

Developing an Instrument to Measure Teachers' Self-Efficacy of Teaching Innovation Skills

Authors : Huda S. Al-Azmi

Abstract : There is a growing consensus that adoption of teachers' self-efficacy measurement tools help to assess teachers' abilities in specific areas in order to improve their skills. As a result, different instruments to assess teachers' ability were developed by academics and practitioners. However, many of these instruments focused either on general teaching skills, or on the other hand, were very specific to one subject. As such, these instruments do not offer a tool to measure the ability of teachers in teaching 21st century skills such as innovation skills. Teaching innovation skills helps to prepare students for lives and careers in the 21st century. The purpose of this study is to develop an instrument measuring teachers' self-efficacy of teaching innovation skills related to the classroom context and evaluating the teachers' beliefs regarding their ability in teaching innovation skills. To reach this goal, the 16-item instrument measures four dimensions of innovation skills: creativity, critical thinking, communication, and collaboration. 211 secondary-school teachers filled out the survey to quantitatively analyze the quality of the instrument. The instrument's reliability and item analysis were measured by using jMetrik. The results concluded that the mean of self-efficacy ranged from 3 to 3.6 without extreme high or low self-efficacy scores. The discrimination analysis revealed that one item recorded a negative correlation with the total, and three items recorded low correlation with the total. The reliabilities of items ranged from 0.64 to 0.69 and the instrument needed a couple of revisions before practical use. The study concluded the need to discard one item and revise five items to increase the quality of the instrument for future work.

Keywords : critical thinking, collaboration, innovation skills, self-efficacy

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