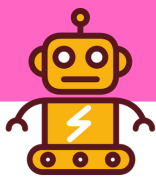# ROBOTICS TO DEVELOP COMPUTATIONAL THINKING IN EARLY CHILDHOOD EDUCATION

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INTRODUCTION

Robotics
as a highly valuable educational resource in the development of technical and social skills.

Computational thinking,
developed in math content with robotic devices adapted to early ages.

Pedagogical innovation
based on play that allows the development of active learning and creative thinking.

OBJECTIVE

To assess the impact of the development of educational robotics activities on the acquisition of computer thinking and programming skills in Early Childhood Education students.
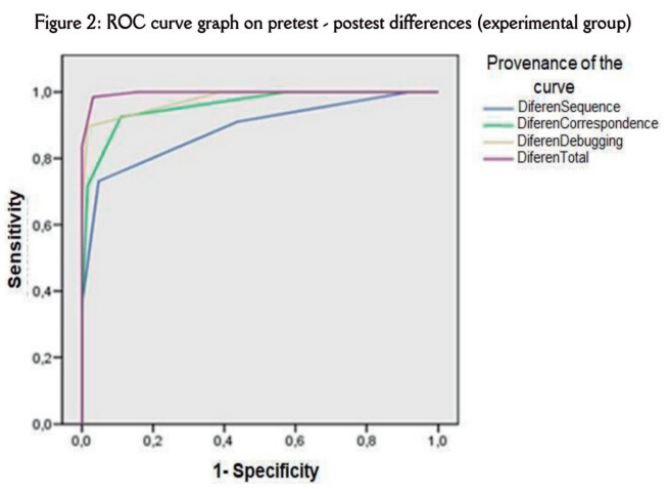
METHODOLOGY

131 Early Childhood Education students

Pilot group   Control group

1 Pretest
2 Intervention training
3 Post-test

RESULTS

Figure 2: ROC curve graph on pretest - postest differences (experimental group)

Provenance of the curve
- DiferenSequence
- DiferenCorrespondence
- DiferenDebugging
- DiferenTotal

The differences found between pre and post test in the experimental group are statistically significant and superior to those presented in the control group, so it is concluded that children who participate in the robotics program achieve greater progress in the three dimensions of computer literacy.

CONCLUSIONS

The training program has facilitated the formation of thinking skills related to the dimensions: sequences, instruction-action correspondences and healing.

Development of active methodologies of constructionist learning that is achieved through the interaction of the subject with the object of study.

This study lays the foundation for the implementation of more complex technological learning scenarios at future school levels.

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