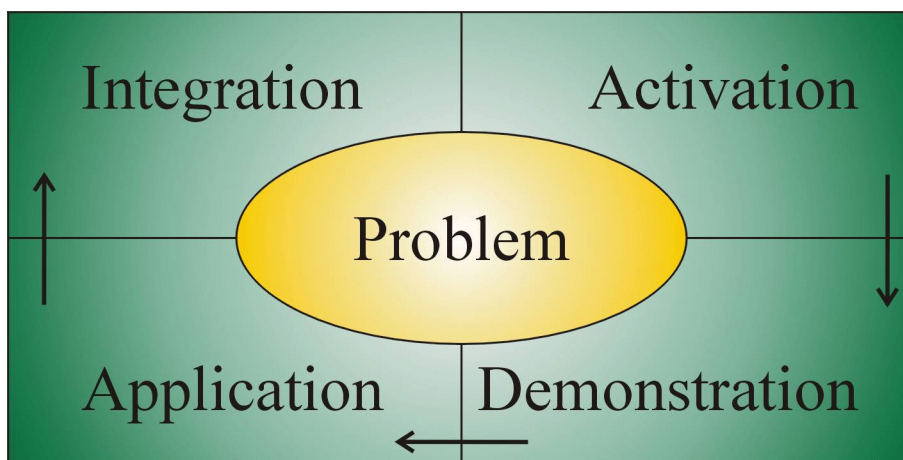


The design and implementation of a computer-based course using Merrill's model of instructional design



by

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Abstract

This dissertation is the developmental research report on the design and development of a multimedia tutorial on Anthropometry for university-level health science students. The practical implication of using Merrill's Model of Instructional Design for developing course work for senior students in the health sciences was investigated.

The multimedia tutorial was designed and developed, and the prototype evaluated by a team consisting of subject and education experts. The prototype was tested by third-year dietetic students who had completed the lecture-based and paper-based course. The students were observed while using the program, then completed a structured questionnaire and finally were given the opportunity to express their views in an informal group discussion.

It was found that if the activation of relevant existing knowledge does not take place, Merrill's Model will be turned inside-out: the student's own problem replaces the instructional problem.

Keywords

- adult learning
- authoring tools and methods
- computer-assisted tutorial
- evaluation of CAI systems
- formative evaluation
- instructional design model
- media in education
- simulations

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- Appendix C Consent Form to Participate in the Evaluation of a Multimedia Program for Anthropometry
- Appendix D Questionnaire for the Evaluation of a Multimedia Program for Anthropometry

List of Acronyms

ADDIE	Analysis, Design, Development, Implementation and Evaluation
CAE	Computer Assisted Education
CAL	Computer Assisted Learning
CAI	Computer Assisted Instruction
CBI	Computer-based Instruction
CIE	Computer Integrated Education
DADI	Definition, Architecture, Design and Implementation
ICT	Information and Communication Technologies
NRF	National Research Foundation
NTA	Nutritional Assessment
NTB	National Training Board
OBE	Outcomes-based Education
PBL	Problem-based Learning
SAQA	South South African Qualifications Authority
SETA	Sector Education and Training Authorities
SME	Subject Matter Expert
TLEI	Telematic Learning and Education Innovation
UP	University of Pretoria
WHO	World Health Organisation

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