THE EVOLUTION OF A MULTIMEDIA PLATFORM: THE PHYSCLIPS PROJECT

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ABSTRACT

The Physclips project has taught countless students worldwide aspects of introductory physics. It has also taught its producers (the present authors) much regarding educational multimedia. This presentation traces its history, the evolution of the interface used in Physclips and the development and philosophy of the different components of the project. The first stage used combinations of animations, film clips and a voiceover to produce rich multimedia whose user navigation consisted only of buttons, menus and hyperlinks. In later stages, we added an enhanced scroll bar that is indexed through the use visual cues and researched its efficiency as a form of learner-control. Contextually-embedded links appearing within the multimedia screen allow for necessary revision of background material or a more detailed coverage of new material. The use of Physclips by teachers prompted the inclusion of the animations/film clips as downloadable re-usable learning objects. We also added laboratory exercises that require only simple, inexpensive components (plus a computer). An ancillary resource uses animations from Physclips to exemplify the incorporation of evidence-based guidelines into the design of dynamic visualisations. Currently, we are constructing teacher-training resources to demonstrate the adaptation of animations to learner expertise, cognitive processing ability and specific learning objectives.

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