

Universiti Teknologi MARA

**Development of a Multimedia Courseware for
Teaching Secondary School Fractions using
Constructivism Approach**

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DECLARATION

I certify that this thesis and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline

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ABSTRACT

One of the most rapidly changing and exciting areas of education in the world today is the development of computer-based teaching materials, especially interactive multimedia programs that run on personal computers. These new technologies offered students and teachers access to materials as never before. Through the condensed storage capabilities of computers, multimedia can deliver large amounts of information in ways that make it manageable, approachable, and useful. The given title for this research paper is the development of a multimedia courseware for teaching secondary school fractions using constructivism approach. This research was carried out to replace the existing dull and uninteresting method of teaching and learning in the classroom to a more interesting and effective one by applying constructivism approach in developing the prototype. The courseware was developed for Form 1 students. The courseware covered the basic sub topics in fractions including addition, subtraction, multiplication, and division. For each sub topic, students had to go through five modules which are orientation module, idea blazing module, idea restructuring module, application module and reflection module during the process of learning fractions. The research was conducted according to the ADDIE Model which includes the analysis, design, development and implementation phase. For information gathering purposes, an interview was conducted, and secondary sources were obtained.

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