Work in Progress: Preliminary Analysis of Developing Team Building Skills in Community College Students

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Abstract – “Ability to function in teams”, “good team building skills”, “teamwork”, are all now common phrases in the classifieds. It is increasingly important in society today, both in social and work environments, to be a good team player. But how do we actually develop those skills in our students and ourselves? And how do we evaluate whether our efforts have had a measurable impact on the students so that we can adjust our approach for maximum benefit? This paper presents an assessment tool developed to track and improve students’ team building skill as well as a brief description of its implementation. An analysis is performed and reported on based on data collected over a year of study in electronics for a group of community college students.

Index Terms – teamwork, self-assessment, group roles.

INTRODUCTION

The importance of teamwork in today’s workplace is essential, and including teamwork in educational programs is now required by many accreditation agencies such as ABET. Numerous publications can be found on the subject; samples are provided [1] – [5]. Most material discusses processes for creating and managing effective teams as well as the assessment of the team and, to a lesser degree, the individual. In general, these processes are most applicable to major projects with teams of 4 – 6 people. It is more difficult to find publications presenting a simple assessment process that can be implemented for small scale, daily team activities along with proof that the process helps individuals improve their own team building skills.

The Team Assessment process utilized in this research study was developed through study, observation, and interaction with a variety of constituent groups. The purpose is to provide a simple and quick method of evaluating teams for small-scale classroom and lab activities in such a way that provides feedback to students on their team building skills. The specific student audience includes first and second year community college technology students.

The process involves the use of a student team assessment form. The form is quick to fill out and highlights the important aspects of teamwork: preparation, active participation, and involvement in reporting results from the team. Also, the roles of team members are highlighted by asking students to supply the following information, for themselves and for their peers:

1. Cite one specific thing the team member did that contributed to successful completion of the activity.
2. Cite one characteristic of this person that was most supportive of positive team building.
3. Suggest one thing this person could do to become a better team player.

Students are invested in the process from the beginning by encouragement and discussion facilitated by the instructor as well as a grade for completing the assessment form for every team activity. Since student teams are formed by random draw and they are regrouped for each activity, student comments originate from a variety of classmates. Comments from the students on the three points listed above are compiled and returned at mid-term and end-of-semester so that the source of the comments is anonymous. Furthermore, the instructor includes a summary of their sense of the student’s current team building skill as well as what to focus on for improvement.

In the following section, the expected outcomes of the assessment process and the evaluation plan to determine the success of the process are presented. Results and conclusions from the study as well as recommendations for continued work are supplied.

EXPECTED OUTCOMES AND EVALUATION PLAN

The Team Assessment process should raise awareness of the importance of working effectively in teams and provide personal insight on how each individual can achieve this. Ultimately, this should lead to the self-development of the student to successfully function in teams. It is also expected that evaluation of the process will lead to better teaching strategies that will improve team building and leadership skills in the students.

In order to determine whether the Team Assessment process achieved the expected outcomes, student responses from the assessment forms were analyzed using two different approaches. These analyses were performed individually by two different instructors. The data analyzed was student feedback that had been collected on students in a 2nd semester Electronics I course and the subsequent 3rd semester Electronics II course.
...ELECTRONICS II course. The purpose of the analysis was to locate student progress—a trend in the improvement of their ability to work effectively in teams. The first method involved summarizing students’ progress from a holistic perspective by reviewing the collection of student feedback over the two semesters. The second method categorized the responses and calculated the difference in the number of comments in each category over progressive semesters.

After the analysis of the student responses was completed, interviews were held with each student for which a year of data was available. Interview questions focused on working in teams and the effectiveness of the assessment process. Although data has been collected on forty students starting in the Spring 2002 semester to the present, there were only seven students available for interviews for whom we had one year’s worth of data. The seven students represented a diverse population (29% female, 57% people of color, 43% non-traditional). Four students are high achieving, one average, and two are low achieving students. The responses to the interview questions were compared to the data analysis results.

RESULTS AND DISCUSSION

The summaries of the two approaches to analyzing the data produced a depiction of each student’s strengths, weaknesses, and changes. The categorization method essentially quantified the holistic method. The interviews confirmed that the combination of our summaries from analyzing the data were on target with the student’s own thinking and feelings about the tasks (i.e., recording, building, computer) they performed for their teams, the support roles (i.e., leader, initiator, standard setter, collaborator, communicator) they fulfilled, and how those changed over the year.

Students were able to clearly articulate specific critical behaviors of themselves and others that they would not have been able to identify without the team assessment process. They were also able to articulate specifics of what they could do to work better in teams in both task and support functions. Pertinent student interview responses included:

“Made me realize that I was bowling over others.”
“People said...sometimes he gets frustrated, needs to calm down a little bit.”
“It [the feedback] really helped because I was just sticking to the...just give me the data, I’ll answer the questions...but now I started taking data myself...If nobody [had] said anything I would just go on with things [how I used to]”.
“People said [in the assessments] that I was too involved...too much of the stuff and didn’t leave enough for them to do and they wanted to be more involved because it would be better learning for them...If we hadn’t gone through the assessment...I really wouldn’t have noticed what was going on.”
“Reiterates the fact of what you need to work on.”

When asked if the team assessment process had been beneficial, every student responded in the positive. Responses to this question included:

“The most important thing ... is the critiquing of the person, because it is one thing just to say ‘there’s something wrong with you’, it’s another to say... ‘here’s two or three solutions.’”
“Somebody would say ‘well, what are you doing’ ... I wouldn’t have necessarily [said] ... ‘well, this is why’, more ‘it’s taken care of, whatever’. Now it’s more like stop, explain to everyone, get everyone caught up to speed, then go on with it again.”
“That is what the assessments are there for; to build your skills, to work on your flaws, to build your strengths up even further. I took to heart what people said about me.”

In the course of the one year of evaluation, the raised awareness did not necessarily translate to a remarkable change in behavior. This was indicated by the data analysis and confirmed by the interviews. Furthermore, students did not clearly recognize new leadership skills in themselves, even if the skills were noted by their peers.

CONCLUSION

By active involvement in Team Assessment, students learned more about what it takes to be a valuable team member as well as what they can do to improve themselves. Students’ behaviors indicative of improved team building skills were observed and documented in the data analysis. Students indicated that without the Team Assessment process described, they would not have been able to identify some of their specific strengths and weaknesses.

Possible improvements in the process have been revealed through this study. For one, it is imperative that students understand the purpose and usefulness of the process in order for comments to be meaningful. Student preparation also arose as a major issue. Finally, clarifying leadership skills needs to be incorporated. The assessment form and functional group role summary handout are available at enact.sunydutchess.edu/akins/general_info.htm.

REFERENCES