ETM
ENGINEERING & TECHNOLOGY MANAGEMENT

RIDING THE PERFORMANCE CURVE: THE EVOLUTION OF TEAM #1 TEAMWORK AND COMMUNICATION

Course Number:	ETM522: Communication and Team Building
Instructor:	Dr. Dryden
Term:	Spring
Year:	2011
Authors:	Angie Baltz
	Adam Bobek
	Chris Imondi
	Patrick Pai
	Charles Tsai
	Matt Trippel
Date:	6/1/2011

EXECUTIVE SUMMARY

In this report, Team #1 reviews its successes and failures in six areas of teamwork: communication, roles and participation, the execution of assigned tasks, organization, conflict resolution, and assignment success. Team member feedback on each point is analyzed and we examine the development of our team and its processes. We discuss areas for improvement and what we would build upon in order to reach optimal team performance.

CONTENTS

INTRODUCTION

Every Engineering and Technology Management course at PSU highlights the importance of team work to success in high-tech environments. In every 12 week quarter, students form teams to tackle the necessary subject matter. In ETM 522 Communication and Team Building, the subjects at hand are the teams themselves. Over the term, the student teams complete five projects from start to finish, using both the material and experience from each to improve performance on the next.

Through the course material, we've learned the skills and tools needed for a team to perform well, and we've taken a critical look at where we have exercised them well and where we've fallen short. In this report, we evaluate our team's performance in six different areas: communication, roles and participation, the execution of assigned tasks, organization, conflict resolution, and assignment success. Each section was written with honest, reflective input from all team members.

COMMUNICATION

From our formation and until our last meeting, we as a group communicated well with each other. However, our group experienced a few barriers. Patrick and Charles do not speak English as their first language, while the other four members of the team do. Patrick and Charles were also new to the ETM program while the others were "veterans". It was difficult for them to join the discussion because they couldn't exactly catch the whole conversation and the atmosphere didn't seem for them to offer a moment to interrupt the discussion and ask for clarification. The English speaking members of the team did not take any special measures to help these team members contribute we did not talk slowly or speak in extreme details. When we left this first meeting, Patrick and Charles were left behind speaking their native language.

As the team evolution progressed through weeks 4 and 6, we gained a better understanding of cultural differences throughout the class; the native English speakers became more sensitive to the language and cultural barriers. Team members avoided slang and by speaking slowly and rephrasing for comprehension, listening attentively, and providing constructive feedback during our meetings. As a result, Patrick and Charles were able to participate more actively with the group discussions. The team further drew Patrick and Charles into our conversations by prompting both Patrick and Charles for their input after discussions were complete. Despite the language barriers, every team member contributed to every meeting from the start. We also kept detailed meeting minutes which helped further mitigate any communication issues. If a discussion was not fully understood, the team member could reference the meeting minutes to understand the tasks and due dates. Email correspondence would typically occur after the meeting and before a due date. These conversations were easier for all team members to understand, as the emails could be read at the team member's own pace.

Despite these improvements, everyone in the group could have done a better job both engaging each other in communicating and communicating more in the group. The team could have improved the meeting communication by using tools recommended in class, such as the nominal group technique or inter-relationship diagrams [1]. These tools would have taken input from all team members in a structured format. In addition, our group never had the "hard" conversations, for example we didn't critically assess our presentation performance.

In the end our communication was very honest, and we all tried to be very inclusive. Each of us grew in our communication abilities. Some had to adjust for a bias that assumed that the quieter members of our group just

didn't have anything to offer. Others learned how to listen attentively, and provide constructive feedback in the appropriate fashion. By our final presentation, even Charles, our most quiet member, presented his materials in class informally without use of detailed note cards. This was the result of getting more experience speaking and presenting in ETM classes.

ROLES AND PARTICIPATION

The group had a wide range of experience. Some members were just beginning the ETM program without significant work experience while others were more experienced in the program. Those with more experience in the program typically took the lead in team meetings and in strategy formation for the team. No formal roles were established at the beginning of the term. It was agreed that a team member would always record the minutes of each meeting. Meetings were generally structured without a formal leader. Some team members would take a lead during the meeting, depending on the week. In general, team members rotated through the role of orchestrating sub team activities, acting as the leader [1].

Since the class ownership was repeated 3 times during the course, everyone gained more experience with the class and the presentation process—this resulted in sharing more equivalent roles both in preparation and in execution of the ownership. Those with more experience took the lead; while those with less experience let the others take the lead without creating roadblocks for team progress.

Work was distributed in two general ways: the work would be listed out by the meeting leader, and each member would assign themselves to a section, or the leader would recommend certain sections to a team member. Some assignments, like the required readings, were done in pairs. In general, an experienced English first language member would be paired with an English second language member. This was done strategically to ensure that all topics were understood completely, and that all group members participated equally. As the term progressed, the need for coaching and support greatly decreased.

For the class ownership assignments (weeks 2, 4, and 6), roles were rotated. Each team member had the opportunity to prepare and present each kind of lesson. The roles were also somewhat flexible. For example, when Matt was out of the state for one week when the team had a presentation, he worked on researching and writing SR3 for the prior week. This way, he could still contribute to the work load, even though he was absent.

Group participation was never a problem during the term, so the group roles, or lack thereof, were never questioned or modified. Due to there being no formal leader, there was no structured system for providing feedback to group members about mistakes or missed due dates. No assignments were completed late, but several soft due dates were missed. Another negative aspect of the group role structure was that it did not force input or leadership from all members. The less-experienced team members did not have an opportunity to lead a group meeting.

EXECUTION OF ASSIGNED TASKS

Four team members worked full-time, so we decided to meet on Saturday for the first meeting. We met once a week mostly on Saturdays, but one time on Sunday to communicate together in person and divide the project into assigned responsibilities. In addition, we used the break time during class to confirm our next meeting time. For time efficiency, we used the group page to communicate where we were on our assigned tasks and share the material with one another. This helped formalize our agendas for the next meeting.

On one occasion, three members of the team scheduled a virtual meeting through Skype to discuss and delineate further individual tasks for the subproject. This scheduling seemed to work smoothly and efficiently for the team. Two members at different times could not attend a scheduled meeting because of work, so they either volunteered to do a selected reading or gave permission to team members to assign him whatever was left to do. They were extremely flexible and had excellent follow through, so it did not interrupt our time efficiency and work flow.

For the last two weeks, our meetings happened either at the same time class was cancelled or the night before our presentation to finalize and practice our presentation. We always made sure that scheduled meetings did not interfere with each member of the team participating equally and fully. There was respect and honor of working and non-working team members. We always considered each other's additional responsibilities, like becoming a new parent. Likewise, each member never let their team members down.

Our progression of skills for scheduling and time efficiency was shown throughout the term by our extreme flexibility and accommodation of one another's needs and outside responsibilities. We used technology (i.e. Skype and the Yahoo! Groups page) more and more throughout the term in lieu of person to person meetings as a way to become more flexible with one another's time demands.

ORGANIZATION

Prior to the teams initial meeting, an agenda was distributed (see Appendix I.) defining the goals and objectives for the week one class ownership. This initial agenda/outline for execution of the team assignments prior to class ownership sessions was effective in supporting a successful ownership session; this same agenda was used informally as an outline for the remaining class ownership sessions. By following the agenda, our meetings were efficient and never longer than two hours.

While the agenda was a useful tool, there was still a required learning curve associated with the team members on assignments and division of work within subgroups. Repeating the class ownership formula allowed the team to correct any misunderstandings on team deliverables and team member requirements. This learning curve is likely typical of any newly formed team.

In addition, each meeting had one member as recorder to document meeting minutes. Following each meeting, the minutes were reviewed prior to adjourning and were then distributed as a means to ensure that there was no confusion about assignments, due dates, or responsibilities. This was found to be very effective in eliminating confusion related to language barriers—a written record of the meeting could be referred to after each meeting in the event any clarification was necessary for team objectives or assignments. This is a lesson learned both from other ETM courses, practical work experience and the materials covered in class.

No team member was ever late to a meeting—this was partially driven by class discussions about the importance of promptness and the respect that promptness shows for the team. The respect that everyone showed for attending meetings on time drove the high morale of the team and made the group feel that everyone was taking the group's assignments and group membership very seriously.

Scheduling and organizing meetings was at time challenging due to varying schedules. Electronic communication for both developing strategy for assignments and executing assignments was effective. As a new team, everyone was anxious to show that they were committed team members and always emphasized flexibility and commitment to meet when best for all team members. This team oriented philosophy expressed by all team members again drove the team members to support each other in scheduling and work execution. With each member taking the

group's time commitments (and outside of class time constraints seriously), the team felt compelled to come to each meeting prepared to discuss the topic for each meeting.

To share information and to support team communication, Yahoo! Groups was used as a tool to organize team content. Folders were created for each class ownership week and each course deliverable where team members could upload and view group files. This enabled the group to work together on assignments without having to meet.

Though more tools for organization were learned through the course, these were not implemented in the group. For example, while the team charter was completed for the class, this was not referred to continually by the group. The success of the team initially and the performance of each individual group member made the addition of more tools for organization unnecessary from the team's perspective. The consensus of the team was that better organization was not a key need for the team.

Each presentation was fairly balanced by using a timing device. By using this tool, each presenter could limit the length of their presentation sections and we could closely follow the structure of the presentations prescribed in the course outlines. In the final team ownership session, the team failed to use the timing device resulting in poor presentation balance.

CONFLICT RESOLUTION

Our team experienced nearly zero group conflict. This didn't mean that we had "groupthink" or avoidance during the team meeting. As we learned about effective discussion techniques, every team member "prepared for discussion" before the meeting [1]. During the meeting, our group had a structured approach. Generally one person would give an idea, and then everyone voiced their opinions, thoughts, and ideas in a round-robin fashion [1]. Most ideas that were suggested were constructive and valid.

In addition, no emotional ideas were suggested in any of the meetings. Every comment focused on the topic, we didn't have judgmental language, and we also made an honest effort to understand the other person's point of view [2]. Benefits and drawbacks were generally discussed. Often ideas were built upon with input from each other and no judgment was made on any idea. As this process became our team's norm, few conflicts happened.

Besides applying conflict reduction skills, like the effective discussion skills and constructive feedback skills we have learned in this course, another reason why our team managed conflict so well was that two thirds of our team members were "veterans". These "old hands" have a lot of team working experience not only in ETM courses but in their careers. They are well trained in respecting others' ideas or providing thoughtful opinion which can lead to less disagreement and more building of ideas. These experiences helped our team to build up good and productive norms. No individual felt left out or discounted, which is the most important element for team conflict reduction.

The only acknowledged conflict happened when we had many different ideas deciding on a format and the materials for the research report. The first issue was which alternate textbooks we would suggest for next term. We talked through many options; everyone explained why he/she suggested his/her books first and also the drawbacks of his/her suggestion. Then, we voted for which book we would suggest. From that decision, we decided how to modify the syllabus and then decided who would responsible for which week's modification. Although we had a diversity of opinions, we made the final decisions through consensuses. Everyone's ideas were respected and incorporated. There were no negative arguments during the meetings. In addition, even though the meeting was longer than normal, it still ended within two hours. Though we had conflict, it never became gridlock.

Assignment Success

Although not all course grades have been received yet, we feel confident that our team is doing well. Participation both within our team and by our team members in class has been high. There was a noticeable performance curve on the grades the team received on the required readings. Our team initially had difficulties understanding the page proportions of the assignments. With the TA's feedback we gained a better understanding of the requirements with each attempt. As a result we received 100% on our last two selected readings.

In general, our class ownership presentations have been well received, with a high level of participation. However, this was not always the case. During week two, our presentation tended to be very academic. We just introduced theories and case studies that were written in the textbook. We didn't have much interaction with the audience in contrast to our later presentation. The non-native speakers of our team read their notes during their presentation. Later, and with the utilization of brainstorming techniques such as popcorn, everyone was able to share their experiences making for a higher quality presentation. For example, Angie involved the issue "Should I break up with Boyfriend?" when we introduced the idea Force Field Analysis. We also saw small improvement, as we learned and communicated the techniques that worked for in-class leading. Overall, the most gratifying part of the class was seeing the progress Charles made in his skills communicating and interacting with the team; observing his evolution resulting from our team's support and the materials learned in class had a positive impact on team morale.

In looking back, we never reviewed our presentation success. One barrier was that we didn't have solid feedback on our presentation success other than observation. We overcame presentation difficulties through personal improvement. Since we didn't have a reward system within the group, we depended on personal responsibility and the goal of getting an A. Pursuant to this, each member did extremely well with their research, preparation, and time adherence which lead to the successful deliverance of each of our assignments.

WHAT WOULD WE DO DIFFERENTLY / THE SAME IN A NEW TEAM?

Overall, the initial team's success was due in large part to the individual accountability, respect, work ethic and personal skills of each member of the team. While the selection of the team members was not strategic (we happened to sit next to each other during the first class), the effectiveness of our team indicated that team members selection is fundamental requirement for team success.

To support team discussion and team contribution, a culture of respect and professionalism was established that allowed the team to function openly. While there were challenges with equal levels of discussion by team members, by the end of the class and through this team analysis, it was clear that all team members understood that communication is a key and that in a culture respecting each team member there should be no barriers to open and honest member contribution.

While each team member felt the group was successful in the course and the work of the team, areas of improvement were identified. These areas included:

-Better scheduling and status reporting would have eliminated "last-minute" work on assignments; regular status reports during execution of assignments would lead to better enforcements of due dates.

-Utilizing tools to improve and equalized team communication and contributions to discussions, such as the group techniques cited in the course literature, would have encouraged better teamwork, especially in a multicultural

team. The understanding learned late in the class about working in multicultural groups could have been used to better engage members of the multicultural team.

-Improved efforts of each individual team member to go outside of their comfort zone to volunteer information.

-Establishing a team leadership schedule during the first week to ensure that all team members have an opportunity to lead a meeting; this would likely enable team members to overcome fears of language and cultural differences by being forced into a leadership role.

-Implementing a review of the team performance throughout the class and after each presentation would have allowed for an opportunity to provide constructive feedback. By giving an opportunity to provide feedback to the team performance, the overall quality of our team's work could have been improved.

CONCLUSION

We're proud of the work we have presented and handed in, and we're also proud of the team work that produced it. At our final meeting, we all ranked this as one of the best teams we've been on in the ETM program. In this report we've identified the aspects of our team that most contributed to this success: inclusive communication, clear organization of work, and personal accountability. However, if were to continue on and hope to perform at a higher level, we would have some significant work to do. We would have to become comfortable with challenging ourselves and each other to continually improve. As projects become more complex, our "divide and conquer" approach won't be as feasible. We would need to spend more time collaborating and would each need to improve our degree of preparation in order to make that time efficient. This hard work, using the skills we've learned, could eventually turn our good-performing team into a high-performing team.

As we transition to new classes and new teams next term and new team opportunities in our workplaces, we'll use this experience as a reference for how to develop a team that works, and as a reminder of the work needed to build a team that truly succeeds.

REFERENCES

[1]   Scholtes, Peter R.; Brian L. Joiner; Streibel, Barbara J.: The Team Handbook 3rd edition, Madison, WI: Oriel, Inc., 2003.

[2]   GOAL/QPC and Joiner Associates (Editors), *The Team Memory Jogger: A Pocket Guide for Team Members*, Madison, WI: Oriel, Inc., 1995.

APPENDIX I. SUPPLEMENTAL MEETING AGENDA AND MINUTES

MEETING DATE: SATURDAY, APRIL 2, 200PM PSU LIBRARY

Agenda:
-Discuss assigned reading for presentation materials
-Develop outline for class presentation (see example slide outline below)
-Develop plan to involve class, encourage participation with presentation
-Assign responsibilities
-Assign responsibility for SR#1 article overview, key learning points (1 person)
-Assign responsibility for SR#2 article overview, key learning points (1 person)
-Assign responsibilities for SR#1 follow on research, implications (2 people)
-Assign responsibilities for SR#2 follow on research, implications (2 people)

-Strategy for research report
      -Journal entries for SR#1, SR#2 (each person)
      -Strategy for SR#3, SR#5, SR5a
      -Strategy for remaining SRs

-Outline schedule for term

Action Items:
-Everyone reads the assigned readings prior to the meeting
-Read syllabus and requirements for team assignments
-Chris to post team roster on yahoo groups
-Everyone signs up to yahoo groups

MEETING MINUTES: 4-2-11

Met at PSU library at 3:00 pm. We had originally scheduled 2 but were able to adjust the meeting time to 3 in order to accommodate a team member.

Since this is our first stab at this, we decided to divide and conquer.

We're confused by what they mean by the I/We Icebreaker. We're going to try a boggle icebreaker.

Division of Labor (written in class outline)

Ask questions "What are the performance challenges?" Ask the class for a story of a particular performance challenges.

Mix in questions that the class can answer individually with activities where you ask the class to deliberate in teams. "Teams" be their tables.

Ask the class for feedback individually, conduct an ice breaker, and then ask for another round of feedback and see how they compare.

We'll add in a "Discussion" slide for each round of discussion

Selected readings also to include future research? Include but may have to be cut for time.

We discussed our game plan for 30 minutes and then broke into our sections to get brief ideas down in PowerPoint

We came back after half an hour to discuss what we had developed for outlines and coordinate which discussion questions to ask. We also tweaked the order so that we discuss basic team skills after the ice breaker. This way they'll be more comfortable before the feedback sections to follow.

We discussed ways to manage our time in front of the class, e.g. building in buffer questions in case discussions fun long or short.

We'll upload slides by Monday night for compilation

Meeting Minutes – 4/6/2011

- Informal meeting during break period of class
- Next meeting will be Saturday at 4pm to work on Team Charter and plan for week 4 presentation
  - Matt will be doing the write-up for SR3

- Met to create team charter as part of class activity
  - Angie was scribe, Adam lead activity.
  - Team charter created with key milestones:
    - Week 7 research report due
    - Week 10 process report due
  - Established weekly meetings and brief meetings during class
  - Key Challenges:
    - Time commitment
    - Language/communication
    - New student
  - How to overcome
    - Regular meetings
    - Good minutes
    - Clarify often to avoid miscommunication
    - Google chat
- Angie presented the charter to class

- Tasks to complete before Saturday meeting
  - Briefly review week 4 outline and materials that our team will be presenting.

TEAM ONE MEETING MINUTES *4/09/11*

Present: Adam Bobek, Charles Tsai, Chris Imondi, Matt Trippel, Patrick, Angie Baltz
Next meeting: 4/13/11, After Class with Adam Charles and Patrick.

I.   MEETING MINUTES
- Adam to send email to TA regarding exercise two.
- Angie to type up the charter document and upload to the site.
- Our focus was to evaluate the team presentation on 4/20/11
  - -Team toolbox 30 min
    - -Angie and Chris to take these items. Angie will take forcefield Chris to take ID.
  - -Exercises - 60 min & Wrap up-5min
    - -Adam, Charles, and Patrick
  - -Matt to create the write up for selected reading number 3. As Matt will not be in class for our next presentation.
  - Matt to upload his work and the team will provide feedback based upon that upload.
  - Matt will bring a print out and submit a soft copy of the final team reviewed SR3
  - -Angie had an idea of acting out a productive session, for part of the presentation.
- MJ-
  - -Introduce charts and come up with different activities within the class
- -Project
  - Each member takes a text book for an update.
  - Chris and Patrick to take the upcoming future research on SR 4 and SR5.
  - Matt to take future research on selected reading 3
  - Angie to conduct research on reading number one
  - Adam to finalize Matt's research work on reading number 2.
  - Adam to update the memory jogger
  - Chris to update the TH text book
  - Matt to take the wisdom of teams.
  - Charles to update team memory jogger.
- Team to keep taking notes and record personal feelings.
- No meeting next weekend, just discuss and review online next wed.

TEAM ONE MEETING MINUTES *4/23/11*

Present: Charles Tsai, Chris Imondi, Matt Trippel, Patrick, Angie Baltz
Absent: Adam Bobek (absence communicated to team prior to meeting)
Next meeting: 4/27/11, During/After Class

I.   MEETING MINUTES

For Week 6 presentation:

- Matt to present intro, TH 6-24 to 6-32
- Chris and Patrick to present SR 5
    o   Patrick to cover summary and key learning
    o   Chris to cover implications and follow-on research
- Charles and Angie to present SR 5a
    o   Charles to cover summary and key learning
    o   Angie to cover implications and follow-on research
- Adam to cover TH Ch 7, summary and discussion (discussion may required support from other team members)
- Rough/preliminary draft of presentation materials should be completed and distributed by date TBD during class (likely Saturday of next week…follow-up meeting TBD)

Research Paper (Review/update of class materials)

- Everyone should familiarize themselves with selected readings, looking for obvious lacking or outdated papers (focus on SR 4, 6,7,8,9 since other readings have been read/reviewed in our write-ups).
- Rough draft of sections (approx 1-page each person) should be completed by Wednesday for discussion/assembly into rough paper by Wednesday.
    ▪   Angie to conduct research on reading number one
    ▪   Adam to finalize Matt's research work on reading number 2.
    ▪   Matt to finalize research on reading number 3
    ▪   Adam to update the memory jogger
    ▪   Chris to update the TH text book
    ▪   Matt to take the wisdom of teams.
    ▪   Charles to update team memory jogger.
    ▪   Patrick to update SR 4,6,7,8,9?? (poor note taking by matt….must clarify Patrick's responsibility)

Process Paper

- Team to keep taking notes and record personal feelings.

TEAM ONE MEETING MINUTES *5/26/11*

Present: Adam Bobek, Charles Tsai, Chris Imondi, Matt Trippel, Patrick, Angie Baltz
Next meeting: None

MEETING MINUTES

Phase I. Distribute Individual portions by Saturday night
Phase II. Complete respective sections Monday night
Presentation: Conclusion from paper, how we think of team, where did we finish? ----Distribute 10 questions among the team before by Sunday night (min 5)
Meet on Tuesday to review paper and dry run game.
360 evaluations due on June 8.

Intro (Angie)
-Communcation: How we interacted within the team (meetings, e-mail) and with the teacher/TA (Adam)
-Roles/Participation: Meetings during roles, managing absences, separating into subgroups (Chris)
-Execution of assigned tasks/Time efficiency/Scheduling: Did we execute the plan/schedule (Charles)
-Organization: Meeting structure, class learning was applied (Matt)
-Conflict resolution: how we reached consensus/made decisions (Conflict resolution)
-Assignment Success: how well do you think we did? What did we learn from class ownership? (Matt)
-Conclusion (Angie)
> -How does class material contribute to the success of the class; where do we fall on the team performance curve? Justify why we evolved on the performance curve based on the material in the body of the paper.

Each section should include:

> -How category skills progressed from start of project to end
> -What are the barriers to this categories, how/did we overcome barriers
> -Examples good/bad features of the categories
> -Use group deliverable milestones for each category
> -Any class learning especially beneficial?