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## Explaining the Social Presence of Online Course Students based on Cognitive Presence, Technological Self Efficacy and Perception of Online Learning Climate (Case Study: Payame Noor University Online Course Students)

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### Abstract

**Aim:** E-learning has revolutionized the way we think about educational experiences in terms of sustainable communication and collaboration. The purpose of this research was to explain the social presence of online course students based on cognitive presence, self-efficacy in technology and perception of the online learning atmosphere in Payam Noor University online course students. The current research was applied in terms of its purpose and in terms of the nature of the collected data, it was quantitative and based on the correlation approach. The participants were 265 students of online courses at Payam Noor universities in North Khorasan province in the academic year of 2018-2019, who were selected by cluster random sampling method. cognitive presence, social presence, perception of online learning environment and computer self-efficacy questionnaires were used. the results of multiple regression analysis showed that cognitive presence, perception of online learning atmosphere and computer self-efficacy positively predict social presence; In addition, predictor variables generally explain 1.50% of the variance of social presence. In general, the results indicated the importance of the variables of cognitive presence, perception of online learning atmosphere and computer self-efficacy in predicting social presence; Therefore, if it is possible to increase the amount of cognitive presence, perception of the online learning atmosphere and computer self-efficacy by using educational methods, the level of social presence can be improved to a considerable extent, and in this way, the growth of social presence. Help students in online courses.

**Keywords:** *Social presence, cognitive presence, technological self-efficacy, perception of online learning climate*

### Introduction

The reason social presence is emphasized in online learning is that online and virtual learning experts believe that social constructivism is an important factor for improving interpersonal communication and learning quality. Social presence is influenced by various factors that learners gain from their learning experiences. More specifically, social presence can affect learners' motivation, teacher's satisfaction, and real learning results as well as perceived learning. In addition, social presence has consequences for the design of the training course (Richardson et al., 2017) and even for retention and the desire to enroll in the online course (Liu et al., 2022). Studies have reported cognitive presence as one of the variables that play a significant role in the social presence of students in online courses. Cognitive presence refers to the degree to which learners in a specific combination in a research community are able to construct meaning through continuous communication (Gio et al., 2021).

Studies have shown that self-efficacy, another variable that plays a significant role in the social presence of students in online courses, quickly spreads in special areas such as computer use and users' beliefs about their abilities. Technological self-efficacy indicates one's judgment of their ability to use the computer to do specific tasks. In addition, studies have shown that perception of the online learning climate is another variable that plays a significant role in the social presence of students in online courses. Kaufman, Seleno, and Frisby (2016) quoting Cole, Lennon, and Weber (2019) define "online classroom space" as "a perceived relationship between instructor and student interaction in an online class."

Identifying the factors that affect cognitive presence, social presence, and students' perception of the online learning climate can help to have a clearer view of the nature of the online learning environment, and also provide clear guidelines for educational designers to develop learning plans. Teachers, curriculum designers and those involved in online teaching should be equipped with the necessary tools in online education and participation as much as possible in this space. Therefore, according to the stated contents, the aim of the present study is to explain the social presence of online course students based on cognitive presence, technological self-efficacy and perception of the online learning climate in Payame Noor University online course students.

## Methodology

The current research was applied in terms of its purpose and in terms of the nature of the collected data, it was quantitative and based on the correlation approach. The statistical population of this study was all the students of Payame Noor University in North Khorasan Province who had online courses in the academic year 2020-2021. To determine the sample size, the Krejci-Morgan method was used. Finally, 265 completed questionnaires of cognitive presence, social presence, self-efficacy in technology and online learning climate were analyzed.

In this research, mean and standard deviation, simple correlation coefficient and regression methods were used.

## Results

The values for mean and standard deviation were  $15.38 \pm 42.14$  for cognitive presence,  $41.87 \pm 42.22$  for technological self-efficacy,  $96.86 \pm 09.26$  for social presence, and  $34.51 \pm 22.16$  for online learning climate. Pearson's correlation coefficient was 0.69 between cognitive presence and social presence, 0.55 between self-efficacy and social presence, and 0.39 between social presence and online learning climate, all of which are significant ( $P < 0.01$ ).

Also, the results of simultaneous multiple regression of cognitive presence, technological self-efficacy and perception of online learning climate explained 50.4% of social presence.

## Discussion and conclusion

This research aimed to investigate the role of cognitive presence, technological self-efficacy and perception of online learning climate in predicting the social presence of students of Payame Noor University's online courses.

The findings showed that cognitive presence, technological self-efficacy and perception of online learning climate play a decisive role in predicting changes in the social presence of online course students. Students who have a higher level of technological self-efficacy and perception of the online learning climate enjoy higher academic success in online courses and accordingly overestimate their abilities. This factor itself can increase the level of social presence of students in online courses.

## Reference

- Cole M, Lindeque PK, Fileman E, Clark J, Lewis C, Halsband C, Galloway TS, (2016). Microplastics alter the properties and sinking rates of zooplankton faecal pellets. *Environmental science & technology*. 15;50(6):3239-46. <https://doi.org/10.1021/acs.est.5b05905>
- Guo, P., Saab, N., Wu, L. and Admiraal, W., (2021). The Community of Inquiry perspective on students' social presence, cognitive presence, and academic performance in online project-based learning. *Journal of Computer Assisted Learning*, 37(5), pp.1479-1493. <https://doi.org/10.1111/jcal.12586>

- Kalman, R., Macias Esparza, M. and Weston, C., (2020). Student views of the online learning process during the COVID-19 pandemic: A comparison of upper-level and entry-level undergraduate perspectives. *Journal of Chemical Education*, 97(9), pp.3353-3357. <https://doi.org/10.1021/acs.jchemed.0c00712>
- Liu B, Xing W, Zeng Y& Wu Y(2022). Linking cognitive processes and learning outcomes: The influence of cognitive presence on learning performance in MOOCs. *British Journal of Educational Technology*, 53(5), p 1459-1477, <https://doi.org/10.1111/bjet.13193>
- Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in relation to students' satisfaction and learning in the online environment: A meta-analysis. *Computers in Human Behavior*, 71, 402-417. <https://doi.org/10.1016/j.chb.2017.02.001>



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