

ORIGINAL ARTICLE

The Mediating Role of Computer Self-Efficacy in the Relationship between Technology Acceptance and Lifelong Learning in Elementary School Teachers

Ali Abdi¹ , Faramarz Soheili² , Somayeh Ghahramani³ 

1. Associated Professor, Department of Educational Science, Faculty of Educational Science and Psychology, Payame Noor University, Tehran, Iran.

2. Professor, Department of Knowledge and Information Science, Payame Noor University, Tehran, Iran.

3.M. A., Department of Educational Sciences, , Payame Noor University, Tehran, Iran.

Correspondence:

Ali Abdi

Email: ali.abdi@pnu.ac.ir

Received: 08/Feb/2025

Revised: 13/ Jul/2025

Accepted: 31/Jul/2025

Published: 23/Sep/2026

How to cite:

Abdi, A. ,Soheili, F., Ghahramani, S. (2025). The Mediating Role of Computer Self-Efficacy in the Relationship between Technology Acceptance and Lifelong Learning in Elementary School Teachers, Technology and Scholarship in Education, 6 (3), 22(1-4).

DOI:[10.30473/t-edu.2025.73722.1248](https://doi.org/10.30473/t-edu.2025.73722.1248)

ABSTRACT

The present study aimed to fit the mediating role model of computer self-efficacy in the relationship between technology acceptance and lifelong learning in elementary school teachers. The research is developmental research in terms of its purpose and descriptive and correlational in terms of data collection, in which the structural equation model method was used. (SEM). The statistical population included all the teachers of the beginning of Kermanshah city in the academic year of 2023-2024. In order to select the sample size based on the JPower software and according to the research method and effect size, 222 primary school teachers in Kermanshah were selected as a sample based on the available sampling method and followed the information technology acceptance questionnaires. Absolute (2021), Murphy et al.'s computer self-efficacy questionnaire (1989) and Lee and Tsai's lifelong learning questionnaire (2007) answered virtually. For data analysis, descriptive statistics including mean and standard deviation and inferential statistics including Pearson's correlation test and structural equation modeling were used through SPSS-26 and Smart PLS software. The findings showed that the effect of technology acceptance on lifelong learning is statistically positive and significant. The effect of technology acceptance on computer self-efficacy is statistically positive and significant. Computer self-efficacy has a significant effect on lifelong learning. Also, the indirect effect of technology acceptance on lifelong learning with the mediating role of computer self-efficacy is significant. The results obtained from the research showed that the conceptual model of lifelong learning based on technology acceptance with the mediating role of technological self-efficacy fits with the empirical model.

KEYWORDS

technology acceptance, lifelong learning, computer self-efficacy, elementary school teachers.



Introduction

The present study aimed to fit the mediating role model of computer self-efficacy in the relationship between technology acceptance and lifelong learning in elementary school teachers

Method

In terms of its objective, this study is applied developmental research, and in terms of its execution method, it is a descriptive correlational study. The statistical population of the present study includes all primary school teachers in Kermanshah city during the academic year 2023–2024. To determine the sample size based on G*Power software and considering the research method (regression-based), an effect size of 0.5, and a power of 0.99, 222 primary school teachers in Kermanshah city were selected as the sample using convenience sampling. The data collection tools are as follows: The Technology Acceptance Questionnaire by Nikpey Motlagh (2021). The Computer Self-Efficacy Questionnaire by Murphy et al. (1989). The Lifelong Learning Questionnaire by Lee and Tsai (2007). To analyze the statistical data and respond to the research hypotheses, inferential statistical tests including confirmatory factor analysis and structural equation modeling were used via Smart PLS software.

Results

The findings of the study showed that the relationships of the two variables of technology acceptance and lifelong learning with their dimensions are significant at the error level of $P < 0.05$. Also, the direct effect of computer self-efficacy on lifelong learning ($\beta = 0.556$, $p = 0.001$), the direct effect of technology acceptance on computer self-efficacy ($\beta = 0.333$, $p = 0.001$), and the direct effect of technology acceptance on lifelong learning ($\beta = 0.114$, $p = 0.031$) are positive and significant at the error level of $P < 0.05$. The indirect effect of technology acceptance on lifelong learning ($\beta = 0.188$, $p = 0.001$) is significant at the error level of $P < 0.05$. The finding also shows that the endogenous constructs of computer self-efficacy (0.111) have a weak coefficient of determination (R^2), and lifelong learning (0.377) has a moderate coefficient of determination (R^2). The Q^2 index of Stone and Geisser determines the predictive power of the model for the dependent variables. The findings show that all values of the Stone-Geisser Q^2 index are positive and large, indicating the high predictive ability of the research model.

Discussion and conclusion

The findings of this study indicated a direct and significant effect of technology acceptance on lifelong learning, and the first hypothesis of the study was confirmed. In explaining this finding, it can be said that technology acceptance allows teachers to access diverse and up-to-date educational resources and materials. This access can increase their motivation to continue learning. Educational technologies such as online platforms, educational videos, and learning software facilitate the learning process and make the learning experience more interactive. This can lead to better learning. Also, technology acceptance helps teachers strengthen their digital skills. These skills are very important for lifelong learning because today's world is rapidly changing. The use of technology will have a positive effect on teachers' attitudes toward lifelong learning. When teachers learn how to use technology and

benefit from it, they will be more inclined toward continuous learning. On the other hand, in explaining studies that are inconsistent with the results obtained from this study, several reasons can be mentioned. These reasons can refer to psychological, social, technical, and factors related to the educational environment. Given that teachers' behaviors and attitudes toward technology are very diverse, this can depend on factors such as previous experiences, age, education, and level of digital skills. For example, some teachers may feel comfortable with technology, while others may feel confused and afraid. These individual differences can lead to contradictory results in studies. Also, this difference may be due to the use of different research approaches, differences in data collection instruments, or differences in the research population and samples. This widespread acceptance of technology and the development of online resources led to a profound change in educational and learning patterns. The pandemic taught people that learning is a process that can take place at any time and place with the help of technology, and this awareness can contribute to a culture of lifelong learning among teachers and students. The results also show that the effect of technology acceptance on computer self-efficacy is positive and significant, and the second hypothesis of the study was confirmed. In explaining these results, it can be said that following technology acceptance, online learning, e-learning, and other informal learning approaches expand the sources, places, and spaces of learning and provide the possibility of self-initiated construction of the learning experience.

The results also showed that computer self-efficacy has a significant effect on lifelong learning, and the third hypothesis of the study was confirmed. results, it can be said that the disruption of information and communication technology has led to many changes at the social, economic, and consequently educational levels. The findings of this study also showed that technology acceptance has an indirect effect on lifelong learning with the mediating role of computer self-efficacy, and the fourth hypothesis of the study was confirmed. In explaining this finding, it can be said that since computer self-efficacy refers to individuals' ability and self-confidence in effectively using computer technologies, this belief in teachers causes them to view technology as a positive means for learning and teaching. This positive attitude can help their lifelong learning and keeping their educational knowledge and skills up to date. It also allows teachers to turn technological challenges into learning opportunities. Instead of avoiding the use of new technologies, these individuals will have more motivation to learn and advance their digital capabilities.

Funding

This research received no specific funding from any public, commercial, or not-for-profit agency.

Authors' Contribution

All authors were responsible for the study's conceptualization, methodology, data collection, analysis, writing, and final approval of the manuscript.

Conflict of Interest

The author declares no conflict of interest regarding the publication of this article.

Acknowledgments

The author would like to express gratitude to all researchers whose scholarly works contributed to the theoretical and empirical foundations of this study.