MULTIMEDIA-BASED LINK MAPS – A PRELIMINARY REPORT

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ABSTRACT

Past research has shown that students with lower prior experience in a subject area benefit greatly from the use of scaffolds in their learning. Part of this arises from the view that novices often have of subjects such as physics - a vast expanse of complicated and disconnected concepts and theorems. To address this, in teaching first year physics students with little or no prior knowledge, a particular approach using 'link maps' has been implemented at the University of Sydney. Separately, the steady proliferation of multimedia into teaching practice has also seen research emerge on the effective use of technologies such as video presentations and computer programs in teaching physics at tertiary and upper-secondary level.

With a solid research foundation for these fields, we are interested in the synthesis of these ideas into a unique teaching and learning tool. Our research aim is to develop the fundamental ideas and research basis of link maps into video and computer-based multimedia, and investigate the effects of these tools on students. We put forth the developed multimedia tools, and preliminary findings of how they influence students' understandings of physics.

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