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The Impact of Digital Competence and Technology Use on Teaching Quality

Dr. Mirela Karabina

Lecturer, Department of Pedagogy and Psychology, Faculty of Social Sciences, University of Tirana, Albania

Abstract

This study examines the impact of teachers' digital competence and technology use on teaching quality. A mixed-methods approach with an explanatory sequential design was employed, combining quantitative and qualitative data. The quantitative phase included 153 teachers, while the qualitative phase consisted of semi-structured interviews with 25 teachers. The findings indicate that teachers generally report high levels of digital competence and technology use. Specifically, 88.2% felt confident using technology in teaching, 82.8% believed that technology improves the organization of the teaching process, and 70.6% reported having the skills to develop digital instructional materials. However, 69.3% identified inadequate technological equipment and 66.0% reported internet connectivity problems as major barriers to the effective integration of technology in teaching. The qualitative findings reinforced the quantitative results, showing that teachers regularly use Microsoft Word, Excel, PowerPoint, and applications for creating educational videos and interactive quizzes. Participants also reported that technology enhances student engagement, encourages active participation, and promotes critical thinking. At the same time, they emphasized the need for specialized professional training and improved digital infrastructure in schools. The study concludes that teachers' digital competence and the pedagogical use of technology positively influence teaching quality. Continuous professional development and investment in digital infrastructure are essential to maximize these benefits.

Keywords: Digital Competence; Technology Use; Teaching Quality; Teachers' Professional Development; Digital Infrastructure