

Study about the teaching of computer programming at schools

Master in Computer Engineering

Sandra Lima da Cruz Dias, Manuela Cunha

Instituto Politécnico do Cávado e do Ave



2nd SYMPOSIUM
OF APPLIED
RESEARCH

Introduction

The TIC are becoming more and more necessary in the process of teaching and learning; through its use one can get into the learning of computer programming language.

It becomes possible to program in a simpler and intuitive way. It gave birth to the project called "Initiating programming methods" which concerns the secondary grades from the beginning and which improved software and robots up to the above levels.

OBJECTIVES

The aim of this project is to study the impact of teaching computer programming to different level students attending different schools.

Analysing the following aspects:

Why is it important to learn how to programme?

- Will it be viable to teach programming to younger students?
- Will students that acquire programming skills at a younger age become more successful?
- Will those students that learn to computer programme at an early age become computer programmers?
- Teaching programming through robots leads to more programmers?

METHODOLOGY

In this study the following items will be used:

- Participant observation and registration: analyzing the lower level students through robots;
- Quizzes and interviews: evaluate the learning status that students acquired through robotics, interactive software or traditional methods;
- Observation data on quizzes and interviews: evolution on the students motivation towards the programming and the knowledge they achieved to programme in the future if they've started programming at an early stage.



RESULTS AND CONCLUSIONS

The computer programming teaching, at present times, is important to create future programmers, as well as develop studies about the making of materials or methods which could contribute to its teaching at schools.

This survey will focus on the impact of interactive programming conserving lower level students; it will be based in students of different levels and diverse schools.

The choice of the subject is relevant to my professional activity, as I am a teacher in the area of technology and it would be interesting to report on the item at a professional level.

BIBLIOGRAPHY

- Coutinho, C., & Costa, M. F. (2006). Um Estudo Sobre Robótica Educativa No Ensino Básico.
- Fernandes, S. (2014). Aprendizagem baseada em projetos na consolidação de conceitos de programação de linguagens SCRIPT.
- Ferreira, H. (2013). OS ROBÔS NO ENSINO DA PROGRAMAÇÃO.
- Gomes, G. (2011). A ROBÓTICA EDUCATIVA NO ENSINO DA PROGRAMAÇÃO.
- Meirinhos, M., & Gonçalves, V. (2016). Inovação na Educação com TIC.