

عنوان مقاله:

Capturing the Contribution of Fuzzy and Multi-criteria decision-making Analytics: A Review of the Computational Intelligence Approach to Classroom Assessment Sustainability

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خلاصه مقاله:

This is a systematic literature review that discusses the contribution of fuzzy analytic (FA) and multi-criteria decision-making (MCDM) methods in classroom assessment. Due to lack of knowledge and not being exposed to the importance and benefits of using computational intelligence approaches such as FA and MCDM, not many educators apply such methods. The issue of how it operates is also the cause of educators still adopting conventional assessment methods. Classroom assessment involves the orientation of data in the form of divergent, multiple, fuzzy, and in terms of relation, so a more efficient approach of assessment is through modern mathematical methods and soft computing techniques as suggested by experts. This practical gap needs to be refined by providing a clear picture to educators about FA and MCDM as alternative assessment methods. Therefore, based on the PRISMA model, this systematic literature review is implemented to expose educators to the contribution of FA and MCDM in classroom assessment and conceptualize how to operate the method more easily and simply. Starting with article searches in several databases such as Google Scholar, ScienceDirect, and Elsevier using only specified keywords, ۲۱ articles were selected for discussion after going through the steps of Identification, Screening, Eligibility and Included. Based on the findings, some aspects of assessment are very significant to be implemented using FA and MCDM, appropriate, more practical and show a meaningful contribution to classroom assessment. The conceptual model of the operation of FA and MCDM based on a summary of the workflow of selected studies can also help educators get insights and ideas to implement this alternative assessment method. This paper can prove that the computational intelligence approach greatly contributes to classroom assessment and if there are initiatives and facilitation implemented, surely educators can take advantage to strengthen the management and assessment of the classroom.

کلمات کلیدی:

Online Teaching, Students' Engagement, Students' Mastery, Coronavirus Outbreaks, Metacognitive Regulation, Online Mathematics Teaching

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