INFO 610 Analysis of Interactive Systems, Winter 2004

Assignments

Week 1 1. Complete the **HCI Questionnaire**. This should be the first thing you do for the class. Please do it as soon as possible.

2. Purchase the textbook and browse through it. Read **Chapters One, Two and Three** of the textbook. Take notes.

3. Read: Scardamalia & Bereiter, "**Computer support for knowledge-building communities**".

4. Discuss these readings in Blackboard. Press the button "Discussion Board" and click on the discussion forum defined for "**Discussion - Week 1**".

5. **Write a brief autobiographic description**, including your interests and background related to this course. Also create a **digital picture** of yourself. Post these to your **personal Web Space** (see Course Overview for instructions).

6. Participate in a collaborative math problem in class.

7. Complete this week's assignments by midnight of the due date (stated in the Course Overview).

Week 2 1. Read **Chapter Four** and **Chapter Five** of the textbook.

2. Study the readings on **ethnographic approaches** to analysis and on the role of psychological theory in analysis.

3. Discuss the readings in Blackboard. Press the button "Discussion Board" and click on the discussion forum defined for "**Discussion - Week 2**".

4. Participate with your group in a **face-to-face collaborative math problem**, scheduled with your instructor.

5. Work with your group to create a **group web space**. Include an introduction to your group, its name and logo, its members and mission. Include the logs from online problem solving sessions.

Week 3 1. Read **Chapter Six** and **Chapter Seven** of the textbook.

2. Study the readings on **surveys, focus groups and usability roundtables**.

3. Discuss the readings in Blackboard.

4. Work with your group to conduct a **survey** of students in ISYS 310 doing collaborative problem solving of math. Post the description, analysis and findings of your survey to your group Web Space in a presentation format.

5. Participate with your group in **observing and videotaping** a face-to-face collaborative math problem session done by a group in ISYS 310, scheduled with your instructor.

6. Work with your group on an **online collaborative math problem**. Do this exclusively in your group's "virtual classroom" in Blackboard. Be sure that you archive the session's chat log and snapshots of whiteboard drawings -- you will need to use these archives in future group projects. Be sure to follow the procedures and do all work online – any bending of the

rules could spoil your future work in the course.

Week 4 1. Read **Chapter Eight** and **Chapter Nine** of the textbook.

2. Study the readings on **field study methods** such as contextual inquiry, diary studies, participatory design and data logging.

3. Discuss the readings in Blackboard.

4. Work with your group to conduct a **focus group** with ISYS 310 students on support of collaborative math problem solving. Post the description, analysis and findings of your focus group to your group Web Space in a presentation format.

Week 5 1. Read **Chapter Ten** and **Chapter Eleven** of the textbook.

2. Study the readings on **scenarios, task analysis and conversation analysis**.

3. Discuss the readings in Blackboard.

4. As an *individual*, conduct **interviews** of several students from ISYS 310 about collaborative problem solving of math. Post the description, analysis and findings of your interviews to your *group* Web Space in a presentation format.

5. The quarter is half over, start to work on your **final assignments** for week 10.

Week 6 1. Read **Chapter Twelve** and **Chapter Thirteen** of the textbook.

2. Study the readings on **usability testing and think-aloud verbal protocols**.

3. Discuss the readings in Blackboard.

4. Work with your group to **understand collaborative math problem solving**. Analyze the process that your group and other groups went through in working on the math problems by finding illustrations of key interactions in chat logs, video, transcripts and ethnographic notes. In particular, document how decisions were made, such as task clarification, organization of the work, roles of members, selection of ideas and negotiation of group products. Cite and analyze detailed log excerpts. Post the description, analysis and findings of your analysis to your group Web Space in a presentation format.

5. Work with your group on an **online collaborative math problem**. Do this exclusively in your group's "virtual classroom" in Blackboard. Be sure that you archive the session's chat log and snapshots of whiteboard drawings. Be sure to follow the procedures and do all work online.

Week 7 1. Read the supplementary readings on heuristic design.

2. Study the readings on **inspection methods, heuristic evaluation and participatory h.e**.

3. Discuss the readings in Blackboard.

4. Work with your group to conduct **a task analysis** of groups doing collaborative problem solving of math. Post the description, analysis and findings of your analysis to your group Web Space in a presentation format.

Week 8 1. Read the supplementary readings on cognitive walkthrough.

2. Study the readings on **cognitive walkthrough and pluralistic usability walkthrough**.

3. Discuss the readings in Blackboard.

4. As an *individual*, conduct a **heuristic evaluation** of an interaction system assigned to you by the instructor. Post the description, analysis and findings of your evaluation to your *group* Web Space in a presentation format.

Week 9 1. Read **Chapter Fourteen** and **Chapter Fifteen** of the textbook.

2. Study the readings on **comparison of evaluation techniques, cost-benefit analysis, ethics in analysis and usability problem reports**.

3. Discuss the readings in Blackboard.

4. Work with your group to conduct a **cognitive walkthrough** of an interaction system assigned to you by the instructor. Post the description, analysis and findings of your walkthrough to your group Web Space in a presentation format.

Week 10 1. As a group, organize your **group Web Space** to be a portfolio showing the findings of your group work this quarter.

2. As an individual, organize your **personal Web Space** to be a portfolio showing your work this quarter.

3. As an individual, write a ten-page (single spaced) **reflection paper** proposing what you think should be done if your group had another 10 weeks to continue this quarter's work. This paper should be your personal reflection on what you learned in the course. This paper should be presented either as a Word document stored in your personal web space or as a hypertext document in your *personal* web space, referencing items in various web spaces, in the course readings and in related literature.

4. If you are a PhD student, also write a conference research paper meeting the submission requirements of the CSCL conference in terms of content, style, format and length. This paper should be based on research done in this course on the problem of supporting online collaborative math problem solving. Post this paper to your *personal* Web Space.

5. All course work must be completed by midnight of the due date (stated in the Course Overview).

Readings

Week 1 Review	Preece, Rogers & Sharp (2002) "*Interaction Design: Beyond Human-Computer Interaction*." Wiley. Scardamalia, M. & Bereiter, C. Computer support for knowledge-building communities
Week 2 Ethnography	Bloomberg, J. et al. An ethnographic approach to design Tolmie, P. et al. Unremarkable computing (ACM) Nardi, B.A., Whittaker, S., and Bradner, E. Interaction and outeraction: Instant Messaging in action (ACM) Ging, M. Sun City couple secretly tested Windows XP for Microsoft

	Nielsen, J. Field studies done right: fast and observational
Week 3 Survey	Butler, M.B. Getting to know your users: usability roundtables at Lotus Development (ACM) Kirakowski, J. Questionnaires in usability engineering McNamara, C. Basics of conducting focus groups Nielsen, J. The use and misuse of focus groups
Week 4 Interview	Redish, J. & Wixon, D. Task analysis Palen, L. & Salzman, M. Voice-mail diary studies for naturalistic data capture under mobile conditions(ACM) Wilson, S. et al. Helping and hindering user involvement – a tale of everyday design (ACM)
Week 5 Task analysis	Stahl, G (2002) Groupware goes to school Stahl, G (2002) The complexity of a collaborative interaction
Week 6 Usability	Dumais, J.S. User-based evaluations Nielsen, J. First rule of usability? Don't listen to users Mayhew, D.J. Usability testing: you get what you pay for A usability test by 3G Lab: Comparison of two camera phones (given out in class, or go to www.3glab.com/products/usabilitysuite.html - but you have to register to get it)
Week 7 Heuristics	Cockton, G. et al. Inspection-based evaluations Nielsen, J. 1994 design of SunWeb – Sun Microsystems' intranet Nielsen, J. & Molich, R. Heuristic evaluation of user interfaces
Week 8 Walkthrough	Wharton, C. et al. The cognitive walkthrough method: a practitioner's guide (given out in class) Rieman, J. et al. Usability evaluation with the cognitive walkthrough Reiman, J. Colonel Looseleaf Challenge's Heuristic Walkthrough
Week 9 Comparisons	Jeffries, R. et al. User interface evaluation in the real world: a comparison of four techniques Donahue, G.M. & Weinschenk, S. Usability is good business Nielsen, J. Return on investment for usability Mackay, W.E. Ethics, lies, and videotape Tognazzini, B. How to deliver a report without getting lynched
Week 10 Reflection	--