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Designing Collaborative Experiences for the IS Curriculum

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Background

Information systems professionals are multifaceted individuals. It is unrealistic to assume that an IS student without a solid understanding of hardware and software issues would be well prepared for today's work environment. It is, however, equally unrealistic to assume that IS students without a solid understanding of presenting, writing and team work would be prepared. The gap between employer expectations and the skill level of new graduates appears to be widening. "New graduates lack the right mix of technical, business, industry and soft skills in demand in today's decentralized, userdriven environment," and few students are taught or exposed to communication, documentation and team skills (Maglitta, 1996).

Recognition of this need for developing IS students' skill beyond the technical content areas was formalized by the IS'95 Curriculum Committee with three of nine objective areas emphasizing the soft IS skill set: communications, team work and professional skills (Couger et al., 1995). Mastery of communication and team work skills cannot be achieved by adding a single course, or providing a onetime group experience such as the capstone group project. Expertise in these areas can only be developed over time with exposure to different problems, settings and people. As the IS'95 curriculum emphasizes, group work and communication skills must be learned in a spiral process where ideas are presented stepwise and repeated again at a higher level.

How can we infuse the IS curriculum with communications and group work skills while retaining the vital emphasis on technical content? The answer lies in the classroom teaching methodology. We must integrate collaborative experiences into our technical courses.

Tutorial Agenda

This tutorial will discuss the need for collaboration in the IS curriculum, the nature of collaborative experiences, approaches for developing and assessing collaborative experiences, and specific exercises that have been used successfully within the presenters' and participants' curriculums. Both facetoface collaborative experiences and virtual collaborative experiences will be discussed during the tutorial.

Many teachers have been exposed to general information on collaborative teaching. However, transitioning from one discipline to another is not always easy. (What is the data structures equivalent of a collaborative exercise to illustrate the moral philosophical dilemma of welfare reform for teenage mothers?) This tutorial will move beyond general strategies to specific methods for developing exercises in the IS area, and specific examples of exercises. Methods for assessing the success of the collaborative experiences will also be presented.

The tutorial itself will be an exciting collaborative experience. Based on the discussions about building collaborative exercises, participants will venture together to explore what can be created, and what can be attempted. Using brainstorm techniques, participants will generate ideas for collaborative experiences that

can be incorporated in their courses. Support for implementing their collaborative exercises will not end when the tutorial ends. Participants will be invited to take part in a yearlong collaborative project as they experiment with creating and using collaborative experiences in their IS courses. An electronic discussion list will be created for sharing information and materials we create or "discover", supporting each other in this effort, discussing our individual and collective learning and insights, identifying, circumventing and preventing obstacles. Discussions from the list will be archived and made accessible through the IS education internet resources links, such as ISWorld Net..

In a followup session in the 1997 AIS, we plan to discuss the results of this yearlong "collaboration on collaboration." The knowledge and materials resulting from the project will then form the basis for a book of collaborative experiences for the IS classroom and curriculum, where each participant will be invited to author one or more chapters.

Following is the framework for the collaborative experiences tutorial:

Understanding Collaborative Learning

1. The need for collaborative experiences throughout the IS curriculum. The need to plan these experiences at a curriculum level to ensure spiral learning (exercises should become more complex as students master lower level collaboration skills).

2. Benefits of collaboration: group work skills and beyond! Collaboration also develops students' speaking and writing skills.

3. Limitations of collaboration.

Building Collaborative Learning Experiences

4. Creating the conditions for effective collaboration: team structure and process, working across cultural differences, procedures for facilitating and assessing group dynamics and handling conflict.

5. Differences between facetoface and virtual collaboration.

6. Structuring collaborative exercises.

7. Evaluating collaborative exercises.

8. Sample of collaborative experiences from IS systems development classes.

Collaboration on Collaboration

9. Brainstorm: Participants will engage in a collaborative experience during the tutorial, generating ideas for developing collaborative exercises for their courses, and creatively planning for how they can be integrated within their curriculums.

10. Collaboration Project: This tutorial continues throughout the 19961997 year as participants implement collaborative exercises within their courses. During the year, participants and presenters will support each other and share experiences through an electronic discussion list.

Presentation handouts will include 1) sample collaborative exercises that participants can take home and use in their classrooms, 2) a description of the collaboration project and an invitation to participate in the

project, and 3) a bibliography of readings and internet resources on creating and using collaborative classroom exercises.

At the conclusion of this tutorial, participants will understand why and how to integrate collaborative experiences in the IS classroom and have several examples of successful exercises in the IS field. They will also be involved in the launching of a joint yearlong project, where they will support each other in developing collaborative experiences to try in their own courses.

The book that will result from the project will provide the broader community of IS faculty with a badly needed source of expertise: exercises and creative collaborative learning experiences tailored for the IS classroom.

References

Couger, et al. "IS'95: Guidelines for Undergraduate IS Curriculum," *MIS Quarterly*, 19/3, September, 1995, pp. 341359.

Maglitta, J., "IS Schools: Need Improvement," *ComputerWorld*, February 19, 1996, pp. 7983.