The Role of Talent and Working Memory Capacity on Multitasking

Barış MERCİMEK
Anadolu University, Faculty of Education, Department of Computer Education and Instructional Technology, Eskişehir / TURKEY, e-mail: barismercimek@anadolu.edu.tr

Yavuz AKBULUT
Anadolu University, Faculty of Education, Department of Computer Education and Instructional Technology, Eskişehir / TURKEY, e-mail: yavuzakbulut@anadolu.edu.tr

Most of daily life activities are being realized through digital technologies. Digital tools, which are easily accessible and portable in teaching environments, reduce the need for printed materials. It is observed that individuals who meet technology at an early age use these technologies easier than adults. This new generation use digital technologies not only to make life easier, but also to meet other entertainment and social life needs. Thus, it is maintained that the nature of their learning is entirely different. For instance, it is argued that their ability to perform multiple tasks simultaneously are better than that of their parents and teachers. On the other hand, there are few experimental studies, which can explain to what extent human cognitive architecture allows for multitasking. The limited number of studies in the literature suggest that concurrent multitasking performance is more difficult and less effective than sequential multitasking.

It is a common approach to resort to the digital nativity claims to explain the multitasking skills. On the other hand, robust experiments have recently been conducted, which suggested that consistent features of human cognitive architecture can be more influential than habitual digital experiences. The current study, which has been derived from the first author’s PhD dissertation proposal, aims to examine the variables affecting the multitasking performance of middle school students. Along with the variables related to technology experience which are frequently used in the digital nativity discussions, the ability levels and working memory capacities are also considered. Through controlling these variables, it is aimed to examine the effect of sequential and simultaneous multitasking on recall performance. In this regard, permissions of data collection tools were obtained, adaptation studies were carried out, achievement tests and computer-based multitasking environment were developed and prepared for the pilot implementation. The findings are expected to contribute to the literature through questioning the advantages attributed to the new generation.

Keywords: Multitasking; talent; working memory capacity