ABSTRACT

This bachelor thesis is about robotic programmable devices (toys) and their possibilities of use in school practice. Its aim is to analyze the available robotic programmable toys suitable for teaching in primary schools and to describe the possibilities and ways of using these devices in teaching. The third goal is to verify the awareness of teachers at primary schools in the Central Bohemian Region about the possibilities of using robotic programmable toys and to propose recommendations based on the results. The thesis is divided into two parts, practical and theoretical. The first part describes the basic concepts used in the thesis, the analysis performed on selected robotic programmable toys, which aims to determine the most suitable robotic toys for use in teaching at first and second grade of primary school, and finally this part presents the possibilities and ways of using these devices in teaching focused on primary schools. The practical part includes the characteristics of quantitative research, research results and their evaluation with respect to the stated expectations and goals. Based on the research conclusions, recommendations for primary school teachers are proposed. This research was carried out using a questionnaire survey. This survey was conducted at selected primary schools in the Central Bohemian Region and among users of the social network Facebook, who are members of the group "*Učíme informatiku*" and who are teachers at primary schools in the Central Bohemian Region. In the end, the evaluation of the fulfillment of goals is described and the whole work is summarized here. The results of the questionnaire survey show low awareness of teachers about these devices and the resulting non-use of robotic toys in teaching. At the same time, computer science teachers showed a higher knowledge of these toys and a higher rate of their use than teachers of other subjects. The connection between the shorter pedagogical practice of a teacher with a higher level of knowledge and the use of robotic programmable toys in teaching has not been confirmed.

KEYWORDS

Robotic programmable devices (toys), Informatics at primary school, computational thinking, algorithmic thinking