



Dr. William Winn

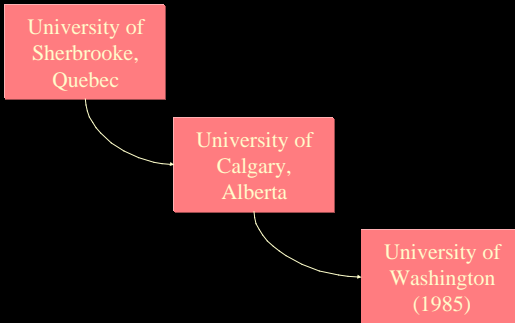
EDIT 6100
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Educational Background

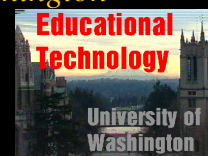


- ▶ Bachelor's
 - Modern Languages
 - Oxford University
- ▶ Master's
 - Comparative Literature
 - Indiana University
- ▶ Ph.D.
 - Instructional Technology
 - Indiana University

Faculty Positions



University of Washington



Dr. Winn has served as:

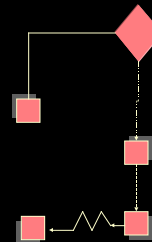
- Director, Learning Center (HIT Lab)
- Editor - Educational Communication and Technology

Research Areas

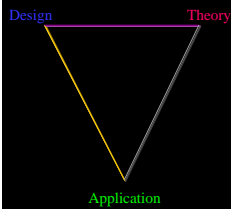
- Processing and learning from maps, charts and diagrams
- Utilization of cognitive and constructivist theories
- Use of virtual reality in education

Processing and learning from maps, charts and diagrams

- ▶ Studies found, for example
 - When processing diagrams
 - More detail improved analytic processing
 - less detail improved holistic processing
 - Suggested designers could exert some control over type of processing desired for a task by varying this type of information
- ▶ Also explored use of graphics in distance learning



Utilization of cognitive and constructivist theories



- ▶ Relationship between theory and application in IT
 - Use of cognitive theory to guide design
 - Early proponent of constructivism
 - pedagogy in distance learning
 - pedagogy in web based learning
- ▶ IT defining its self as a field
 - Should not merle emulate good teaching

Virtual Reality in Education



- ▶ Writings exploring pedagogy underlying use of VR to
 - train
 - Simulations
 - teach
 - Atom Building
- ▶ Research
 - Constructivist use of VR
 - "shell" building

Human Interface Technology Lab



- ▶ "mission is to empower people by building better interfaces with advanced machines that will link minds globally and unlock the power of human intelligence into the 21st century."

Virtual Reality Roving Vehicles



- ▶ Children (grades 4 - 12) build virtual worlds to represent knowledge areas
- ▶ Wetlands ecology

Propositions about educational uses of Virtual Environments

- ▶ Less expensive than physical simulators
- ▶ Safer than real-world training
- ▶ Most useful when addressing concepts and principles not normally accessible
- ▶ Allow direct construction of knowledge
- ▶ Engender presence
- ▶ Situate learning in meaningful context
- ▶ Can foster collaboration

Results of Virtual Reality Studies

- ▶ Low ability students demonstrated more improvement than high ability students
- ▶ The majority of students found building virtual reality projects very motivating
- ▶ Help students understand scientific theory and to build their own theories
- ▶ Use of VR continues to be largely exploratory

Contributions to the field of IT



- ▶ Writing and editing articles relating to anchoring IT in cognitive and constructivist principles
- ▶ Exploring use of new technologies for learning