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The Mediating Role of Internet Self-Efficacy in the Relationship Between Teachers' Digital Competence and Professional Growth

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Abstract

Purpose: The Internet, as a symbol of the new era of information and communication technologies, plays a crucial role in human development and professional growth. This study aimed to explore how Internet self-efficacy mediates the relationship between digital competence and professional growth in teachers.

Methodology: The research employed a quantitative approach and a correlational method. The statistical population consisted of teachers in Kermanshah City, with a sample size of 310 teachers selected through available sampling. Data were collected using standardized questionnaires on digital competence, professional development, and Internet self-efficacy. Analysis involved descriptive and inferential statistics, as well as structural equation modeling using SPSS-23 and Smart PLS software.

Findings: The study revealed a positive and significant direct impact of digital competence on Internet self-efficacy, on professional growth, and on Internet self-efficacy with professional growth. Additionally, the indirect impact of digital competence on professional development through Internet self-efficacy was positive and significant.

Conclusion: Internet self-efficacy plays a crucial role in predicting the relationship between digital competence and teachers' professional growth. Enhancing digital skills enables individuals to leverage resources on the Internet, while self-efficacy beliefs contribute to professional growth. Recognizing the psychological aspects of self-efficacy is essential in achieving professional goals.

Value: This research provides a conceptual model for teacher professional growth based on digital competence, highlighting the mediating role of Internet self-efficacy.

Key Words: *Digital Competence, Professional Growth, Internet Self-Efficacy.*

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Extended Abstract

Introduction: The internet, symbolizing the new era of communication and information technologies, is considered a cutting-edge tool for professional development and human progress. Therefore, the primary objective of this study is to explore the mediating role of internet self-efficacy in the relationship between digital competence and professional development among teachers.

Purpose: The main focus of this study is to investigate how internet self-efficacy mediates the connection between digital competence and professional development in teachers.

Methodology: This research employs a quantitative approach, with developmental goals and a correlational data collection method. Through a data-driven approach, it examines the interplay between dependent, independent, and mediating variables using Structural Equation Modeling (SEM) with variance-based analysis. The study's target population includes all teachers in Kermanshah city, with a sample size of 310 teachers selected through convenience sampling. Data was gathered using the Digital Competence Questionnaire by Al-Khatib, the professional growth of teacher's questionnaire by the University of Maryland, and the Internet Self-Efficacy questionnaire by Hsien and Miner. Data analysis was carried out using descriptive and inferential statistics, as well as Structural Equation Modeling with SPSS-23 and Smart PLS software.

Findings: The results of the study reveal that the conceptual model of professional growth, based on digital competence with the mediating role of internet self-efficacy, aligns well with the empirical model. Path coefficients between variables were found to be significant at a 95% confidence level. Various measurement indices and models indicate a strong fit between the theoretical and empirical models, as illustrated in Figures 1 and 2.



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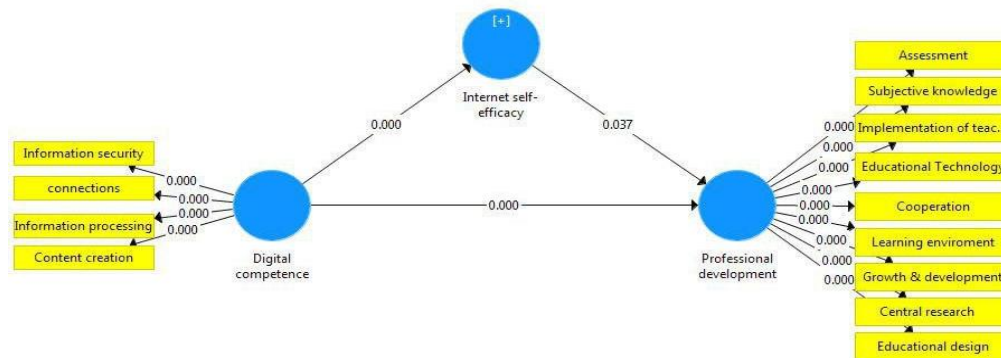


Figure 1: The final structural model of the research based on the conceptual model with significant path coefficient values.

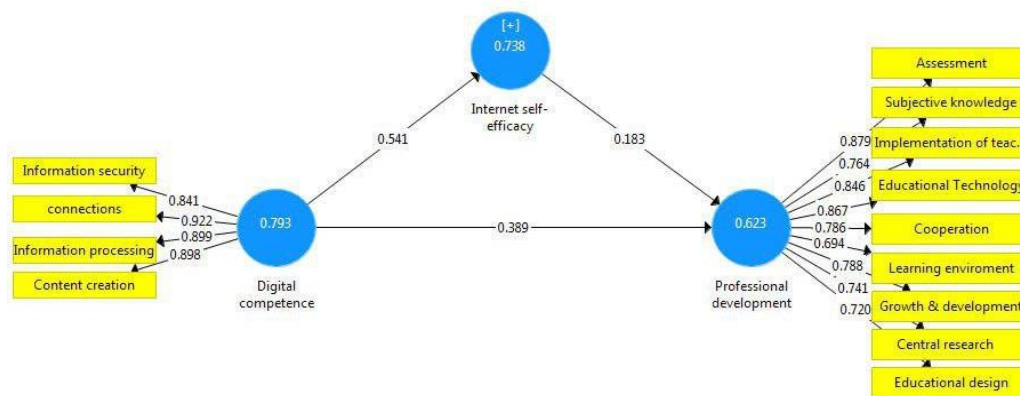


Figure 2: The final structural model of the research based on the conceptual model with AVE values

Figures 1 and 2 demonstrate a robust fit of the final structural model, with significant path coefficients and mean variance values above 0.50 for all latent variables. These findings corroborate the theoretical and empirical underpinnings of the study.

Assessment of the measurement models reveals high Cronbach's alpha coefficients, composite reliability, factor loading coefficients, convergent validity, and discriminant validity indices, all exceeding desirable thresholds. The internal model analysis examines collinearity, path coefficients, and effect size, showing statistically significant relationships between digital competence, internet self-efficacy, and professional growth at a 0.05 significance level. The effect sizes of digital competence on professional growth and internet self-efficacy on professional development were small, while the impact of digital competence on internet self-efficacy was significant, as evidenced by the results presented in Table 1.



Table 1: Collinearity indices, direct and indirect effects (path coefficients), and effect size (f^2) of the internal model in the research.

Source destination	Direct effect						
	path	VIF			values	Confidence interval	effect size(f^2)
		β	T	Sig			
Digital Competence -> Professional Growth	1.414	0.389	4.969	0.001	0.229	0.536	0.145
Digital Competence -> Internet Self-Efficacy	1.000	0.541	10.571	0.001	0.445	0.637	0.414
Internet Self-Efficacy -> Professional Growth	1.414	0.183	2.138	0.037	0.025	0.342	0.032
Indirect effect							
Digital Competence -> Internet Self-Efficacy -> Professional Growth	----	0.099	2.058	0.040		0.193	--

Conclusion: The research results suggest a significant and positive relationship between digital competence and professional growth with a confidence level of 95 percent. Moreover, internet self-efficacy has been found to positively and significantly predict this relationship. The measurement criteria and indices indicate that the research conceptual model fits well with the empirical model, implying

adequate validity. Therefore, it can be concluded that the proposed conceptual model aligns well with the empirical model. These findings indicate the growing importance of teachers possessing technological competencies to enhance education quality. With digital skills, teachers can effectively utilize modern technologies to improve their teaching practices and professional development. Teachers with digital competence can engage intelligently in teaching, resulting in better effectiveness and quality. The more skilled a teacher is in using technology, the higher the likelihood of professional success and advancement. Furthermore, the research highlights the impact of digital competence on internet self-efficacy. Teachers with high internet self-efficacy tend to be more effective in terms of teaching quality. Their confidence in using the internet influences their motivation, attitude, and performance in online educational settings. The internet, being a dynamic tool, plays a crucial role in the continuous professional growth of teachers. The mediating role of internet self-efficacy emphasizes the importance of psychological aspects and beliefs. Increased confidence in using technology and internet resources brings individuals closer to achieving professional growth and goals. In today's rapidly evolving digital landscape, digital competence directly affects teachers' professional growth and success.

Value: This research contributes to formulating and testing a conceptual model for teachers' professional growth based on digital competence, with internet self-efficacy playing a mediating role.

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