תכנות אקספרסיבי: גישה מבוססת שלומות להוראת תכנות לילדים (פוסטר)

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Expressive Coding: A Wellbeing-based Approach for Coding Teaching to Children (poster)

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Abstract

The predominant focus on technical skills in coding education may be overlooking the potential of coding as a tool for self-expression, potentially enabling emotional relief and thus improving well-being. We introduce *Expressive Coding* (*EC*) as the process in which novice coders code for the sake of creating a concrete presentation of their thoughts and sensations, positioning self-expression as the primary reason for programming engagement in the first place. Coding has been claimed to be a language like any other, and as such, to enable creativity that is beyond mere technical coding. Nevertheless, the idea of coding as a language used for emotional relief has not been yet sought after. As natural writing-based self-expression has proven to benefit well-being among various populations across the lifespan, we seek to investigate the analogy claiming that if coding is a language like any other, then it may be utilized for self-expression, accordingly, contributing to well-being improvement. We are conducting a proof-of-concept, iterative design study evaluating the contribution of a designated well-being-based *EC Curriculum* to the potential improvement of well-being and coding abilities in 25 children aged 9-10 with no prior coding knowledge. The *EC Curriculum* integrates basic coding instruction with the traditional self-expressive exercise, the *Six Part Story Method* (*6PSM*), which comprises the creation of a personal story in six consecutive phases that project the creator's inner experience. Utilizing a task-centered instructional design, the story creation is executed on the children's programming platform *ScratchJr*, allowing for the integration of self-expression within basic programming skills learning. In the poster we will present the preliminary results of our pilot study aiming to both refine the EC curriculum and account for the potential affordances of a well-being-based coding instruction in young learners. We believe that *EC* may contribute to coding education by not only enhancing necessary technical skills but also by contributing to novice coders' emotional well-being.

Keywords: Expressive Coding, Coding Instruction, Self-Expression.