Evaluation of the Program Recommendation on Information Technologies and Software Course in the Context of Computational Thinking

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Abstract:
Effective use of current technology opportunities is important in terms of enabling the curricula to reach the desired outcomes. Thus, curricula should be open to the requirements and emerging opportunities of contemporary technologies. Curricula are open for updates and recommendations in Turkey. In this regard, it is maintained that the draft program has been adopted and has flexibility in the application dimension. In 2017, the decision to update curricula has been taken. In this context, the Ministry of National Education Monitoring and Evaluation System of Instructional Programs has introduced a proposal to change course and class levels. This change affects Information Technology and Software course as well. The purpose of the current study is to evaluate the implemented changes in terms of computational thinking. Besides, similarities and differences of current program and draft program are discussed with regard to the thinking skills. It is observed that there are no major changes between current program and draft program in terms of content and achievement lists. It is noteworthy that a concept based on class differences is preferred by abandoning the standard program. “Digital Product Creation” and “Computational Thinking” units are presented as separate titles. “Problem Solving, Programming and Original Product Creation” titles in the current program and “Computational Thinking” units in the draft curriculum are similar in terms of achievements. On the other hand, it is considered worthwhile to take the concept of computational thinking, which is the subject of synthesizing with the ability of thinking and intuitive talents, as a separate unit. In addition to this, it is determined that there is need to organize higher education curriculum for teachers to have Computational Thinking skills.

Keywords: computational thinking; information technologies and software course; curriculum