

Abstract

This thesis explores algorithmic thinking development on a high school student level. In the introduction algorithmic thinking as well as current practices of teaching algorithmic thinking are examined. A closer look on programming languages, programming methods and tools which can be utilised to develop algorithmic thinking (such as robotic kits, personal computers and mobile devices with touch screens) follows. After analyzing general properties of these tools one mobile device is selected and its programming possibilities are then explored in the empirical part of this paper. As part of the selected proactive action research a number of activities as well as overall process approach is first designed following by their practical verification in a high school. Final results are summarised as suggestions for improvements for further teaching.