Dear editors and reviewers,

Thank you very much for your comments and professional advice. These suggestions contribute to enhancing the academic rigor of our article. Based on your recommendations and requests, we have made revisions to the revised manuscript. We hope that these modifications will further improve our work. Additionally, we are willing to provide detailed explanations as follows:

Reviewer 1#

- Reducing the length of reference
- Wishing the code available
- In k-tuple, k should be in math mode
- "Dircted" => "Directed"
- "Lehman" => "Leman"
- The math was not supersimple to follow

The author's answers: We have made revisions to the article based on your suggestions to address errors and improve the expression. Corrections have been made regarding issues such as excessively long citations, resulting in the reduction of some citations that have less relevance to the content of the article. The model proposed in this paper now serves as a baseline algorithm in our team's latest work, and the code will be made publicly available in due course. The following corrections have been made to several expressions within the article: "where s_i represents the i-th element in the k-tuple S...", "Weisfeiler Leman Guided Directed GNNs…", "We present a permutation-equivariant directed GNN model by introducing the Weisfeiler-Leman test into directed GNN learning…", "In this paper, we extended the Weisfeiler-Leman test-based GNN model…", "Besides, the Weisfeiler-Leman test was introduced by Morris et al. (2019) to improve the capability of differentiating graph isomorphism in undirected GNN learning Huang et al. (2022)…". In terms of mathematical expression, this paper aims to establish a comprehensive mathematical framework for the CPRP problem. Simplifying the mathematical expression would compromise the rigor required for constructing the CPRP problem.

Reviewer 2#

- How does the proposed model demonstrate scalability and generalizability?
- What potential limitations should be considered in the context of applying this model to diverse educational datasets?

The author's answers: For the question 1, our proposed model aims to leverage the topological information of directed graphs to address the problem of directed graph link prediction. By replacing the initial BERT input designed for CPRP with the initial node features of the graph, this approach can also be applied to other graph link prediction tasks. For the question 2, when applying this model to diverse educational datasets, several factors should be considered. Firstly, there exist differences in dataset characteristics, particularly in terms of graph sparsity. Models may perform differently based on the sparsity level. Secondly, the limitations of model generalization should be acknowledged. Although the proposed model demonstrates good performance on public datasets, its generalization capability may be limited when applied to unknown or complex educational datasets. Third, on the same graph, different nodes also possess

varying "scale" information. The method proposed in this paper does not fully consider the information of different scales on the graph.

Yours sincerely,

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