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Exploring the first experiences of computer programming of older people with low levels of formal education: a participant observational case study

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Abstract: Computer programming is widely regarded as a key skill in the 21st century. Yet, and despite a growing ageing population and interest in promoting computer programming for all, research on this topic with older people (60+) is scant in the Human-Computer Interaction literature. This paper presents a qualitative case study aimed to explore the first experiences of computer programming of a group of older active computer users with low levels of educational attainment (i.e., primary school / K-12). Over a 6-month period, we provided a hands-on introduction to several textual and visual programming languages and environments to (N=29) older and adult people in three courses in an adult educational center. We reveal and explain relevant factors that shape, and help us understand, the participants' computer programming learning experiences, including their motivations, difficulties, and identity, along with strategies that hindered and fostered empowerment. Implications for research and design are discussed.

Highlights:

Non-English speaking older adults with basic education learning computer programming

Older people in HCI: from consumers of digital content to programmers

Learning to read and write programs but not to think in abstract terms

Empowered by programming when connecting coding with their lives and their identity

Further information / Access to the paper:

<https://www.sciencedirect.com/science/article/abs/pii/S1071581920301798>