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Developing technological knowledge and programming skills of secondary schools students through the educational robotics projects

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Introduction

At most schools participated at study, the traditional concept of the educational process has been based on passing more or less ready-made know-how to students by their teacher - most probably, this concept still prevails over other arrangements (Rambousek, Štipek, Procházka & Wildová, 2014). Certainly, many series of examples exist, where such a principle is well-founded and there is no need to look for another alternative. Nonetheless, there also subsist situations where it is suitable to carry out a modification of the relation between the educator and his students.

Methods

Focus of the work in research is based on the empirical qualitative methods.

It is primarily action-oriented research, verifying the examined strategies, based on the analysis of the experimental learning model, associated with the observations and interviews with the research participants.

These methods are supplemented by proper quantitative approaches – by exploratory investigations and by an analysis of the recorded resources.

The empirical part of the research consists of the analysis of experimental educational robotics projects.

Results

The outcomes of the research indicates that the use of educational robotics projects in secondary school education leads to increase the quality of educational process especially in the field of development of the technological knowledge and programming skills of students.

References


