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What is the Internet in the eyes of computer science teachers?

The new Framework Education Programme (FEP) for Elementary Education [1], which puts a strong emphasis on computer science, will start to apply to all primary schools (PS) in September 2023 (lower secondary school (LSS) a year later). The reform will mostly affect those teachers who will have to teach according to the new FEP (primary school teachers and computer science teachers). The new FEP increases the requirements mostly for not-certified teachers' computer science skills. It is unclear whether they are ready for such a change. One of the topics they will have to teach is the principles of how the Internet works. We started study with in-service and pre-service teachers ($N = 39, n_{PS} = 18, n_{LSS} = 12, n_{students} = 9$) who were not trained in computer science to examine their mental models [2] of the Internet using a semi-structured interview method [3]. This research is in progress. The interviews are now being analysed using frequency and thematic analysis [4]. One of the steps includes examining scientific validity of these mental models. Preliminary analysis show that some teachers have mental models comparable to those possessed by children [5] but other are a way more knowledgeable. The results also indicate that primary teachers generally have less knowledge than secondary teachers.

References

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