Abstract

This paper reports on an ongoing study, which intends to propose a principle of interactive algorithm visualization on hybrid mobile application (INAVOHMA) that is created in order to help IT students learn data structure and algorithm (DSA) subject. Totally, 8 existing AV guidelines and models were reviewed comprehensively with the main purposes (1) to determine the research gaps in proposing principles of INAVOHMA and (ii) to identify their common components. Through a systematic and critical analysis, this study discovers there is still lack of inclusive principles or guidelines of AV that focused on mobile platform, mostly for desktop or website platform. Only, two guidelines draw attention to mobile platform, yet the focus of them just for sorting algorithm only. It is noted that this is the research gap that should be the focal point for further study.


3. Sadikan, Siti Fairuz Nurr, & Yassin, Siti Fatimah Md. (2012). Role of Interactive Computer Programming Courseware in Facilitating Teaching and Learning Process Based on Perception of Students in Bangi, Selangor, Malaysia. Learning, 3, 0.51.


5. del Vado Vírseda, Rafael. (2010). A visualization tool for tutoring the interactive learning of data structures and algorithmic schemes. NOTE FROM ACM: It has been determined that the author of this article plagiarized the contents from a previously published paper. Therefore ACM has shut off access to this paper. Paper presented at the Proceedings of the 41st ACM technical symposium on Computer science education.


visualization library. Paper presented at the Proceedings of the 18th ACM conference on
Innovation and technology in computer science education.

(2012). Integrating Algorithm Visualization Video into a First-Year Algorithm and Data Structure


Cognition in education, 55, 37-76.

Electrotechnica et Informatica, 13(2), 54.

on factors influencing the effectiveness of algorithm visualization. Computer Applications in
Engineering Education, 21(3), 410-420.

presented at the CSEDU.

24. Boticki, Ivica, Barisic, Ante, Martin, Sergio, & Drljevic, Neven. (2013). Teaching and
learning computer science sorting algorithms with mobile devices: A case study. Computer
Applications in Engineering Education, 21(S1), E41-E50.

constructing and presenting low fidelity algorithm visualizations Software Visualization (pp.

International Conference on Advanced Learning Technologies.

**Index Terms**

Computer Science

Algorithms

**Keywords**

Algorithm Visualization, Critical Analysis, Finding Gaps, Paper Submission.