

# Evaluating the Effectiveness of Teaching and Learning in Higher Education

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## ABSTRACT

*This paper aims to develop a psychometric scale for assessing teaching and learning performance in higher education institutions, grounded in Kirkpatrick's four-level evaluation model. The study establishes content validity through expert reviews, pre-testing, and pilot testing, employing Exploratory Factor Analysis (EFA). The EFA identifies the dimensionality of the measures, with Cronbach's alpha coefficients ranging from 0.894 to 0.904, indicating strong internal consistency in the pilot testing phase. Subsequently, Confirmatory Factor Analysis (CFA) using Structural Equation Modelling (SEM) validates the one-dimensionality, convergent, discriminant, and construct validity, as well as the reliability and normality of the teaching performance scales, based on a survey of 592 student evaluations. The field study data further confirm the measurement model, verifying the constructs of the teaching and learning performance scales. Establishing this psychometric scale using Kirkpatrick's evaluation model represents an innovative contribution to enhancing teaching quality and effectiveness. Theoretically, this study introduces a novel perspective on psychometric evaluation, focusing on Kirkpatrick's reaction (level 1) and learning (level 2). Practically, the scale offers a valuable tool for trainers and academic staff to evaluate their performance through student feedback within higher education contexts.*

**KEYWORDS:** *Confirmatory Factor Analysis (CFA), Higher Learning, Kirkpatrick's Evaluation Model, Psychometric Scale, Structural Equation Modelling (SEM) and Teaching Performance*

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