*, 23(2), 196-216. <https://doi.org/10.24059/olj.v23i2.1455>
- Kuo, Y.-C., Kuo, Y.-T., & Walker, A. (2010). The Effect of Student Interactions and Internet Self-Efficacy on Satisfaction in Two Synchronous Interwise Course Sessions. *Global Learn*, 2010(1), 4242-4246.

- Levy, Y. (2007). Comparing dropouts and persistence in e-learning courses. *Computers and Education*, 48(2), 185-204. <https://doi.org/10.1016/j.compedu.2004.12.004>
- Lowenthal, P. R., & Dunlap, J. C. (2014). *Presence in a Community of Inquiry*, 11(1), 19-30. <https://doi.org/10.2304/elea.2014.11.1.19>
- O'Connor, K., & Wormeli, R. (2011). Reporting student learning. *Educational Leadership*, 69(3), 40-44.
- Owston, R. (2018). Empowering Learners through Blended Learning. *International journal on e-learning*, 17(1), 65-83.
- Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning Network*, 6(1). <https://doi.org/10.24059/olj.v6i1.1870>
- Richardson, J. & Swan, K. (2003). An Examination of Social Presence in Online Courses in Relation to Students' Perceived Learning and Satisfaction, *Journal of Asynchronous Learning Networks*, 7(1), 68-88. <https://doi.org/10.24059/olj.v7i1.1864>
- Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers and Education*, 52(3), 543-553. <https://doi.org/10.1016/j.compedu.2008.10.007>
- Sorden, S. D., & Munene, I. I. (2013). Constructs related to community college student satisfaction in blended learning. *Journal of Information Technology Education: Research*, 12, 251-270. <https://doi.org/10.28945/1890>
- Strachota, E. M., Conceição, C. O., & Schmidt, S. W. (2006). An Instrument Development Model For Online Surveys In Human Resource Development And Adult Education. *New Horizons in Adult Education and Human Resource Development*, 20(2). <https://doi.org/10.1002/nha3.10249>
- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3), 115-136. <https://doi.org/10.24059/olj.v9i3.1788>
- 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.
- Zhan, Z., & Mei, H. (2013). Academic self-concept and social presence in face-to-face and online learning: Perceptions and effects on students' learning achievement and satisfaction across environments. *Computer & Education*, 69, 131-138. <https://doi.org/10.1016/j.compedu.2013.07.002>