IPRO 301 Midterm Report

Fall 2007

Undergraduate Research on Interprofessional Education

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1.0. Revised Objectives

IPRO301, Undergraduate Research on Interprofessional Education, is an IPRO designed to improve the existing IPRO experience for IIT undergraduates. The four main areas of ongoing research include expanding the current learning objectives, their bodies of knowledge and question banks, assessing the influence of groupware such as iGROUPS on team functioning, increasing inter-rater reliability during assessment periods, such as judging scores on IPRO day, as well as assessing and increasing students' ethical awareness.

Learning objectives improvement has been a multi-semester project. Last summer five new learning objectives (LOs) were added: business planning (EnPROs only), innovation, process improvement, multicultural awareness, and design. This semester's goal includes describing a body of knowledge complete with study guides for three of the five new learning objectives, drawing up a bank of questions for use on the LO test, and collecting data on existing student knowledge in these areas. To showcase these ideas, an abstract has been submitted to the ASEE conference in Pittsburgh. A paper will also be written for this conference should the abstract be accepted.

The objectives for the groupware subteam include a literature review and an analysis of iGroups data. We may also add up to three questions to an end-of-semester survey given to the students, but a more complete survey about a students' use of the iGroups suite is not likely. For the literature review, we hope to find how other groupware suites have been evaluated in the past and attempt to find metrics (such as number of e-mails sent or number/size of files posted) to correlate to the outcome measures (graded self-assessments, IPRO Day results, and the learning objective test).

The third goal is to improve inter-rater reliability during judging portions of the IPRO project, particularly during IPRO Day. Past semesters have highlighted disparities between mean scores of various judging teams. Statistical methods will be implemented to improve the reliability of inter-track and –rater scores, so comparisons between tracks and groups of judges can be made more accurately. Additionally, we hope to include an improved, more detailed and consistent grading matrix and implement judging training for IPRO Day. All of these measures will help in the confidence of the scores in future assessments of the IPRO system and allow better cross-track comparisons.

Additionally, there has been a subteam working on influencing the reflective thinking of IPRO students. The objectives of this subteam are to measure the current level of reflective thinking in students. Once this has been established, interventions will be implemented with the goal of improving the reflective thinking of the students. Lastly, it is expected that the findings of this research will be presented at conferences with papers written in peer reviewed journals and proceedings.

Finally, alumni surveys have pointed to a lack of ethical training in the IPRO program. This fall, drastic changes were made to the ethics LO, including a new textbook, improved question banks, an ethics workshop with the author of the text and professor from Rice University, and a required IPRO deliverable of a code of ethics. This semester we aim to devise a grading matrix for the codes of ethics, collect data on them and their impact on the ethical awareness of students, as well as test the new question bank for significant distracters or other test-related fallibilities.

2.0. Results to Date

Learning Objectives:
- Books are still being identified
- Literature review underway
- Attended FIE conference in Milwaukee and presented relevant learning to the Professors
- Rough copies of bodies of knowledge composed

Groupware:
- Literature has turned up several relevant articles
- Reading articles for potential influences on learning
- Number of subfolders may impact the speed at which a task is completed

Inter-Rater Reliability:
- Literature review underway
- Articles have been identified that may be of interested
- Beginning process of data analysis by cleaning current data

Reflective Thinking:
- Graded reflections
- Attended FIE conference in Milwaukee and presented current results

Ethics:
- Grading criteria for Code of Ethics
- Sample Code of Ethics
- Literature review underway

3.0. Revised Task / Event Schedule

See attached MS Project Document.

4.0. Changes in Task Assignments and Designation of Roles and Team Organization

No changes have been made, because the roles that we were given at the beginning of the semester have not changed, nor has the size or scale of our project changed. The overall goal of IPRO 301 has stayed the same, and thus, no changes were needed. The next items are repeated as originally stated in the project plan.

One thing that makes this IPRO unique is that we are all our own team leaders and we must use resources available to us, such as the IPRO faculty and perhaps even experts in our respective fields of study, editors, and other prominent figures who appear in our research. So rather than simply collaborating as a team, we collaborate amongst each other to exchange information, data and possibly methods to go about searching through the raw data. Essentially, Phil Kalata heads the ethical awareness subteam; Jon

Beagley heads the inter-rater reliability subteam, Lizzie Howard heads the reflective thinking subteam; Kory Woods heads the use of groupware subteam; and Carolyn Wood heads the learning objectives subteam.

5.0. Barriers and Obstacles

As with any project on the level that we are attempting to accomplish, nothing goes according to plan. Thus, there are several barriers that have come up through out the study of our project. The following is a report from each subteam on the obstacles that they have encountered.

For the learning objectives subteam, it has been difficult to find exact information on how college students learn, rather than on assessment of existing systems. In addition, coming down sick several times was a hindrance. Also, defining a question topic for ASEE was difficult given the lit review emphasis of this semester, and the lack of data analysis and hands on knowledge of past semesters data and research.

For the groupware subteam, when searching the Internet rather than an IIT-subscribed database, the largest barrier discovered is finding an interesting book or article, but not having access to it. However, there exists an easy way to get around it: either go to a remote library and use their database or use the IIT library if we have access to one of the databases that offers the article we found via the Internet. On average, however, the greatest obstacle to overcome is the amount of research done not in the exact field of interest, but in one of the related fields. This makes the literature review very difficult because, when using search terms, there's no easy way to eliminate research that compares face-to-face communication with groupware-aided communication, to conduct about groupware's effect on learning when face-to-face communication may be used. In other words, it is difficult to find very similar scenarios to the one of our project, because so much research is being done in very similar, but differing scenarios.

For the inter-rater reliability subteam, there have been several barriers not in finding literature on the subject, as there is a massive amount of it but that presents its own problems. It is searching through this vast pile of journal articles, and sifting out the ones that most directly apply to the project. In addition to this, there were several problems in getting the IPRO Day judging scores. This data is not set up in a format that is easy to deal with, as the way the data has been stored has changed from year to year. This barrier is being overcome with help from Candace Say and the IPRO staff.

For the reflective thinking subteam, other tasks have been taking up time, away from conducting research where it could be focused. There is not much that can be done about this, because the other work is just as important to the IPRO program as a whole. Also, writing project-specific questions was difficult to coordinate with instructors, and it was also difficult to come up with appropriate questions with only a limited knowledge of the content of the project. As a result of the time constraints placed on this subteam, the Individual Plan Reports have not yet been graded.

For the ethics subteam, the biggest obstacle was finding the right place to search for articles. Scopus, a database not subscribed to by Galvin, has yielded a number of good articles. Furthermore, it has been determined that the language used by many of the

authors or relevant articles discusses generating or producing codes of ethics. The search terms were amended to great effect once this was noted.

As a result of these obstacles, we hope to overcome them with good planning. It should also be noted that members of other subteams are not restricted to only their own project, and can help subteams out. This is especially true for the literature review portion of the project.

6.0. Code of Ethics (Attached as a Separate Document)
(already submitted on iKnow)

7.0. Midterm Presentation Slides
(attached powerpoint document)