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i-Conference 2005 submission - all themes

English 101 / Information 101 Communication and Critical Thinking

Information concepts, tools, and skills are as important for further learning, thinking, research, and expression of ideas as are English and Mathematics. Furthermore, students need to learn not only how to write essays and papers but also how to design Web sites and prepare slide presentations. Therefore i-schools must be in the center of undergraduate education (and thus be recognized as being central to the university). An intellectually appealing (if perhaps politically difficult) approach is to team up with the English Department to offer a six-hour freshmen course *Communication and Critical Thinking*.

Engaging in such a course contributes to the definition of our identity; forces us to identify unifying principles across thinking, language, and the structure of information; and presents a grand challenge of translating these principles into terms undergraduates can integrate into their thinking, producing true information literacy.

Course description.

This course will give students tools to think, to organize their thoughts, and to express them in papers, presentations, and Web sites. Students will learn about the structure of knowledge in language, memory, and databases and how to apply this knowledge to find information, assess it, organize it, and present it.

Concepts covered. (These must be translated into easier language.)

Structure of knowledge

- Expressing meaning through entities joined through relationships

- Facets and frames: Aspects of meaning

- Hierarchy frames, and semantic networks: Packaging & interlinking of meaning

- Nature of concepts. Definitions: Clarification of meaning

Thinking and problem solving

Document design

- Document functions, document types

- Match document type with user needs

- Discern the internal structure of the subject and express through the external structure

- Use proper combination of graphic and text. Use font and color

- Use hyperlinks

(Re)Presentation of knowledge

Concept maps, graphic organizers
The structure of language
Organization of papers, presentations, Web sites
Composing paragraphs, slides, Web pages. Writing for different formats
Coherence and cohesion of documents (a combination of text and graphics)

Techniques for finding and analyzing information. Expressing the search topic in a form appropriate to the system being searched.

The course would draw on ideas from many fields, including

- Linguistics
- Information architecture
- Document design
- Rhetoric, composition
- User interface design
- Instructional design
- Advertising design
- Graphics design

The key to making such a course successful is in making connections:

- Language uses grammar to express relationships.
- Use facet analysis to discern the different aspects of a problem; do not force a one-dimensional outline on a problem that has multiple dimensions.
- Use concept maps to generate ideas for a paper.
- Frames as document outlines.
- A frame as the model of a paragraph where each sentence has the same subject, allowing the reader to fill frame slots in her mind.
- A semantic network as the model of a paragraph where each sentence takes up the idea from the end of the previous sentence.
- Vocabulary is needed for reading, writing, and formulating a query.
- Facet analysis of a search topic