

**IPRO 339**  
**Assessing and Improving Interprofessional Education at IIT**

**FINAL REPORT**  
**Spring 2005**

**Faculty Advisors**

Prof. Daniel Ferguson  
Dr. Kenneth Schug

**Sponsor**

Mr. Tom Jacobius

**Students**

Timothy Britt  
Levi Citrin  
Jake Crulcich  
Vlad Gutkovsky  
Megan Mims  
Natalie Orrison  
Alana Platt  
Victoria Strokova  
Sonia Vajaria  
Rachel Wasserman  
Nicholas Williams

**May 5, 2005**

## Table of contents

<b>Introduction</b> .....	<b>2</b>
<b>Background</b> .....	<b>2</b>
<b>Objectives</b> .....	<b>2</b>
<b>Methodology</b> .....	<b>3</b>
<b>Assignments</b> .....	<b>4</b>
<b>Obstacles</b> .....	<b>5</b>
<b>Results</b> .....	<b>6</b>
<b>Conclusions and Recommendations</b> .....	<b>6</b>
<b>References</b> .....	<b>7</b>

## Introduction

I PRO 339 “Improving and Assessing Interprofessional Education at IIT” has been instrumental in changes made to improve the I PRO Program. I PRO Program has existed for 10 years and has developed significantly over time. It has become a complex organization with different stakeholders, complicated processes. Therefore, the need to a continuous assessment which would provide feedback to the Program about its performance has been recognized. This assessment serves as a basis for the improvement of the Program. I PRO 339’s primary goal is to provide support for assessment of the I PRO Program and to improve the processes in the I PROs and the I PRO Program itself, such as the creation of the I PRO proposals, their selection, as well as marketing of the I PRO Program. One of the biggest challenges for I PRO 339 is to reinforce the achievement of the I PRO learning objectives through development of the training materials and pilot training programs.

## Background

Since Fall 2003 I PRO 339 has been working on the assessing and improving the interprofessional education at IIT. I PRO Learning Objectives have been identified and I PRO assessment process has been started by previous I PRO 339 teams. Last semester for the first time the full cycle of assessment has been completed (collection of pre- and post-semester data, analysis and delivery of the results to the I PRO Faculty and the I PRO Office), also activity of I PRO 339 was expanded to creation and selection of I PRO proposals and the process of developing training materials for I PRO Learning Objectives was started.

This semester the main contribution of I PRO 339 to the endeavor of improving the I PRO experience of IIT has been the development the training materials for several I PRO Learning Objectives, methods of their delivery and testing on acquisition of knowledge and skills among students.

The development of the training materials have posed some issues with intellectual property, i.e. the usage of copyrighted materials for training of I PRO teams, which needs to be resolved before the proposed materials are used for all I PRO teams. The implementation of the training materials will require a great deal of collaboration of an implementing team with the sponsor – the I PRO Office, for the acceptance of the introduced changes by the Interprofessional Studies Committee and university.

## Objectives

IPRO 339 members had a set of goals in terms of assessing the IPRO program at IIT, creating and selecting IPRO proposals, developing training materials for IPRO Learning Objectives and supporting marketing of the IPRO program.

In the sphere of **assessment** of the IPRO program IPRO 339 aimed at gathering data for the continuous assessment, evaluation, and improvement of the IPRO programs, and producing detailed documents which would make future process for data collection more effective and efficient.

In terms of developing the **training** materials the goal was to develop a training program to teach the topics of Project management, Communication, Teamwork, and Ethics. Last semester some research was done and three bodies of knowledge were produced, but they were of insufficient quality and needed revisal. This semester was the first step in finalizing these materials and researching how they should be taught. There were many constraints when thinking of how the material should be taught. ROTC students are only required to take one IPRO while other students take three IPROs. So the question arose, would this training program occur in one semester or throughout the IPRO experience? Time was also a factor because we wished to give students an in depth and comprehensive look at the four subject areas but we realized that we could not add an exorbitant amount of work into an already hectic IPRO semester. Future IPROs must pilot the proposals which we have developed this semester to test the usability and the benefits of the training program. They would be responsible for resolving any difficulties that arise during the process and refining the training program.

In the sphere of **creation and selection** of the IPRO proposals, the primary goals were to facilitate the creation of new IPRO proposals, and to support the IPRO office in the selection process. To fulfill the first objective, there was a number of goals: create a way for any student across IIT to propose their own IPRO (with the backing of a faculty sponsor), identify barriers that discourage members of certain departments from offering more IPROs via a series of luncheons, and to create IPRO proposals from within IPRO 339. As for the selection process of our work, it was our job to hold the selection luncheon, help coordinate the selection committee, present the proposals, and tally up the final votes.

For the **marketing** of the IPRO program, improving the content of the IPRO website was the first priority.

## Methodology

The **assessment** of the IPRO Program is a challenging tasks and the methodology was used as follows:

To gather data we conducted briefings and debriefings. In order to do this we had to get all participants IRB certified. The briefing, which takes place at the beginning of the semester, provides the students with information pertaining to the IPRO learning objectives and resources for reaching the goal of the team. A survey was given to the students in order to get their perceptions and expectations as students in the program. These surveys where then taken to o the psychology service center where they were coded, analyzed, and then turned into a report. All members took place in the briefings, along with IPRO faculty.

We produced detailed checklist for the briefing and debriefing processes along with flow and gant charts for visual aids. The checklist give specific tasks as well as when, where, who, and how to do each step in the process. The flow and gant charts were made in Microsoft Visio and provide more general direction as far as what tasks need to be completed first, in order to proceed in the briefing and debriefing processes.

The debriefings, which take place at the end of the semester, are performed by a graduate student, or other non 339 member, as the facilitator and a 339 member as the recorder. There are two surveys given out in the debriefing, a team excellence survey and a learning objectives survey. There is a facilitated discussion held which is recorded by a 339. Both the information from the surveys and the recorder notes are taken the psychology service center to be coded, analyzed, and turned into a report.

Our team made slight changes to the handbooks used in both processes and the surveys. We also made changes to the IPRO day judging forms.

For the development of the **training** materials, the research was broken up into the four topic areas of Project Management, Communication, Teamwork, and Ethics. The training materials include the body of knowledge and case studies. There was also significant research of possible online platforms which would display the information gathered. The sub-team sought advice and direction from tenure faculty members as to how the material should be organized and in what forms it should be displayed. This advice was crucial in narrowing our research to the areas of our subjects that were specific to IPRO and its team structure. This extensive research lasted the majority of the semester as we had to become familiar with the topics ourselves before we could decide which information needed to be taught and how.

Due to the nature of work for **creation and selection** of the IPRO Proposals, we did not do a lot of research. The only research we did was finding out additional information about the IPRO proposals, and holding the selection luncheons to get faculty member's feelings and conceptions of the IPRO program.

For the support of **marketing** of the IPRO Program, the brainstorming sessions were conducted with the IRPO Office and team members to identify the ways to improve the content and layout of the IPRO website so that it serves better all the stakeholders. A number of case studies about outstanding IPROs have been under development through research of the existing materials on PRS.

## Assignments

In order to achieve the above-mentioned objectives, IPRO 339 was divided into the following subteams. The subteam membership was the following:

- **Assessment:** Megan Mims (briefings coordinator), Rachel Wasserman (debriefing coordinator)
- **Training:** Timothy Britt (subteam leader), Levi Citrin, Jake Crulcich, Natalie Orrison, Nicholas Williams

To accommodate the changing work load and for better results, Creation/Selection subteams were merged in the middle of the semester.

- **Creation/Selection/Marketing:** Alana Platt (subteam leader), Vlad Gutkovsky  
Sonia Vajaria (co-leader)

For the purpose of coordination and planning of overall activity of the team Victoria Strokova was a team leader.

**Assessment subteam** assignments for this semester were to conduct the briefings in the beginning of the semester and debriefing in the end of the semester, in between the processes were documented.

In the second half of the semester the **training subteam** began collaborating our research and organizing it into the revised bodies of knowledge, or in the case of Ethics, the original. Case studies were also developed citing specific IPRO problems or dilemmas and the solutions to them. These case studies deal with a variety of problems ranging from what to do with a non-productive member, to what are students' rights to ideas created during an IPRO semester. These materials were created and brought back to the faculty members for editing and approval. Next, some team members began developing tests to assess whether the information in the materials was ascertained by the student. These tests are in rough stages and need refinement before implementation of the program.

**Creation/Selection/Marketing subteam** has had the following assignments:

Task	Responsible person	Status
Coordinating Psych Luncheon	Alana	Complete
Coordinating Social Science Luncheon	Alana	Complete
Coordinating Institute of Design Luncheon	Vlad	Incomplete
Powerpoint slides for creation luncheons	Alana/Vlad	Complete
Create 2 IPRO proposals	Vlad	Complete
Content for student IPRO proposal submission site	Alana	Complete
Flyer about student IPRO proposal submission site	Vlad	Complete
Coordinate selection luncheon	Alana	Complete
Binders for luncheon	Alana	Complete
Luncheon summary	Vlad/Alana	Complete
Research proposals	Alana/Vlad (and others)	Complete
Present proposals	Alana/Vlad (and others)	Complete
Coordinate Merge with marketing	Alana	Complete
Plan for creation/selection/marketing	Alana	Complete
The IPRO website evaluation	Alana/Sonia	Complete

### Obstacles

For the **assessment** subteam, in the beginning of the semester the main obstacle was that the purpose and tasks were not clearly defined, therefore it was difficult to take the correct course of action. After this complication was cleared we successfully completed our tasks.

Barriers and obstacles were numerous throughout the semester for the **training subteam**. Meeting with faculty members and relaying feedback was a major issue with our project and therefore required a lot of administrative time. Also there was much time devoted to research so by the midterm progress report we had not yet reached the midpoint of the project. The mid-semester deliverables could not possibly reflect the work put into research, and caused a shift in focus from the actual project. We spent the rest of the year presenting and proposing with no real conclusions, which lead to scattered ideas and results. There were repeated attempts to ask for group consensus on sub-team projects that either never reached a conclusion or never occurred at all. It was hard to reach a conclusion and focus attention on one specific proposal when the team did not decide which one they supported. Half of the time spent was defending our actions and explaining our motives which left little time for actual development. Any feedback that we did receive we used which lead to the development and refinement of the bodies of knowledge and case studies.

Overall, the **creation/selection/marketing** subteam was very successful. The only portion of incomplete work was the Institute of Design Luncheon, and its failure was due in large part to when in the semester it was attempted. The marketing subteam was difficult to manage because some of the marketing tasks were assigned to all the members of the team in addition to their subteam assignments. It was also difficult to schedule outside of class meetings due to numerous time conflicts. The team member responsible for managing the subteam in the first half of the semester was experiencing difficulties due to personal problems.

## Results

The **assessment** subteam was able to make many needed changes to the briefing and debriefing processes by listening to students and members of IPRO 339, then making the revisions. We found that it was better to use graduate students in place of 339 members for the processes because students respond better to older individuals. We found that the only way to make proper improvements is to be open to criticisms and decide whether they are valid or not.

The **training sub-team** was able to produce and receive approval for four concise and specific bodies of knowledge, case studies which illustrate common IPRO problems. Some members actually began writing tests and developing ways to assess their portion of the program. We discovered that the goal of developing and implementing a training program in one semester was a little out of reach. If a well-devised plan is to make significant changes in a program much time and consideration is needed. The proposals created during this semester need to be reviewed, and the accompanying materials such as tests developed. All of the information must be transferred to whatever medium is chosen for implementation.

All of the completed tasks of **creation/selection/marketing** subteam are outlined above in the assignments table.

## Conclusions and Recommendations

In the **assessment subteam**, we recommend following the steps outlined in the checklist correctly so that the briefings and debriefings will go as smooth as possible. It is never too early to start planning and taking action. We recommend that the graduate students are kept in place but that it is emphasized that they go over the script ahead of time so that they are prepared to have a good discussion.

The next steps in the **training subteam** would be to choose a plan of action from the proposals we have developed and research exactly what is needed to implement that proposal. Become familiar with the bodies of knowledge and test the time required to read and comprehend the materials. Make sure that the added tasks do not take too much time away from the IPRO and use the software to administer multiple choice tests on Project management, Communication, and Teamwork. Ethics will require the use of graduate students or a faculty advisor depending on the proposal chosen. Seek advice from previous 339 members and faculty, and develop a clear plan of action early on and note all changes made throughout the course of the semester. This will help track whether the original goal was not accomplished or if multiple smaller goals were added to the team's workload.

The **creation** luncheons proved to be a huge success. I strongly suggest that next semester's creation and selection team have at least three more luncheons, and target BCPS, the Institute of Design, and Civil Engineering. Also, the student proposal site needs to be more vigorously advertised, and the merge with marketing lends itself to this end. Also, there should be some research into the feasibility of setting up a system by which certain departments – like psychology – can work as sort of “floating” advisors who work with various IPROs that have a strong element of their major in it. These advisors would ensure that the people on those teams from the majors in question do work relating to the major (e.g. a psychology student does work relating to, say, I/O psych rather than only doing grunt work for the group). In addition, the continuation of 339 students creating IPRO proposals is something that should be continued.

## References

The training subteam was using the following resources for the development of the training materials:

### Teamwork

1. Building Blocks for Teams. Roles of the team. Retrieved October, 18, from <http://tlt.its.psu.edu/suggestions/teams/student/roles.html>
2. Fisher, B., Connor, M. Team skills: Interactive behavior skills.
3. Herrenkohl, R. (2004). *Becoming a team, achieving a goal*. Thomson: South-Western
4. Katzenbach, J., Smith, D. (1999). *The wisdom of teams: creating the high-performance organization*. New York: HarperPerennial.
5. Muchinsky, Paul M. (2003). *Psychology Applied to Work: An Introduction to Industrial and Organizational Psychology*. Seventh Edition. Wadsworth.
6. Rees, F. (1991). *How to lead work teams: facilitation skills*. San Francisco: Jossey-Bass/Pfeiffer.
7. Sholtes, P., Joiner, B., Streibel, B. (1996). *The team handbook*. Second edition. Oriel Incorporated.

## Online Platforms Research

8. Poon, Wai-Ching, Lock-Teng, Kevin, and Yong, David. (2004). A Study of Web-based learning (WBL) environment in Malaysia. *The International Journal of Education*, 18, 374-385.
9. Sullivan, David. (2003). Online project based learning in innovation management. *Education and Training*, 45, 110.
10. Gee, Daniel, and Farb, Daniel. (2005). Link to learn. *Managed Healthcare Executive*, 15, 38-41.
11. Smith, Peter J. (2005). Learning preferences and readiness for online learning. *Educational Psychology*, 25, 3-12.
12. Sheriff, Jazeela, and Khan Rehan. (2005). Role and Relevance of Web Supported Learning for First Generation Learners. *Journal of American Academy of Business*, 6, 123-129
13. Giguere, Paul, and Minotti, Jennifer. (2005). Rethinking Web-Based Learning. *T + D*, 59, 15-16
14. Rosselt, Allison. (2005). Moving Online. *T +D*, 59, 14-15.
15. Anonymous. (2005). Getting personal with training: Why learning at a distance need not be "remote". *Development and Learning in Organizations*, 19, 26-26.
16. Broek, Astrid Van Den. (2005). Diary of an E-Learner. *OH & S Canada*, 21, 54-62.

## Communication

17. The Importance of Effective Communication. CBA education. [web.cba.neu.edu/~ewertheim/interper/commun.htm](http://web.cba.neu.edu/~ewertheim/interper/commun.htm)
18. Tips of Effective Communication. Roles of the team. Retrieved October, 20, from <http://tit.its.psu.edu/suggestions/teams/student/communicate.html>
19. Mind Tools, <http://www.mindtools.com/>
20. Body of Knowledge: Project Management, Teamwork, Communication (Fall 2004 Training Sub-team, IPRO 339)
21. IKNOW: the IPRO Knowledge Management System, IPRO 338
22. IPRO Project Reporting System
23. How To Use Yahoo! Groups In Your IPRO Project
24. Project Reporting System (<http://iproprs.iit.edu/>)
25. HFCL Tutorial: A Study Tour of Communication (<http://www.rdillman.com/HFCL/TUTOR/tutor0.html>)
26. *Strategies for Engineering Communication*, Susan Steven / Steve Whitmore
27. Ellen Woods
28. On Accountability, <http://www.develop-net.com/articles/june1999.html>

## Project Management

29. A Guide to the Project Management Body of Knowledge. Project Management Standards Committee. 1996.
30. Portney, Stanley E. (2001) *Project Management for Dummies*, California, IDG Books Worldwide, Inc.

## Ethics

31. "Conflicts of Interest" from [www.ethics.org](http://www.ethics.org).
32. "Tools for Better Business" from [www.ethix.org](http://www.ethix.org).
33. "Ethical Theory and Business" chapter 1, Tom L. Beachamp and Norman E. Bowie.

34. "Employment at Will and Due Process", Patricia H. Werhane and Tara J. Radin. page 266 from "Ethical Theory and Business"
35. "In Defense of Contract at Will", Richard Epstein. page 274 from "Ethical Theory and Business"
36. "Whistleblowing and Employee Loyalty", Ronald Duska. Page 305 from "Ethical Theory and Business"
37. "Is Business Bluffing Ethical?", Albert Z. Carr. Page 443 from "Ethical Theory and Business"
38. "Second Thoughts About Bluffing", Thomas Carson. Page 448 from "Ethical Theory and Business".
39. "Intellectual Property and the Information Age", Richard T. De George. Page 495 from Ethical Theory and Business".
40. Information about Intellectual Property and Patents from <http://www.wipo.int/>, the world intellectual property organization.
41. <http://www.ama-assn.org/ama/pub/category/4610.html> information on the American Medical Association's website about confidentiality.
42. [http://www.grad.iit.edu/research/OSRP/research\\_handbook/chapter10.html](http://www.grad.iit.edu/research/OSRP/research_handbook/chapter10.html) The IIT policies on personal conduct while conducting research.

## Acknowledgements

I PRO 339 would like to thank the following individuals for their contribution to our work:

- Koren Aragaki
- Prof. Ayman
- Dror Benzev
- Prof. Conley
- Prof. Hyuck
- Mr. Jacobius
- Prof. Ferguson
- Prof. Lezotte
- Prof. Shug
- Prof. Towler