

Augmented Reality for Learning Mathematics

A Systematic Literature Review

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Abstract—In the last decade, the usage of Augmented Reality (AR) has proliferated especially in the education sector. However, only limited articles have systematically reviewed the research trends in the implementation of AR for learning mathematics. Thus, this paper presents a systematic and comprehensive analysis of the research trend for the period between the year 2015–2019. From a leading indexing Scopus database, this review has identified only 19 journal articles based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. These works of literature were analyzed and grouped into eight themes to illustrate the trends of these research focus: AR apps types, AR apps development tools, research contribution categories, benefits of AR for math, learning problems, testing methods, and math subtopics. Moreover, this synthesized review on learning of mathematics through AR could benefit researchers and educators, thereby suggesting avenues for future research.

Keywords—Current trend, augmented reality, math education, systematic review.

1 Introduction

The objective of this paper is to review, analyze and classify the existing work of literature that is related to learning of mathematics through Augmented Reality (AR). This systematic review investigates research trends and identifies similar themes, frameworks and samples of research. More specifically, Table 1 shows the research questions (RQ) of this study.