# Message-Passing Depth and Accuracy Degradation in Graph Neural Networks on Cora and Citeseer

Assignee Research

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**Abstract**

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: How does the depth of message-passing layers in Graph Neural Networks correlate with accuracy degradation on semi-supervised node classification benchmarks for Cora and Citeseer. Graph Neural Networks (GNNs) have proven to be highly effective in various graph learning tasks. A key characteristic of GNNs is their use of a fixed number of message-passing steps for all nodes in the graph, regardless of each node's diverse computational needs and. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 6.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: ADMP-GNN: Adaptive Depth Message Passing GNN. Research question: How does the depth of message-passing layers in Graph Neural Networks correlate with accuracy degradation on semi-supervised node classification benchmarks for Cora and Citeseer?.

## 2 Methodology

Systematic literature search across multiple databases yielded 12 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 6.5/10.

## 3 Results

12 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 6.5/10.

## 4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

## References


- http://arxiv.org/abs/2404.12724v2
- http://arxiv.org/abs/2509.01170v1
- http://arxiv.org/abs/2102.09780v1