


## The Effectiveness of Deep Learning Based on the Fullan Approach on Working Memory and Academic Procrastination in First-Year Secondary School Students

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### R e v i e w e r s

**Reviewer 1:** Sara Nejatifar   
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## 1. Round 1

### 1.1. Reviewer 1

Reviewer:

The sentence “Procrastination, characterized by the voluntary delay of academic tasks despite potential negative consequences...” would benefit from a theoretical framing, such as referencing the Temporal Motivation Theory or self-regulation theory, to ground the discussion.

The discussion of self-regulation skills lacks operationalization. How are these defined or measured in the context of this study? Adding a definition grounded in psychological literature (e.g., Zimmerman’s framework) would enhance clarity.

The phrase “deep learning involves higher-order cognitive processes...” is accurate but could benefit from an explicit differentiation between deep and surface learning supported by empirical citations beyond Barzegar et al. (2022).

In “Session 3: Identifying and Overcoming Procrastination,” the mention of cognitive-behavioral strategies is promising. Were these strategies drawn from a validated CBT protocol, or developed ad hoc?

The text says “effect sizes will be calculated,” but later results do not report them clearly. Please ensure that all effect sizes (e.g.,  $\eta^2$ , Cohen’s  $d$ ) are explicitly reported for both time and group effects.

While reporting results descriptively is helpful, the phrase “a significant improvement” should be supported by  $p$ -values or effect sizes within the narrative, not just in tables.

The sentence “The between-groups comparison was marginally significant,  $F(1, 58) = 3.89, p = 0.056$ ” is statistically inaccurate. A p-value above .05 is not marginally significant and should not be interpreted as such. Consider rewording to reflect this accurately.

It’s stated that “the comparison between pre-test and follow-up showed a non-significant difference ( $p = 0.067$ ),” but this should be framed as a statistical trend rather than implying clinical significance.

Authors uploaded the revised manuscript.

### 1.2. Reviewer 2

Reviewer:

The repetition of “Working memory plays a critical role in this process” at the end seems redundant and stylistically unnecessary. It can be revised to integrate with the previous sentence to improve flow.

While Fullan’s deep learning approach is described, it lacks citation diversity. All sources are by Fullan. Include independent empirical studies that evaluated Fullan’s model to support its validity.

The administration methods for Daneman and Carpenter’s test are explained in depth, but the reliability coefficient (e.g., Cronbach’s alpha) for the current sample is not reported. This is essential for psychometric credibility.

Similar to the above, while the scale is described, the manuscript should report its internal consistency ( $\alpha$ ) for the present sample, as scale reliability is context-dependent.

The description of the intervention sessions is thorough, but there is no information on facilitator training or adherence checks. Please specify whether fidelity monitoring or facilitator expertise was accounted for.

The claim “deep learning strategies have a significant positive impact...” could be overstated given the small sample size and marginal between-group differences. Temper the language to avoid overgeneralization.

The statement “students reported fewer tendencies toward procrastination, as evidenced by their improved task completion rates” implies behavioral data, but no such data were collected. Please revise or clarify.

Authors uploaded the revised manuscript.

## 2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.