Systems Development Life Cycle

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Problem

The Case

My case study involves the two systems development life cycle courses in the college of business. These are team project based service learning classes.

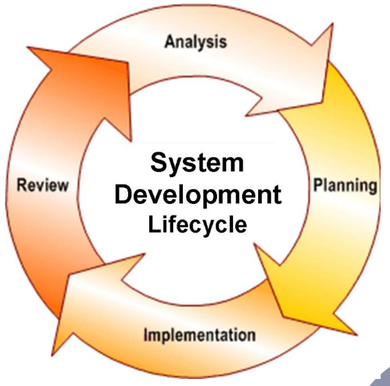
The problem I face in both classes is the unequal division of workload among team members. I think there are several reasons for this problem:

- Some students did not take certain programming courses or did poorly in those classes resulting in cold feet from programming in general.
- Students who cannot take these courses in sequential manner need to switch teams/projects, which creates less sense of belonging to a team/project.
- Original course met once a week at nights for 3 hours.

My inquiry focused on ways in which I could create a more equitable learning experience for all students in these courses.

What is Equity

Equity in this case study means providing all students opportunities to engage in rigorous, coherent, and equitable discussions in order to discuss complex problems from multiple perspectives just like how management information systems professionals work in the real world. Through such discussions, students can reconcile differing views, thereby leading to identification of errors before they turn into bugs. Hence, equity can help students improve their technical and collaboration skills.



Inquiry/Analytics

Prevention Practices

- Have the class meet 2 times a week. Consistent with the Bloom's Taxonomy, focus one meeting to reinforce any core project related skill. Focus the second meeting of a week to the application of reinforced skills to students' projects.
- Provide students real world case studies that describe the value of diverse points of view and skill sets in real world projects. For example, open-source development models and outsourcing. Use an online discussion system with a recommendation functionality to encourage exchange of ideas among students.
- Refer to these case studies to encourage students divide workload equally in teams

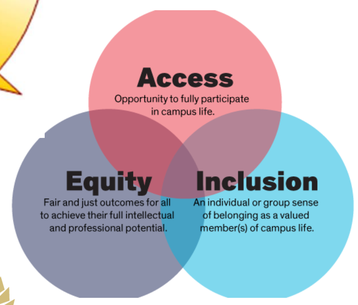
Intervention Practices

A. Start the semester with a team building game which emphasizes critical thinking. For example, truth and lies game to help students get to know one another.

B. Ask students periodically complete a teamwork a satisfaction survey.

C. Ask students to describe how their ideas/developed code improved a project's success.

D. Have students present their project related work regularly to identify common issues and diverse solutions to problems.



Reflection: Challenges and lessons Learned

I have learned that challenges associated with forming productive communities of practice are applicable to students' team based projects. Therefore, students majoring in technical fields need not only possess strong technical knowledge, but also strong collaboration skills.

Future Plans: Beyond Systems Development Life Cycle

Short term

- Serve as faculty judge at student team based competitions to find new ways in order to promote equity in student based teams.
- Search for team building games which emphasize critical thinking

Long Term

- Share the ideas among colleagues at the California State University-Sacramento and international conferences

Assessment

- Monitor students' individual contributions to a team's project.
- Track possible changes in students' teamwork satisfaction survey results.
- Ask clients feedback regarding team cohesiveness at project based meetings.

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Evren Eryilmaz an assistant professor of Management Information Systems at the California State University-Sacramento. He has taught Systems Development Life Cycle, Mobile Application Development, Java Programming, Website Development, and Database Management. Amongst others, his articles have appeared in the Journal of the Association for Information Systems, Communications of the Association of Information AIS Transactions of Human Computer Interaction, and International Journal of Computer Supported Collaborative Learning.