

# Language Model Backbone Size Effects on RxR Agent Path Efficiency and Communication Success

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## Abstract

This report synthesises findings from 13 peer-reviewed papers addressing the following research question: What is the impact of varying the size of the language model backbone on the path efficiency and communication success rate of RxR-trained agents in the R2R benchmark. Large language models (LLMs) have achieved success in acting as agents, which interact with environments through tools such as search engines. However, LLMs are optimized for language generation instead of tool use during training or alignment, limiting their effectiveness as agents. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Learning From Failure: Integrating Negative Examples when Fine-tuning Large Language Models as Agents. Research question: What is the impact of varying the size of the language model backbone on the path efficiency and communication success rate of RxR-trained agents in the R2R benchmark?.

## 2 Methodology

Systematic literature search across multiple databases yielded 13 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.7/10.

### **3 Results**

13 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 4.7/10.

### **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/2412.09082v3>
- <http://arxiv.org/abs/2402.11651v2>
- <http://arxiv.org/abs/2403.03788v1>