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Analyzing the Role of Play and Educational Toys in Cognitive and Emotional Growth: A Review and Network Analysis

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1. Round 1

1.1. Reviewer 1

Reviewer:

The opening paragraph effectively references Piaget and Vygotsky, yet it moves rapidly from classical developmental theory to digital learning contexts. The transition between developmental psychology foundations and digital play ecosystems requires an explicit bridging statement explaining why classical theories remain analytically adequate for AI-mediated play environments.

In the cognitive development subsection, numerical outcomes (e.g., "15% improvement", "d=0.65") are reported from prior studies without indicating whether these values were extracted systematically or selectively. Please clarify extraction criteria to prevent perceived cherry-picking.

The paragraph titled Research Gaps and Contribution states that previous studies overlooked emotional outcomes, yet earlier cited studies already examine empathy and anxiety. Please sharpen the novelty claim by specifying which dimension remains underexplored (integration, methodology, culture, or collaboration networks).

The explanation that ERIC was excluded due to "90% overlap with Scopus" requires supporting evidence or citation. Provide quantitative overlap methodology or include Appendix reference directly in the text for methodological defensibility.

You state heterogeneity prevented meta-analysis. Please quantify heterogeneity (design diversity, outcome variability, measurement differences) rather than presenting a general claim. Reviewers typically expect methodological reasoning here.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

In paragraph two, play is described as "self-directed, enjoyable activity." Later sections treat structured robotics tasks as play. Please clarify early whether the study adopts a continuum model of play (free → guided → structured) or a categorical definition, as conceptual inconsistency may affect inclusion criteria interpretation.

The three research questions are well stated; however, the paragraph does not explicitly demonstrate how the network analysis logically emerges from the theoretical problem. A brief justification linking collaboration mapping to knowledge production or paradigm evolution would strengthen coherence.

The paragraph beginning "The investigation is deliberately situated within the Iranian context" is valuable but remains descriptive. Consider expanding this section by explaining how cultural variables function analytically (moderator, contextual lens, or comparative case). Otherwise, Iran appears illustrative rather than theoretically necessary.

Within Theoretical Foundations, multiple theories are listed sequentially (Piaget, Vygotsky, Torrance, Gross). The section would benefit from a synthetic conceptual model showing relationships among cognition, creativity, and emotional regulation rather than presenting theories as parallel traditions.

The statement referencing "prefrontal cortex insights" linked to Diamond (2013) introduces neuroscience evidence but is not integrated elsewhere. Either develop neurocognitive implications consistently across the review or remove the isolated reference to avoid theoretical fragmentation.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor's decision: Accepted.
Editor in Chief's decision: Accepted.

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