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Computer-Aided Assessment for Computer Science Students

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Computer-Aided Assessment for Computer Science Students

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Abstract

This poster investigates if and how students of a degree in computer science would be able to benefit from computer-aided assessment (CAA) [1]. A preliminary investigation was performed by executing two continuous assessments with one cohort of four students in an advanced databases class. One assessment was pure paper-based assessment (PBA), the other assessment was fully computer-aided. Both assessments were conducted in an open-book manner. Additionally, both contained an element of replication tasks and applied knowledge tasks [2]. It was anticipated that computing students would excel in computer-aided assessment and improve both satisfaction and task performance. However, detailed analysis revealed that there was no statistically significant increase using CAA versus the PBA. Furthermore, contrary to initial hopes, students did not appear to have gained a higher level of satisfaction conducting tasks on a computer. One of the reasons given was that most exams are PBA; consequently, the assessments should prepare for the exams and should also be paper-based. This research is to be followed by another run using qualitative methods, such as informal guided discussions that are complimented by a structured questionnaire.

References

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- [2] G. Brown, J. Bull, and M. Pendlebury, *Assessing student learning in higher education*. 2013.