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# Analysis of the indicator's performance to predict Indonesian Teacher Engagement Index (ITEI) using artificial neural networks

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## Abstract

Research related to the Indonesian Teacher Engagement Index (ITEI) is still being developed to get better predictive accuracy. In this study we conducted an analysis using the Neural Network approach to determine the performance of each dimension obtained from the ITEI database. Root Mean Square Errors values generated when using variables in dimensions related to Nationality Character are quite low, which is 0.151, with a correlation of 0.906 and execution time of 13s. In addition, the Nationality Character Dimension obtained excellent performance predictions when combined with the Positive Education Dimension. The Square Errors Root Mean value can be reduced to 0.102 with 8s execution time. The results of this analysis will be used as the basis for developing ITEI applications in the future so that the resulting Teacher Profiling can be used as a basis for policies and strategies to improve teacher performance and engagement in the school environment. © 2019 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>) Peer-review under responsibility of the scientific committee of the 4th International Conference on Computer Science and Computational Intelligence 2019.



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