

Understanding of the Impact of Technology in Collaborative Programming for Children

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Abstract : Visual Programming Tools available are a great tool for introducing children to programming and to develop a skill set for algorithmic thinking. On the other hand, collaborative learning and pair programming within the context of programming activities, has demonstrated to have social and learning benefits. However, some of the online tools available for programming for children are not designed to allow simultaneous and equitable participation of the team members since they allow only for a single control point. In this paper, a report the work conducted with children playing a user role is presented. A preliminary study to cull ideas, insights, and design considerations for a formal programming course for children aged 8-10 using collaborative learning as a pedagogical approach was conducted. Three setups were provided: 1) lo-fi prototype, 2) PC, 3) a 46" multi-touch single display groupware limited by the application to a single touch entry. Children were interviewed at the end of the sessions in order to know their opinions about teamwork and the different setups defined. Results are mixed regarding the setup, but they agree to like teamwork.

Keywords : children, collaborative programming, visual programming, multi-touch tabletop, lo-fi prototype

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