AC 2009-1474: PEER AND SELF ASSESSMENT IN DEVELOPING TEAM SKILLS IN A CORE DESIGN SEQUENCE

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Peer and Self Assessment in Developing Team Skills in a Core Design Sequence

Background

The ability to work effectively in teams, and especially multidisciplinary teams, is a key competency (rather a set of competencies) needed of engineers to be successful in the 21st Century workplace. Industry has for quite some time been a strong advocate for engineering education to include the development of teaming skills in undergraduate programs and this has been reflected over the years in the reports of various national organizations and panels[1,2]. ABET responded in its accreditation criteria by requiring all undergraduate engineering programs to now include teaming in their educational outcomes.

Not surprisingly given its significance there is a large body of literature on teaming in the management literature and this includes theories of effective teaming ranging from the structural perspective (task design, team composition and context) to those that address relevant cognitive and interpersonal factors[3].

In the engineering education environment, in preparing students with teaming skills for the work world, the development of those skills is not something one might expect can be effectively done in a single course or experience. It is not solely knowledge acquisition nor can it be just taught, but rather is a process of personal development that can be guided[4]. It can be considered a form of experiential learning as described by Kolb[5] as a cycle of experience, reflection, conceptualization and experimentation. For this reason a rational approach to team skill development is one that takes place over multiple experiences and with feedback. Seat and Lord[6] for example apply cognitive style theory in developing a modular approach to developing interactions skills that contribute to teaming. Besterfield et al.[7] have provided an overview of some of the engineering education teamwork research of recent years particularly as it relates to cognition and behavioral issues and also highlight assessment approaches. The BESTEAMS project[8] is a multi-institutional effort that has produced three modules that can be incorporated into a thread. The modules including understanding the significance of of learning style, communication, feedback and team dynamics as well as project management. Self awareness development is a key feature. Edmondson[9] also describes a threaded approach to building team skills across the curriculum.

In a previous paper[10] we described our approach that involves threading teaming elements in a sequence of core design courses starting in Freshman Year. For practical reasons we did not try to adhere closely to a particular model of teaming from a research perspective but have been guided by Tuckman's[11] model of team development (forming, norming, storming, performing, adjourning). In that sense it allows students to deal with issues of general acquaintance and task familiarization during the first semester. It then builds a more formal instructional component and peer assessment in the second semester. This is reinforced in the next course and followed by awareness building and longer-term goal setting.

In the previous paper we reported on results from the Freshman Year implementation. The results revealed some interesting correlation of poorer performance in the design courses and lower self efficacy with lack of experience prior to college on teams, either in school or extra-curricular. We also showed some support for the use of peer assessment in teaming evaluation in the early design courses. In this paper we describe the further evolution of the teaming thread into the Sophomore Year along with the inclusion of self awareness building and personal goal setting as contributors to teaming skills. Below we reiterate the overall approach and describe the details of the Sophomore Year implementation.

Outline of the Teaming Thread and Assessment

Our approach is to develop team skills through a series of engineering design courses. The curriculum at Stevens Institute of Technology has a design or design-related course every semester[12] with the four courses in the freshman and sophomore years (Engineering Design 1 thru 4) being of particular importance to the early development of various "soft skill" threads, including teaming. These first four design courses are core engineering curriculum courses; later design courses in the sequence are disciplinary, culminating in the two-semester capstone design project.

The subject of team formation is one that is debated in the teaming literature[13]. In the first four courses of the Stevens design sequence the students are assigned by the instructor to teams rather than allowed to choose their team-mates. The rationale is that this produces a diversity of interests and skills and as such is reflective of the reality of the teams that graduates will experience in business and industry. The instructors typically try to mix skills and interests based on a questionnaire given at the start of the course, especially for the incoming Freshman. It should be noted that the major is not declared until close to the end of the third semester, so all students take a common set of courses. Even in the fourth semester only one or two discipline-specific technical electives are taken. So for four semesters students are in teams where their teammates have differing engineering interests and goals and so to a degree these teams are "multi-disciplinary" even if the members have not yet developed significant technical knowledge in their field of interest. Some research[14] has considered the merits of using self awareness tools, such as for learning styles, in team selection and we plan to introduce such an approach in the future to provide additional guidance in team formation and in assisting the students to understand the team dynamics.

The design courses are taught in multiple sections of approximately 24 students with typically three or four students on a team. It should be noted that the instructors in the first four design courses are all adjunct engineers, so they bring their individual experience and perspective into the classroom and this has been well appreciated by the students.

Skills such as project management and communications are developed throughout the design sequence. For example, project management concepts are introduced in Design 1, including use of Microsoft Project to develop work breakdowns and project Gantt charts. This is reinforced in later design courses. Communications skills, both oral and written, are developed through an explicit communications plan that includes various communications outcomes and associated

assessments in each of the design courses. These include presentation skills, short and long forms of technical reporting, etc. and these assessments are used in grading.

Engineering Design 1
Engineering Design I includes some limited elements aimed at improving teaming skills. These include a presentation of the attributes of effective teams and team members as part of the short in-lab talks given by the instructor. This is timed to be just before the teams start their major design project (autonomous robot challenge) that runs through the second half of the course.

The students are asked to complete a self and peer teamwork assessment survey at the end of the major project. The survey is called the Team Member Contribution Rating Form (see Appendix 2). They are told that for Design I this is for feedback only and will not be used in grading. However, they are informed that this survey instrument will be revisited in Design 2 and later design courses and told that the results would be considered by the instructor, in combination with the instructor's own assessment, in giving a team participation grade for the project in those later courses. Prior to completing the peer survey in Design 1 students are asked to complete a separate survey, the Team Experiences Survey (see Appendix 1 for sample), that is intended to learn about the types and extent of their pre-college experiences with regard to teamwork and their attitudes towards teamwork and perceived preparation for collaborative work in college. Students are informed that the survey data will be confidential and not influence grades, rather it is to be used to help in improving team skills in the program. The goal of conducting this survey is 1. To determine if prior experience and attitude have any correlation to team performance in the college setting and 2. To help identify individuals for whom personal development planning, for example in time management, might have potential value, and/or in assisting instructors in selecting members of teams.

Engineering Design 2
Engineering Design 2 follows up on the first design course in having a sensors and systems theme and again includes a major design project. The students are now given instruction in teaming skills using material prepared by one of the authors (PD) with expertise in teaming and leadership development.

An important additional component introduced in Design 2 is the team charter as a means for the team to formalize roles and responsibilities and the "ground rules" of team operation. This is done at the time that the Request for Proposal (RFP) is issued to the teams for their major design project – projects are posed as business opportunities, hence the use of the RFP. Each team is required to develop a team charter as a tool to facilitate and reinforce normative development[11] and review it with the instructor. The students have as input to their thinking the feedback they had received in Design 1 via the self & peer survey (Team Member Contribution Rating Form - Appendix 2).

The Team Member Contribution Rating Form is once again used towards the end of the Design 2 class after students have nearly completed their major project. At this instance students have been informed that the results of how their peers rate them will potentially have impact on grading. These results are considered by the instructors along with their own personal

assessment in awarding an individual participation grade to each student for their major project, which is in all other respects graded as a group effort.

Engineering Design 3
The teaming thread elements from Design 2 are repeated in Design 3 in order to reinforce them as being important parts of the Design Spine outcomes and enhance students' comfort with self and peer assessment. The Engineering Design 3 course is linked to a concurrent core lecture course on Mechanics of Solids, with several experiments and two design projects with this theme.

Engineering Design 4
In Design 4 an important additional assessment is introduced aimed at self-awareness building. At this stage students have had three sets of design team experience, including assessment of their performance and an introduction to concepts and tools that can promote teaming skills. They are also at a stage when students as sophomores typically have reached or passed through a transition in perspective, becoming more reflective on their goals, motivations and sense of self[15,16].

While making it clear that their responses will in no way influence grades, students are asked a set of questions that require reflection on how they perceive their confidence, comfort and competence with teaming aspects as well as project management and communications. They rate these on a 5-point Likert scale (see Appendix 3). Students are also asked to identify two things that they think are most important for teams to be successful, again prompting reflection on their experiences in the first three design courses. The final important piece of the questionnaire asks students to set two personal teaming goals for their remaining two years that are based on their teaming experience so far and on the feedback they have received on their performance from their peers and instructors. It is implied that they will be asked to look back as seniors to assess how they have progressed. Such goal setting has been show to be important to teaming success[17].

Results from Assessments

Longitudinal Results of Team Member Contribution Survey over Design 1,2 & 3

Team Member Contribution Survey data tracking individual students over the sequence of the first three design courses were recorded and analyzed. Consolidated average responses to three questions are given in Table 1. The scale is from 1 (strongly disagree) to 5 (strongly agree).

Table 1 Overall response to questions about team attributes and team charters

N ~ 370	Design 1 thru 3		Design 2 only
	I was happy with team performance & composition	I was satisfied with team effort to collaborate	I thought the team charter was useful
Average	4.4	4.5	3.6
Standard Deviation	0.8	0.7	1.2

It can be seen that overall the students indicated quite a high level of satisfaction with their teams' performances and level of effort to collaborate. Where there was a change in rating over the sequence from Design 1 through 3, it appears to have primarily been one of improvement and that mostly this was between Design 1 and 2. The overall opinion on team charters was less favorable and with a larger spread, although still on the reasonably positive side. It may be that the projects were not of sufficient scope and duration to really test the value of the charter to the students. Nevertheless, it provides them with a tool that we found in a previous pilot of team charter use in early design to have been later invoked by some teams without prompting in the more challenging senior design team environment a couple of years later. So we wait to see with interest the extent to which the students in the present broad implementation turn to team charters for team self organization in senior design projects.

We ran paired sample t-tests to examine whether student's peer ratings of each other's contributions changed over time. We chose to use paired sample t-tests instead of ANOVA due to the amount of missing data for semester 3 (n=193) in comparison to the data available for semester 1 (n=371) and semester 2 (n=337). We found significant differences between semester 1 and semester 2 ratings for all four dimensions, with the means for semester 2 being higher. Similarly, there were significant differences between the ratings for semester1 when compared with semester 3, with the means for semester 3 being higher. There were no significant differences between the mean ratings for semester 2 and semester 3.

These results suggest that based upon peer ratings, students' performance with respect to teamwork does improve and that improvement does sustain itself over time, however, there is likely a ceiling effect with respect to that improvement.

Table 2.1 below provides the means and standard deviations for each peer rating dimension by semester. Table 2.2 provides the results of the paired sample t-tests comparing semester 1 to semesters 2 and 3 respectively. The results for the t-test comparing semesters 2 and 3 are not reported because they were not significant.

Table 2.1 Team Member Contribution Ratings
(Means and Standard Deviations by Semester)

Rating Dimension*	Semester 1 (N=371)		Semester 2 (N=337)		Semester 3 (N=193)	
	Mean	SD	Mean	SD	Mean	SD
Time, Effort, Expertise	2.71	.45	2.84	.37	2.87	.33
Cooperation	2.81	.38	2.90	.28	2.91	.31
Timely Work Outputs	2.72	.43	2.87	.32	2.88	.34
Overall Rating	2.74	.43	2.85	.35	2.9	.33

* Rating Scale: 1 (below expectations); 2 (meets expectations); 3 (Exceeds expectations)

Table 2.2 Summary of Paired Sample t-tests

Rating Dimension	Semester 1 vs Semester 2 df=336		Semester 1 vs Semester 3 df=192	
	t	Significance (p) (two-tailed)*	t	Significance (p) (two-tailed)**
Time, Effort, Expertise	4.03	.000	3.57	.000
Cooperation	5.44	.000	2.45	.015
Timely Work Outputs	3.72	.000	3.03	.003
Overall Rating	3.25	.001	3.23	.001

*All results are significant at or beyond p=.001
**All results are significant at or beyond p=.015

We ran independent sample t-tests to examine differences between in the first semester peer contribution ratings of those students who withdrew from the engineering program because of poor academic performance, (academic withdrawal) (n= 11) and those who left the program for other reasons such as switching majors (non-academic withdrawal) (n=20). We found significant differences between the ratings for these two groups on all four dimensions, with the means for those in the nonacademic withdrawal group being higher. Although the overall sample size is small and differences between these two groups is large, these results support the notion that there is a strong relationship between students' academic abilities, at least as expressed in an engineering curriculum, and others' perceptions of their team contribution behaviors. Table 3.1 below provides the means and standard deviations for each peer rating dimension for the two groups. Table 3.2 provides the results of the independent sample t-tests comparing the two groups.

Table 3.1 Team Member Contribution Ratings: Academic Withdrawal versus Non-Academic Withdrawal (Means and Standard Deviations)

Rating Dimension*	Academic withdrawal (N=11)		Non-Academic withdrawal (N=20)	
	Mean	SD	Mean	SD
Time, Effort, Expertise	1.76	.81	2.72	.4
Cooperation	1.97	.85	3.00	.10
Timely Work Outputs	1.75	.86	2.84	.20
Overall Rating	1.72	.88	2.78	.29

* Rating Scale: 1 (below expectations); 2 (meets expectations); 3 (Exceeds expectations)

Table 3.2 Summary of Independent Samples t-tests Academic Withdrawal versus Non-Academic Withdrawal

Rating Dimension	Semester 1 vs Semester 2 df=336	
	t	Significance (p) (two-tailed)*
Time, Effort, Expertise	4.47	.000
Cooperation	5.25	.000
Timely Work Outputs	5.46	.000
Overall Rating	4.97	.000

*All results are significant at or beyond p=.000

The use of a 1-3 scale would appear to be insufficiently discriminating and we plan to change this for future assessments.

Personal Reflection on Teamwork Skills and Goal Setting

Evaluation of the results from the Design 4 survey aimed at promotion of self awareness has provided some insights. Average response data to the set of survey questions are seen in Table 4. The scale is from 1 (strongly disagree) to 5 (strongly agree). The average ratings are quite similar across all questions (see Appendix 3) suggesting students perceive themselves as improving in both teaming and communication skills by virtue of the 4-course Freshman/Sophomore year design sequence. This can be taken as a reasonable measure of self efficacy. While we see a fairly uniform average of the ratings across all the questions, those addressing organizational skills (better planner, better organizer) are a little lower and have a larger standard deviation than for the teaming questions.

Table 4 Average responses to questions in Design 4 Personal Reflection Survey

N = 100	More Confident Now	Teaming Ability Improved	Understand Teaming Better	More Comfortable Leader	Leader Ability Improved	Conflict Resolution Improved	Better Organized	Better Planner	Better Presenter	Better Technical Writer
Average	4.1	4.1	4.1	4.0	3.9	3.8	3.7	3.9	3.8	4.0
Standard Deviation	0.7	0.7	0.7	0.9	0.8	0.8	1.0	0.9	0.8	0.8

As part of the Personal Reflection Survey students were asked to list two things that they considered most important for teams to be successful. While the responses were varied there was one very clear outcome. Out of 100 students, 56 chose Communication as their first selection of the two most important things and of those who did not, 4 chose it as their second item, so 60% in total. Few other responses appear many times, the next most common are Cooperation which appears 3 times as first choice and 11 times as a second, mostly coupled with Communication as the first choice. "Teamwork" appears 6 times. The students' recognition of the significance of communication is felt to be an important achievement[18].

The last part of the Personal Reflection Survey asked the students to set two long-term goals. While we have not analyzed the responses in a detailed manner yet we see that 27 out of 100 directly specified "better communication" versus the 60 noted above, but in their goal setting many others set related but more specific goals such as better listener. A strong orientation in the goals is towards organizational skills such as better time management, being better prepared, and quite a few stated that they wished to be a better leader. This is consistent with the results in Table 2 where students had a somewhat weaker perception overall of their abilities in these organizational areas.

Conclusions

The teaming thread has been extended from the two Freshman to two Sophomore courses in an eight-course core design sequence. It uses self and peer assessment together with personal reflection and goal setting to provide a path to development of the cognitive and behavioral aspects associated with effective teamwork. Analysis of the results of assessment instruments applied to date have provided some insight into the significance of pre-college team experiences and attitudes as they relate to college level collaborative project participation and have validated the notion that peer assessments can be valuable in support of overall teaming performance development in project-centered design courses. Students by the end of their third design course in the sequence report significant perceived self efficacy in teaming and communication skills as a result of those design courses. Some evidence of improvement is that students who had lower ratings early in the sequence are in general rated better by their peers in the later courses. By the fourth design course students have a clear understanding of the importance of key attributes, in particular good communication, needed for successful teamwork. They also recognize their need for improved organizational skills in setting long term goals.

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Appendix 1

Team Experiences Survey

The purpose of this survey is to learn more about your experiences and interests with regard to teamwork and collaboration. Please take a few minutes to candidly answer the questions below. Your responses will remain completely confidential and have no impact or relationship to your grades in this course. We will be using the information you provide to help us improve the ways in which we design and deliver team learning experiences.

Your name: _____ Section: _____ Date: _____

Part 1 (circle the box that best applies)

How much experience did you have as a member of groups or teams prior to coming to college (e.g. sports teams, extra-curricular teams/organizations, civic activities, church-religious, military)

None – I was rarely/ if ever involved in team-based activities.	A small amount – I was occasionally part of a team or group but my involvement was sporadic and not that important to me.	Some – I was consistently part of a team or group and generally valued the experience.	A great deal – Team-based activities were a significant part of my life and routine.

Prior to coming to college, how much experience did you have working on school-related team projects, working with two or more people in a group.

None – Almost all of my academic work was done independently	A small amount – I can think of just a few times when I had to complete a team assignment	Some – I probably had at least one or two team projects every year of high school	A great deal – Almost every class had some kind of opportunity to work collaboratively

How much experience did you have ***leading*** team or group activities prior to coming to college (e.g. sports teams, extra-curricular teams/organizations, civic activities, church-religious, military)

None	A small amount	Some	A great deal

Setting aside the technical knowledge and skills you learned, to what extent do you feel your **high school experiences** prior to college prepared you to work collaboratively (e.g. helped you develop team skills).

None	A small amount	Some	A great deal

Part 2: Please rank the items listed below

In what settings have you learned the most about teaming and collaboration. **Rank** the following from most to least (with 1 representing most and 6 representing least)

Settings	**Your Rank**
Academic settings (e.g. classroom, class projects)	
Work settings	
Informal social settings (e.g. friends)	
Extra-curricular school-related activities (e.g. athletics, clubs, etc.)	
Home life, family	
Extra-curricular civic, community related activities (e.g. scouting, community service, church /religious, ethnic organizations)	

Part 3: Please indicate the extent to which you agree with each of the following statements

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I am confident in my abilities to work well on team projects in college	1	2	3	4	5
I enjoy working on team projects	1	2	3	4	5
When it comes to school work, I prefer to work individually as opposed to working on a team	1	2	3	4	5
Team-based work was common in my high school	1	2	3	4	5
In my high school teamwork and collaboration were highly valued	1	2	3	4	5
I have a good understanding of the kinds of things people on teams need to do in order collaborate effectively.	1	2	3	4	5
When I disagree with others, I am comfortable speaking up, even if I don't know them well.	1	2	3	4	5
In group situations I like to take the lead	1	2	3	4	5
Others would say that I am easy to get along with	1	2	3	4	5
I usually let people know when I feel they have let me down or not done their share of work.	1	2	3	4	5
I usually create plans and schedules to help me get organized for the work I need to do.	1	2	3	4	5
I don't often procrastinate.	1	2	3	4	5
My successes thus far have largely been the result of my own hard work	1	2	3	4	5
I have good study habits	1	2	3	4	5

Part 4: List two things that you think are most important for teams to be successful:

_____

_____

Thank you for completing this survey!

Appendix 2

TEAM MEMBER CONTRIBUTION RATING FORM

Use the form below to provide your assessment of the contributions *you and each of your fellow team members* made to your design project. This information may be used by your instructor to make adjustments to individual final course grades. **The information you provide will remain confidential. No individual ratings will be identified or discussed.**

First, write your own name on the top line of the chart below. Then write the names of each of your team members in the spaces below. Next, rate each team member by circling a number corresponding to the following rating scale:

3 = Meets or exceeds expectations: Is fully deserving of the team grade
2 = Marginal: Questionable as to whether performance warrants an equal grade
1 = Below expectations: Should be graded lower than the rest of the team

Team Member	Contribution of Time, Effort, and Technical Expertise			Cooperation w/ Other Team Members (In and Out of Class)			Timely Completion of Individual Assignments			Overall Contribution to the Team		
(Use top line for your name)	1	2	3	1	2	3	1	2	3	1	2	3
	1	2	3	1	2	3	1	2	3	1	2	3
	1	2	3	1	2	3	1	2	3	1	2	3
	1	2	3	1	2	3	1	2	3	1	2	3

PLEASE ANSWER THE FOLLOWING:

- Indicate the **one person** on the team who you think contributed **the most** to the project:

  _____
  And Why? (Include yourself)

- Indicate the **one person** on the team who you think contributed **the least** to the project:

  _____
  And Why? (Include yourself)

- Some of **my** key contributions to the project were:

- Overall, I was happy with the composition and performance of my team (Circle One).

  1 Strongly Disagree 2 3 Somewhat Agree 4 5 Strongly Agree

- Overall, I was satisfied with the efforts that my team members and I made to collaborate and work together.

  1 2 3 4 5

Please include any thoughts you have for making future team projects more successful and rewarding.

Appendix 3

ENGINEERING DESIGN IV

PERSONAL REFLECTION ON TEAMWORK SKILLS & GOAL SETTING

Why are teamwork skills important?

When surveyed, employers of engineering graduates consistently point to the ability to work effectively on teams as one of the most important attributes that they value in their engineers. Directly related to the ability to work effectively as a member of a team, are the abilities to manage teams and projects and also personal time management.

Engineers in industry normally do not work alone or solely with other engineers, they are typically part of a multidisciplinary project team where they work with other technical and possibly non-technical professionals. Teams can be distributed geographically, often globally in larger corporations.

As a member of a team you typically do not choose who you will work with and this can make handling interpersonal and cultural influences key factors in effective teamwork. Being able to successfully deal with these factors is also critical to the ability to lead teams.

In just a few years you will be working on teams as a professional and your performance will be judged. Your success in this will have a direct influence on your career. Your success will often be tied to your team's success. It is therefore important that you try to hone your teamwork skills while in college.

How will I develop my teamwork skills to help me be successful in my career?

In previous Design Spine courses you have participated in team goal setting (charters) and team and peer evaluation aimed at giving you tools and feedback to help with your teaming skills development. You have had a further opportunity in E232 to apply what you have learned.

In this course we take an additional step in the development of your skills by asking you to reflect on how well you have progressed and set some personal goals for the future. It is through such goal setting and reflection that you will build confidence and ability in this important career enhancing skill set. We plan to ask you to reflect on how well you have achieved the goals you set now when you participate in senior design close to graduation.

Please answer the following survey that asks you to assess your current skills and how they have changed as a result of the design courses. You will notice that some of the questions are the same as we asked when you started in Design 1.

Part 1: Please indicate the extent to which you agree with each of the following statements

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I am confident in my abilities to work well on team projects	1	2	3	4	5
My ability to work well on team projects has improved significantly while at Stevens.	1	2	3	4	5
My improved ability to work well on team projects is a result of my design courses					
I enjoy working on team projects	1	2	3	4	5
I have a good understanding of the kinds of things people on teams need to do in order collaborate effectively.	1	2	3	4	5
When I disagree with others, I am comfortable speaking up, even if I don't know them well.	1	2	3	4	5
In team situations I am comfortable taking the lead	1	2	3	4	5
My ability to lead a team has improved significantly as a result of my design courses	1	2	3	4	5
Others would say that I am easy to get along with	1	2	3	4	5
I usually let people know when I feel they have let me down or not done their share of work.	1	2	3	4	5
My ability to resolve conflict in a team has improved significantly					
I usually create plans and schedules to help me get organized for the work I need to do.	1	2	3	4	5
I am effectively able to plan a team project	1	2	3	4	5
My ability to give an effective presentation has improved significantly	1	2	3	4	5
My ability to produce an effective written technical communication has improved significantly	1	2	3	4	5

Part 2: List two things that you think are most important for teams to be successful:

_____

_____

Part 3: On the next page set **TWO** personal goals to be developed during the remainder of your time at Stevens

Your TWO PERSONAL GOALS should be set by considering how you think you have performed as a team member/leader on project teams in the past **AND** take into account the feedback that you have received from your instructors and peers on past projects,. The goals should be structured so that when you look back at the end of the senior year you can make a judgment of how effective you were in the area of the goal at the end of sophomore year and how effective you have become by the end.

ENGINEERING DESIGN IV

PERSONAL GOAL SETTING

Name: Section:
Semester & Year:

PERSONAL DEVELOPMENT GOALS

I have thought about my past performance on projects teams and have also taken into account the feedback that I have received on my teamwork from my class instructors and the other students with whom I have teamed. I have set the following two personal goals for becoming more effective as a contributor to and/or leader of a project team:

Goal 1:

Goal 2:

I understand that I will be asked to review my performance in meeting these goals.

Signature:
Date: