

Bridging the Gap between Educational Psychology and Information Sciences – Topic Maps in ELearning

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Overview

- Graduate Writing Instruction
- Course Management Systems
- Falling short with Educational Theories
- Cognitive Information Retrieval
- Topic Map Solution
- Results
- Future Instantiations

Graduate Writing Instruction

- ELearning Course
 - Essay Writing Tasks
 - Extension of theories
 - Real-life applications
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- 33 learners – 132 essays

Course Management Systems

- Indexing of course-related material
 - Articles
 - Student Artifacts
 - Grading Scheme
- CANARIE project

Falling Short

- Theories of Learning
- Self-Regulation

- Task Understanding
- Assessment Criteria
- Meeting Instructor's Standards

Cognitive Information Retrieval

- Library and Information Sciences
- Ingwersen (2000)
- Cognitive Space
- Socio-Contextual Environment

- Work Task as Unit of Analysis
- Problem Representation Research

Topic Maps in Education

- Ontopia's OKS
- Academic License

- Funding
 - Government of Québec
 - Concordia University

Development

- Subject Matter Experts
- Stakeholders – Students, Professor

- Categories distilled to indexes
- Author, Subject, Grade

Research Study

- Three instantiations of ELearning Class
- Total of 28 students
- Essays, Performance and Confidence Predictions
- Tracking Data
 - UserID, Date, Time, Site Visited
- Time Line Interviewing

Preliminary Results

- Trend Analysis
 - Performance Improvement
 - Prediction Discrimination Bias
 - Confidence in Predictions
- Individual Motivating Factors
- Perceived Learner-Learner Interactions
- Instructor – Learner Interactions

Implications

- Enriching views of content
- Flexibility and Scalability
- Topic Maps as Learning Resources
- Discovery Learning
- Scoped Vocabulary
- Merging – A Double-Edged Sword
- Expert Validation – Theory Driven

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