Ill-Structured Problems
ISP

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Helping Teams Navigate Ill-Structured Problems

We are currently experimenting with different interaction models to support new teams navigating ill-structured problems. Ill-structured problems are defined as complex with multiple right answers and multiple right ways to go about solving. It is our hope that new interaction models will support both cognitive development and team dynamics through the life of the team project. Currently, we are collecting data and testing our theories and technologies in a senior level capstone course in the Management Information Systems program at the College of Business. The REU team would help both in the academic research and applied HCI methods. Academic research would involve literature reviews, analysis of current data sets, and development of surveys to improve data collection. Applied HCI methods would focus on concept mapping, task analysis, data log analysis, low and high fidelity usability testing, lab and field usability testing, collaborative systems testing, and ultimately help us develop the technology with different interaction models. REU students will focus on developing an understanding of role contracts, team performance, and team cohesion on project success.

A video summary of team ISP's research
Posted on August 8, 2011 by Melanie

ISP Demo Video_Take2

Posted in ISP | Comments Off

Team meeting 7/8/11
Posted on July 8, 2011 by Jeanette

Our priorities for today were to: focus on participants and scheduling in usability (and scheduling with Allyson), having a design alternative by Monday at 3pm, other information, and our go around.

*just a reminder, our ISP final docs folder has been updated.

As for our participants needed:

start asking people to be in our usability lab during the afternoon of the 14th and 15th- we have both days blocked off from 1:30 to 5pm. We'd like to target 5 to 6 people. – We might be able to get the e-mail out this weekend, due to our need of people in HCI.

Designs:

pilot for us Tuesday during our meeting of design alternatives.

(we may need a rational as to why we are only using HCI students, but I think it's our focus on application expertise.)

Monday- correlation tasks on IRB

Design alternatives

test manipulation- move nodes, can we do that? ... it might be a technological challenge.

Monday, 3-5 in the lab to do work.

Need to understand levels of logic of user-zoom software. It sometimes does not make sense.

We will need to recruit REU teams for testing of the designs during 20-22 of July.

Do we have them each in there for 2 hours, or do we have 1 hour increments each day? Enough for pilot study.

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Mid-Oral Presentations

Posted on July 6, 2011 by Ashleyyyy !

So, i waited til after the mid-oral presentations to blog. im pretty sure i would have a lot to say! Man i did horrible, im not good at speaking in front of people. i let my nervousness take over me.. and i had to change my part a little before the presentation which i knew was going to throw me off guard. But this just pushes me to improve myself for the final presentation. i kno i will still be nervous. Sheessh! and i have to get rid of those notecards, man! the comments really helped (even though after i was finish i knew what i needed to work on.)

Overall, i think we didnt pretty good, be sides my mess up! It took us a while to get a full understanding of our research problem, its still a little iffy with me. Not really my feild.

But im totally glad its over with! Almost through, boy does time fly!

Posted in ISP, Uncategorized | Comments Off

ISP Meeting 6/28/11

Posted on June 29, 2011 by Ashleyyyy !

1-3 pm

Agenda

IRB- Finish up Final corrections

Lit. Review

~~Methods~~

Participant getting

~~Go Round~~

After finishing the final corrections for the IRB application, we went over each of out Lit. Review paragraph. Andrea made suggestions and corrections on everyone's paragrapghs. We then went into developing a structure for the Lit. Review. Tonight she wants us to work more on out lit review paragraphs, and start developing some paprt prototype off of interaction models Ashley found. We will have another meeting after the HCI course from 4-5 to put together our Lit Review. We dicussed our task homework for HCI class.

As far as teams for Study 2: Hosea, Adam, Leif, Sidney, Dillon, Patrick

Target 10 ppl for usuablity testing

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Sunday morning meeting

Posted on June 26, 2011 by Jeanette

Our meeting started with a list of goals. They were to look at our IRB and take in account all Bennett's comments, look at our research currently and figure out how that will go into our lit review and plan who will write what.

We each have our specific pieces we will write from our "area of expertise"… Melanie will focus on Team knowledge representation and navigating ill structured problems. Ashley will focus on interaction models. Jeanette will focus on domain self efficacy and team communication.

We will want to look into these for references:

www.hcibib.org/readings/html

Carroll, Dix, Lazar, (Rodger's interaction design)

Our Week's goals:

1) finalize IRB (Jeanette is getting signatures tomorrow.)

2) start prototyping our software

3) write lit review (by Tuesday meeting, everyone will have paragraphs done) By Wednesday, we will submit it.

4) Method's paragraph is due friday.

Future Goals- Week of July 4- developing prototype… start prototype participants (not REU students), get into lab to write software next wednesday. Week of July 11: start running design alternative studies. Start coordinating with other teams about 20-27th of July and set up times (4 sessions) of availability. Start outline on poster week of the July 18.

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IRB Meeting

Posted on June 26, 2011 by Ashleyyyy !

Wednesday, May 22, 2011 @ 8:00 am

First we looked at a article Melanie found with a knowledge representation survey. We also viewed some surveys Jeanette found on locus of control, which she thought could be related to self-efficacy. Then we all split up and went to do more research on survey questions we could use for our usabilty questionaire. We worked on your IRB draft for the next hour and a half. Andrea gave out assignments to each of us to divide and conquer. We finish the rough draft of our IRB.

Posted in ISP | 1 Comment

ISP Team – Craft of Research

Posted on June 23, 2011 by Ashleyyyy !

As a team: Categorize post as "Craft of Research"

1. Post one example of a question your potential audience might have regarding the team's problem area or solution. Describe your plan for refuting it.
2. Identify an example of how your research contradicts current publications. How will you address this?

- How is this a benefit to society, why is important?

-This technoloy will benefit society by improving teams thinking and problem solving skills.

- To our knowledge there aren't any current publications contradicting what we are trying to accomplish. Given the current literature on ill-structured problems, we want to be careful with defining it making sure we don't contradict what that is.

Posted in Craft of Research, ISP | Comments Off

ISP Usability Testing Strategy

Posted on June 23, 2011 by Melanie

For our usability testing, we hope to find 5 to 10 participants. We will be testing two design alternatives for our technology and will use Morea usability testing software to record mouse-clicks, click-throughs, video, and audio. Participants will be given 15 to 20 tasks to complete, which will be delivered via on-screen text message. While working on each task, participants will be asked to use think-aloud protocol and describe their satisfaction level in using the technology. Once all the tasks are complete, participants will complete an online exit survey.

As the test is all computer-based, our facilitator, Jeanette, will only only have to show each participant to the room, describe the test protocol, and demonstrate think-aloud protocol. Our two main measures of user success are Task Success and Learnability. We hope to perform our testing as soon as possible, but we must first develop our two design alternatives and find participants. With that in mind, our tentative test date is July 7.

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Team meeting for 6/21

Posted on June 21, 2011 by Jeanette

Our Goals for today:

-IRB finished

-go over problem paragraph

-update research and definitions

Today we discussed a lot of the IRB, to fix and answer additional questions.

Our "To do" list from our IRB application:

-Attachment A= Consent form (Melanie will attempt to write this)

-Attachment B= Our e-mail invitation to participate in our study (Ashley will write this)

-Attachment C= Script for verbal invitations to participate in our study. (Ashley will write this and will act as our point of contact.)

-Attachment D= pre and post test surveys. (Jeanette will attempt to find these, focusing on problem solving abilities, knowledge representation, team communication, and expert vs novice (maybe in the realm of self efficacy).

-Attachment E= Study 1 exit survey (Jeanette will focus on this as well). (Maybe adding a morea software usability testing to test how someone uses software. Andrea's idea.)

We will meet tomorrow morning from 8am till about 9:45am to finalize these things.

**It would be important to note next week our research question is due, along with our lit review paragraph. We should be considering what we'd like to talk about for our presentation and start thinking about our method's paragraph as well.*

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ISP_meeting

Posted on June 17, 2011 by Ashleyyyy !

Team Meeting, Tuesday May 7, 2011

Agenda

-Article Reviews

-How to read like a
Grad Student

-Lit. Review

-Scope

-Task

-Roles

**Research
Question**

*Is learning
non-linear model _____ better (as in Navigate & Solve, Thinking Skills)
then linear model? (in relation to group work)

*User manipulation
model better than non manipulation model

<u>Team Navigation Solution</u>

DV-   airtime   # of ideas gen   variance to expert say

Mental
model   variance ideas   support for solution

# of designs/options

Stage time

IV-   Model A (linear

Model B (non-linear)   <u>Domain</u>

Model C (non w/ manipulation)   HCI

PRE-Session #
(stage of team dev)

<u>*Scope</u>

Expertise
Ashley- IM, TPS

- ***Interaction
  Models*** Jeanette-TD, TPS

-Structure   Melanie-IM, KR

-Input
Method   Andrea- PD,KR

- ***Team
  Problem Solving***

-Process/How

- ***Problem
  Domain***

-Nature of Problem

- ***Team
  Dynamic*** Tasks

-Personality
(big 5)   1) List of IMs (characteristics of each)

-Roles   2) Why use/where ideal to work

-Expert/Novice
3)Linear / Nonlinear

-Domains   define linear/nonlinear (seq./non seq.)

-Stage of dev

- ***Knowledge
  Representation***

-Bloom's
digital box

-thinking/cognitive
skills

Required
for problem type

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← Older posts

- ***Team
  Dynamic*** Tasks

-Personality
(big 5)   1) List of IMs (characteristics of each)

-Roles   2) Why use/where ideal to work