

## An Analysis of Playful Mathematical Games in a Brazilian Conference Context

**Jose Vitor Ramos de Lima**

University Federal of Pernambuco (UFPE), Brazil

**Péricles de Lima Sobreira**

University Federal of Pernambuco (UFPE), Brazil

**Franck Gilbert René Bellemain**

University Federal of Pernambuco (UFPE), Brazil

**Airton Temistocles Gonçalves de Castro**

University Federal of Pernambuco (UFPE), Brazil

### **Abstract:**

This study presents a segment of an ongoing doctoral research project and aims to demonstrate how mathematical games are being used and developed for mathematics education through a systematic literature review conducted at a Brazilian educational event. To this end, a systematic literature review was carried out based on the proceedings of the latest edition of the Encontro de Ludicidade e Educação Matemática (ELEM - Playfulness and Mathematical Education Conference), held in 2023 in Brazil. This event, organized by the Laboratory of Studies and Research in Mathematics Education of the State University of Bahia in Brazil, plays the role of providing an environment for reflection and dissemination of studies focused on playfulness and the process of mathematization, as well as the training of mathematics teachers. The period was selected to understand how mathematical games are being developed and applied after the Covid-19 pandemic. Exclusion criteria were applied to filter out studies that did not address games or their relationship with mathematics education. Among the initial 40 studies, 8 were selected for detailed analysis, to answer the questions raised in the systematic literature review: RQ1: Are there Brazilian studies on the use and development of analog and digital games for teaching mathematics? RQ2: What contributions do mathematical games make to the teaching of mathematics? RQ3: Which games are being used and for teaching what? The results indicated that educational games, when well-structured, promote meaningful learning by integrating mathematical concepts into ludic contexts, in addition to showing the games used and developed in the articles analyzed.