Analysis And Research on Expected Teaching Effects Under Three Different Teaching Models

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Abstract

This paper aims to enhance the teaching effectiveness of the "Software Quality Assurance and Testing" course by focusing on elevating students' learning enthusiasm and practical skills, while nurturing talents adaptable to the evolving demands of the software testing industry. The study uses the aforementioned course as a case study, conducting a detailed analysis of traditional teaching models, student-centered teaching approaches, and teaching models based on innovative classroom design. Building upon this analysis, three expected effect evaluation models are constructed for each teaching model. The CIPP method and expert weighting are employed to calculate transfer coefficients for each level under every model. Results reveal that the traditional teaching model exhibits a significant decline in the expected effect, yielding unsatisfactory outcomes. While the student-centered teaching philosophy produces relatively better results compared to the traditional model, various influencing factors still contribute to declining transfer coefficients. In contrast, the classroom design-based model, which incorporates a student-centric approach by exploring deep-seated needs, implementing motivational strategies, and integrating principles of active learning, applied psychology, cognitive theory, and the energy modulation curve, demonstrates enriched learning outputs. Notably, the transfer effect of skills is remarkable, with expected effect coefficients showing an upward trend. This research provides valuable insights for optimizing future classroom designs.

Keywords: software testing, teaching models, expected teaching effects, transfer coefficients, expert weighting