Analysis and Design of Multimedia/Hypermedia Environments

EDIT 730

George Mason University

Fall 2008

Mondays 4:30-7:10pm

Instructors: Brenda Bannan-Ritland

Phone: 703-993-2067

E-mail: bbannan@gmu.edu

Fax: (703)993-2722

Office hours:

By appointment

Texts:

Required:

Rossett, A.R. (1999) First Things Fast: A Handbook for Performance Analysis. San Francisco: Jossey-Bass

Brown, D. (2007) Communicating Design: Developing Web site documentation for design and planning. New Riders

Arnowitz, J., Arent, M., and Berger, N. (2006)Effective Prototyping for Software Makers (Interactive Technologies): Morgan Kauffman

Optional:

Khan, B. H. (2005). Managing e-learning: Design, delivery, implementation and evaluation. Hershey, PA: Information Science Publishing. ISBN: 1-59140-634-X

Bonk, C. J. & Zhang, K. (2008). Empowering Online Learning: 100+ Activities for Reading, Reflecting, Displaying, and Doing. Jossey-Bass. ISBN: 978-0-7879-8804-3

Studio 7.5 (2006) Designing for small screens. ava publishing sa (**www.avabooks.ch**)

Unleashing Web 2.0: From Concepts to Creativity (2007) Morgan Kaufmanby Gottfried Vossen (Author), Stephan Hagemann (Author)

Methodology:

This course will provide students with opportunities to experience the instructional design process as applied to the conceptual prototype of a technology learning system. Students will have the opportunity to interact with subject matter experts, target audience members and draft a comprehensive design approach as well as prototype their ideas using selected technology software tools. The course will be focused on facilitating connections between interdisciplinary approaches of prototyping, design and development of teaching and learning systems from multiple disciplines including instructional design, computer science, and related fields.

*Due to the fluid and dynamic nature of the design process, the instructor reserves the right to change the syllabus if needed based on individual project needs.

Deliverables/Assignments

1. Collaborative Investigation of Design Process Through Blogging and Delicious Postings (10%)

Each student will contribute at least 2-3 significant blog posts starting conversation and 3-5 comments on others posting throughout the semester as well as 3 contributions to course delicious site. Topics will be expected to be related to course readings and discussions and will be posted on the (such as Croquet, Second Life, etc.) to contribute their perspective on the intersection of instructional design and the potential of these emerging computing environments. Students will also be expected to contribute related links to a course delicious site. Meaningful, brief contributions across the semester could include:

- A topic related to current readings/links but not repetitive of it
- Summary of points intersecting instructional design and interdisciplinary perspectives on design and development
- Examples of technology designs and implementation
- Review and brief discussion of relevant articles, research, websites and personal contacts (if applicable), etc
- Commentary on others blog postings

2. Performance Analysis Briefing Report (20%)

A small group of students will initially investigate an assigned design problem and context. Students will collect relevant information to produce a performance analysis briefing report (see Rossett pg. 146-151) describing the design project context including:

- Introduction
- Description of organizational and individual drivers and barriers to success
- Priorities for instruction, support, training or prototype development
- List of matching findings, drivers and potential solutions
- Recommendations and rationale
- Team members roles and responsibilities

3. Needs Assessment/Audience and Task Analyses (10%)
Each design group will further explore and define the teaching, learning or training problem and context. This may require more more formalized data gathering and analytic techniques (than the performance analysis brief but also building on it) such as literature review and observation, interviews etc. with the target audience or related subject matter experts. Students will analyze this data into a more thorough report than performance analysis that includes the following elements:

- Identify and define problem
- Demographics of target audience
- Knowledge/Training gap
- Job or learning environment description
- Learning or performance goal
- Task analysis
- Computer skills analysis
- Technology gap assessment
- Reported team member roles and responsibilities

4. User Needs Documentation (10%)

Each design group will determine relevant user groups, outline content related to each personna, and gain feedback from classmates on personnas. Different groups may plan and implement usability testing or other techniques at different points during the semester due to the individual project needs, but all groups must provide a usability plan and/or competitive analysis report on their project. In addition, each group must present their personnas, usability report (if applicable), competitive analyses to the class, concept model and content inventory. Therefore, the deliverables for this phase are a presentation to classmates and relevant postings on the course Wiki that includes the following:

- Personnas
- Usability testing plan, implementation and report (if appropriate at this phase or later in semester)
- Reported team member roles and responsibilities

5. Strategy Documentation (20%)

Each design group will strategize and conceptualize their design approach considering their audience, learning or performance goals, analyses, theoretical grounding and prior concept modeling. Each group will review with their client, audience member and with their classmates a site map, flow chart, wireframes, layout and visual design for feedback.

- Competitive analyses
- Theoretical grounding in teaching, learning or training literature
- Concept model
- Content inventory/audit
- Reported team member roles and responsibilities

6. Design Documentation (20%)

Each design group will present their final prototype and brief account of process to their client and classmates (as well as possibly target audience members).

- Site map
- Flowchart
- Wireframes
- Layout and visual design
- Documented audience and client feedback with noted design revisions for final presentation
- Reported team member roles and responsibilities

- Prototype and process
- Usability testing or formative results from target audience reported
- Reported team member roles and responsibilities

Assessment

Given the nature of the assignments and the authentic projects involved in this course, the assessment process in this course will be based upon group process model in evaluating individual performance. For each deliverable/assignment groups will provide detail on the roles and responsibilities that the individual has assumed on each of the assignments. Students should indicate which assignment that they were the lead on and detail the contributions they have made to each of the assignments in their individual portfolios. In addition, students will evaluate their own and group members' overall contributions to the design and development of the instructional module at the mid-point and end of the semester. This evaluation form will be completed using the rubric below to provide additional data on the performance on the identified criteria, however, the instructor will determine the grades.

The following rubric will be used to evaluate individual performance as part of the project group. Students use this framework to assess their own and their peers' performance. The instructor(s) also evaluate students based on this rubric.

	Exceeds Expectations **(E = Exceeds Expectations)** **A level work**	**Meets Expectations** **(M = Meets Expectations)** **B level work**	**Below Expectations** **(B = Below Expectations)** **C level work**
Overall Contributions to Group Project Process (self, peer, instructor) (5%)	Demonstrated full participation in group meetings and communication, showed exceptional effort on individual tasks, exceeded individual contribution and was instrumental in leading group forward, respectfully acknowledged and integrated all members' skills in project development process	Participated in group meetings and communication efforts, delivered on individual responsibilities, made valuable individual contributions to group process, contributed to progression of project.	Noted absences at group meetings or communication, la or missing items under individ responsibility, hindered progre of project, did not adhere to group norms and did not treat members ideas and opinions w respect.
Individual Blogging Contribution	Contributed several (2-3) main topic postings and a few comments on others postings (3-5) to promote significant discussion and interest with high relevance to readings and discussions of class. Provided valuable examples and resources to classmates.	Generated some discussion (1 main topic posting) and comments (3-4) throughout the semester aligned with a relevant topic to assigned readings. Provided resources to classmates.	Did not generate discussion through any main topic or interest or comments focused topic related to readings. Little no resources provided to class
Performance Analysis Briefing Report	Contributed to a thorough investigation of design problem and context according to Rossett's guidelines. Provides all required elements of briefing in a professional manner.	Contributed to adequate investigation of design problem and context adhering to Rossett's guidelines. Provides most required elements of briefing.	Little evidence of contribution and investigation of design problem and context. Little evidence of incorporation of Rossett's guidelines. Does not provide many of the required elements of briefing.
Needs Assessment/ Analysis	Full participation in excellent data gather and analysis of relevant information to design problem and context. All required elements are included in a professional report.	Participation in adequate data gathering and analysis of relevant information to design problem and context. The majority of required elements are included in report.	Little or no evidence of data gathering and analysis of information related to design problem and context. Major elements are missing from report.
User Needs Documentation	Significant contribution to conceptualization and presentation of personna,	Contribution to conceptualization and presentation of personna,	Little or no individual contribution to required eleme of personna, usability testing

	usability testing plan (if applicable)	usability testing plan (if applicable).	plan (if applicable).
Strategy Documentation	Significant contribution to design strategy(competitive analysis, theoretical grounding, conceptual model, content inventory aligned with articulated design project needs) demonstrating a creative response to identified instructional/performance problem.	Good contribution to design strategy (competitive analysis, theoretical grounding, conceptual model, content inventory aligned with articulated design project needs) demonstrating an adequate response to identified instructional/performance problem.	Little or no evidence of individu contribution to design strategy missing components.
Design Documents and Prototype Presentation	Full participation in professional presentation of well-articulated design strategy, design document elements and prototype description for review by client	Some participation in professional presentation of a well-articulated design strategy, design document elements and prototype for review by client	Little or no evidence of participation in design strategy design document elements and prototype presentation for clie
Other contributions (5%)	Significant contributions related to the progress of the team, development of processes to move project forward and development of project. Extra effort demonstrated.	Notable individual contributions related to progress of team, development of processes to move project forward and development of project. Average effort demonstrated	Little or no attention directed toward helping the team reach their goals.

Logistics

****Required Portfolio Elements for IT students(EDIT601/EDIT701)**

If you are a student in the IT program, it is strongly suggested that you retain your design brief/prototype elements produced in this course for your required online Masters electronic portfolio assessment process at the mid-point and end of your coursework (EDIT601/701). You may also want to document the feedback from your peers and indicate what elements of the design were adjusted based on collected formative feedback. You will be asked to reflect on your learning within this course and the best time to formulate those reflections is when you are currently in the course. Please retain these electronic materials for your required portfolio assessment.

Mason email Account and IT Listserv

As a GMU student, you will need to acquire a GMU email account. Contact the IT Support Center to activate your account. If you are an IT student, please also subscribe to the IT Listserv which will post job opportunities, program announcements, etc. Directions about how to subscribe can be located on the IT Program Website.

CLASS SCHEDULE

DATE	TOPIC	ASSIGNMENT	
WEEK 1: **Aug. 25** **(F to F)**	• Welcome, Introductions • Dr. Badrul Khan, Kathy Bohnstedt • Generate email list • Books - ADDIE process, multiple perspectives • Review syllabus • Overview of process - design and research integrated • VERY Brief introduction to projects • Working as a team in both face-to-face and virtual settings • Introduction to google docs, course blog, delicious • Assigned design teams • Meet in groups to schedule, exchange contact info, etc. •□□□□ NO CLASS – LABOR DAY	• Review last year's EDIT 730 Wiki • Read First Things Fast, Preface-Chap. 4 • Read Managing e-Learning book, pgs. 104-154 • Read Flexible Learning book, chapter 1 (pgs.1-17), cover page • Research links/information about projects (in Wiki) • Post and link to Facebook • Join Google docs • Join pbWiki • Delicious How-to • Contribute to Design and Research Blog	
WEEK 2: **Sept. 1**			
WEEK 3: **Sept. 8**	• Project details-questions • Introduction to Performance analysis	• Document client/SME data as data • Collectively revise and	

(F to F) **Sept. 9** **(F to F)**	• **Potential client/SME visit and interaction (depending on scheduling)** • Draft questions for Client/SME	send any follow up questions to clients • Read First Things Fast, ch. 5-6	
WEEK 4: Sept. 15 (F to F)	• **Potential client/SME visit and interaction (depending on scheduling)** • Discuss performance analysis communication plan • Introduce needs analysis • Begin planning needs analysis • Gather data	• Document Client/SME interaction as data • Collectively revise and send any follow up questions to clients • Implement communication plan • Gather data • Read Rossett, ch. 7 – 8 • Begin drafting performance analysis briefing report on Wiki	
WEEK 5: **Sept. 22** **(On-line)**	• Work on data gathering • Needs Analysis (more in-depth literature review, data collection and analysis) • Overview of applied ethnography	• Gather design project information and data • Document Client/SME interaction as data • Work on needs analysis post drafts on Wiki or google docs • Finalize performance analysis briefing report	
WEEK 6: **Sept. 29** **(F to F)**	• **Performance analysis briefing report due posted on Wiki by 8pm.**	• Work on needs analysis • Collect data • read Communicating Design Chapters 1-2	
WEEK 7: **Oct.6** **(Online)**	• Work on needs analysis	• Analyze data • Write up results • Read Communicating Design, Chapter 3	
Oct. 13 **(F to F)** **Change in dates to Tues Oct. 14**	• **Monday class meets Tuesday, October 4th because of Columbus Day break** • Intro to User Needs Documentation • Personnas, Usability • Discussion of applicability of usability testing/reporting in each project at this point • work in groups on needs	• Finalize Needs Analysis • Work on User Needs Documentation • Read Communicating Design Chapters 5-7 • Read Effective Prototyping - Chapters 1-3	

	analysis		
WEEK 8: **Oct. 20** **(Online)**	• Introduction to Competitive Analyses Research • Work on user needs, personnas and/or usability	• Work on User Needs Documentation • Work on competitive analyses and/or conducting usability testing plan • Read Effective Prototyping Chapter 4 & 5	
WEEK 9: **Oct. 27** **(F to F)**	• **Needs analysis due on Wiki** • **User Needs Documentation Due on Wiki (personas)** • Conceptual Models • Content Inventories • Selecting prototyping method	• Work on conceptual models/content inventories • Read Communicating Design chapters 8-9 • Read Effective Protoyping Chapters 7 & 8	
WEEK 10: **Nov. 3** **(Online)**	• Work in groups on conceptual models/content inventories/prototype method	• Work on revising conceptual models/content inventories • Read Communicating Design Chapters 10-11 • Read Effective Prototyping Chapters 9 &10	
WEEK 11: **Nov. 10** **(F to F)**	• **Strategy documentation due on Wiki** • Introduction to design documents (site maps, flow charts, wireframes, visual design) • Shuangbao Wang present • Review prototype software	• Work on design documents • Read Effective Protoyping Chapter 11	
WEEK 12: **Nov. 17** **(online)**	• Work in group on design documents	• Work on design documents	
WEEK 13: **Nov. 26** **(online or face to face if**	• **Design documents due on Wiki**	• Work on design documents/prototype	

needed)			
WEEK 14: **Dec. 1 (Online)**	• Work in groups on prototypes prototypes	• Work on prototype	
WEEK 15: **Dec. 8** **(F to F)**	• **LAST CLASS** • **Present Prototype - 20 minutes**	• Congratulations, you made it!	

Class Make-up Policy:

If George Mason University is closed due to inclement weather on the day of class, the class will not be held. Material missed due to the cancellation of the first 3-hour class will be incorporated into the remaining class sessions.

CEHD Course Expectations:

The Graduate School of Education expects that all students abide by the following: Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions. Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code. Students must agree to abide by the university policy for Responsible Use of Computing. See http://mail.gmu.edu and click on Responsible use of Computing at the bottom of the screen. Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.