

# TEAM COACHING AND TEAM BUILDING IN CE EDUCATION \*

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**Abstract:** *Today's typical graduate of Engineering schools in the Philippines lack what is known as soft skills. A thorough, working knowledge of soft skills is a vital importance to the graduate Engineer because he has to deal with people in the workplace. Although two of these -- communication and leadership skills -- are included in classroom discussions, others of equal importance, such as team coaching and team building are hardly discussed. To answer this need, the subject Social Science 20 – Human Resource Development, was offered in the College of Engineering. The subject matter includes self-development planning, team coaching and team building. In the area of team building the following are the topics covered. Time management, stress management and conflict resolution. In addition to the soft skills the student learns, he is also taught how to prepare a self-development plan. Hopefully, this will teach our graduates how to plan for their future. The offering of Soc Sci 20 in the CPU College of Engineering will equip Engineers with vital skills which will be an asset to them when working with industry.*

## ► INTRODUCTION

There is today a growing trend for engineering graduates not only to possess knowledge and skills in the technical aspects but also additional skills when they work with industry. It is, however, important to differentiate between knowledge and skill. Knowledge is defined as "acceptance with facts, truths, or principles, as from study or investigation; the fact or state of knowing; clear and certain mental apprehension;" while skill is a "developed proficiency or dexterity in some art, craft, or the like; deftness in execution or performance; a trade or craft requiring special training for competence or expertness in its practice." In other words, knowledge is "understanding what," while skill is "understanding how". When a curriculum describes a course objective with a noun it indicates the knowledge a student is supposed to learn. If, however, it is a noun what the student will learn is skill.

Why are these skills needed? Several reports and papers indicate that there is a pressing need for graduates to possess these additional skills now.<sup>1</sup> Another very important reason for having these additional skills is the requirements of the new ABET EC 2000 curriculum found in criterion 3. The following are the additional skills needed by graduates per criterion 3.<sup>2</sup>

3d "an ability to function in multidisciplinary teams"

3f "an understanding of professional and ethical responsibility"

3g "an ability to communicate"

3n "the broad education necessary to understand the impact of engineering solutions in a global/societal context"

3i "a recommendation of the need for an ability to engage in lifelong learning"

3j "a knowledge of contemporary issues"

What are these additional skills?<sup>3-6</sup> Several terms are associated with these skills among which these are organizational skills, soft skills, soft criteria and performance skills. These skills are classified into the following: major concentration management skills, communication skills, interpersonal skills, leadership skills and decision-making skills. The major concentration is management skills divided into sub areas of concentration. Some of the major concentration skills are partly covered in a typical engineering curriculum; among these are management skills and communication skills. The other's are, however, seldom taken or covered in the engineering curriculum.

There are three important skills which are requisite for graduates of engineering schools. These are teamwork skill, communication skills, and leadership skills. Why are these three soft skills needed? The answer why these skills are needed is because they have been identified by both academe and industry as necessary for graduates when they work with industry.<sup>7</sup>

## ► INTRODUCING SOFT SKILLS IN ENGINEERING EDUCATION

The College of Engineering of Central Philippine University was convinced that it was necessary to equip engineering graduates with these soft skills. It was decided that soft skills would be included in the present curriculum. The number of subjects needed in teaching soft skills was, however, limited to only one because the present engineering curriculum is already overloaded, making it

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impossible to add more than one subject.

To make sure that all engineering graduates acquire some of the necessary soft skills, the subject known as Soc Sci 20 – Human Resource Development, was made a required subject for all courses in the College of Engineering.

Soc Sci 20 consists of three major sections and was a 3-unit course. The first major area of the subject is preparing a self-development plan. Although this is not one of the major soft skills required, it was felt that the offering of this subject matter was important since a majority of graduate engineers at present do not have a self-development plan of their own. In the US the percentage of people without a self-development plan is around 85%. It is safe to presume that a much higher percentage prevails in the Philippines. Without a self-development plan engineers would never be able to easily plot their future. A very important skill involved in this subject area is communication skill. This is because students are required to prepare a self-development report of their future.

The second area covered by the subject is the concept of team coaching. This area seeks to teach students how to deal with different types of people they will work with when they have graduated and started to work with industry.

The third subject area covered in the course is team building. This area seeks to teach and impart to engineering students interpersonal skills they will need. Among these are stress management, time management, and conflict management skills.

#### ► SELF-DEVELOPMENT PLAN

This subject uses the reference on motivating and goal-setting.<sup>1</sup> This area of the subject explains the importance of preparing a self-development plan. The areas involved in preparing a self-development plan are the following: identity, values, goals, action plan, motivation, discipline, flexibility and outcome. Identification of one's self is important and the best person to do this is the one who is preparing the self-development plan. Of utmost importance is defining one's identity as plan. The student will be able to identify what his strengths and weaknesses are and how he performs his job and gets along with people.

For the next step, the student determines what his/her values are. Different terms are used to identify values and among these are principles, purpose, convictions, ideals and beliefs. Establishing values allows the student to set goals according to his priority. Without knowing the values, a student will hardly

be able to set the right priority.

The next area is setting goals. There are several reasons are given why any individuals cannot always achieve the goals he has set. Among the reasons are it entails hard work, the fear of failure or fear may grip individual. What results when a student defines his/her goals are based on his values. He should set specific goals and then write them down. Another very important factor is to consider is that goals should be attainable. It should be mentioned that when goals are achieved rewards will be given. Thinking about goals is necessary if the student wants to be successful; however to be successful an action plan has to be undertaken.

The preparation of the action plan is important and since goals are only dreams, an action plan has to be prepared to make it a reality. The action plan will always be based on the goals that have been set. The process of creating an action plan starts by identifying the top priority goals and these should be clear, concise and achievable. In the next column identify the activities needed to achieve the goal. When all these are done for all the goals that have been set, determine the resources needed for each activity listed. The last column will be the time frame necessary to accomplish the goals. The action plan may be successful so use motivation to achieve the successful implementation of the goals.

To motivate oneself to achieve the desired goals it is important to state an assumption: "People don't behave in a particular way without an incentive." There are several ways to motivate yourself. The first method that can be used is fulfilling a personal emotional need you desire. The important factors you can use are defined by the following criteria: The first is believe in yourself; this is followed by overcome your fears; and third is start as soon as possible; and finally, focus on your rewards. When you have established motivation in your action plan the next step is to discipline yourself to do the work needed to achieve the goal. This can be done in three steps: take responsibility of your self, do not wait but start at once and finally, practice good habits.

The goals that you set may not always be achieved so be flexible. You should not be afraid to change. There are different types of change it may be subtle or it may be drastic. It may however be advantageous to you if you know how to adapt to it. If you do, the key to change is to be flexible when necessary.

The last step is the outcome or results of your goals. It is important to explain that goals are merely

conceptual while the outcome is reality. When you evaluate the outcome remember to hold it in high regard, take pride in your success. Focus on what you did right and find out what we went wrong when you did not achieve your goal. When all of these are done it is time to set your next goal.

### ► TEAM COACHING

This area of the subject matter is important because it is a very efficient method for leadership training. Two important advantages of team coaching are it is a beneficial process or a win-win process; and it is forward-looking and helps a team win.<sup>9</sup>

It is, however, very important that a coach should learn five insights of people. These are people tend to act out the way they look at life; individual uniqueness should be valued and explored, motivation is usually related to discouragement and not any other problem; the best way to understand performance is to identify the consequence of an individual's action and lastly, people who are responsible for their actions tend to take responsibilities seriously. The process a coach should undertake uses a five-step method as is shown in Fig. 1.

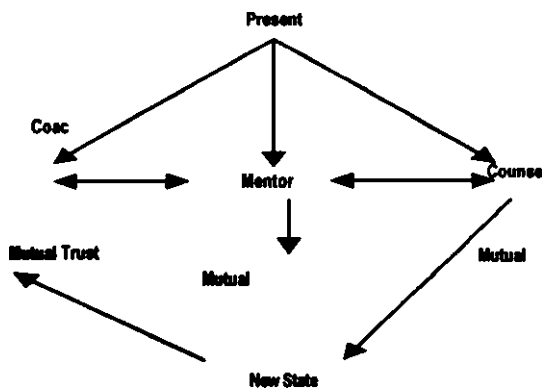


Figure 1 Five Steps Coaching Method

The process of learning starts with your present state which defines what you know about leadership. In order to learn leadership, the first step you must take is to be a coach and being able to share ideas with your team. This means that team members under this category understand how to do the job and mutual trust prevails. This can be done by inspiring, clarifying, probing, acknowledging and challenging. What you do is just coach your team and not mentor or counsel them.

The second step is you become a mentor, which means your team member does not know how to do the job and has to be taught. This can be done by teaching, instructing, leading and guiding people. In

order to make mentoring of people successful, mutual commitment to do the job is important.

The third step is when you have members of the team who do not want to do the job nor care to learn. It means you have to counsel these team members. The steps use are as follows: Agree that there is a problem and discuss the alternative solution. Next, agree on an action plan. This is followed by identifying the consequence and follow-up of what is to be done. When the work is done measure the progress made and record only your achievement. It is important that mutual respect between you, the coach, and your team members should exist, and be sure to reward your people involved when the goal is achieved.

The final step is known as a new state of existence and if you are a good coach you will a team which will now be efficient. There is mutual benefit to the whole team and your team will continue to learn. To further succeed as a team you must always identify your vision and explain how to reach it. The procedure is similar to the self-development plan discussed in the first part. After all of this is done, you have learned leadership skills and you are now a coach and a leader.

### ► TEAM BUILDING

There are four skills that should be taught in the area of team building. The area of motivating skills is already taught in both the first section of preparing a self-development plan and in the second section of team coaching. There is only therefore three team skills which are taught in this section.

The first skill taught is time management<sup>10</sup>. This skill seeks to answer the problem of seemingly having no time to get all the work done. The first step is to find out why things cannot be done. One important aspect that should be considered is the preparation necessary to get a job done. The next step is to act goals and priorities to be done. When the priorities have been set a plan of action is prepared and implemented. When time management is implemented in the office or your work identify typical time wasters. As much as possible these should either be eliminated or minimized. Steps to organize your work are then identified (including existing problems) and as soon as this is done you are able to control your work and subsequently your time. The ability to get things done when working with others is also explained. It is important to take control of your time especially when you meeting a deadline. A section on taking control of your mind is taught with problems of not being able to get things done. In doing this you will be able to do your work within the time

allocated to you.

The next skill that is taught is stress management<sup>11</sup>. Part of this topic is taught when as a coach you have to counsel how to deal with your team members who will be cause of conflict if not properly handled. The types of stress are identified as well as the three ways of responding to each type are explained. The three types of stress are the good, bad and ugly and how it affects you. The next lesson that is taught are priorities and expectations and how to cope with change. It is very important that you can confront and accept change. This will minimize its bad effects on your health.

The importance of communication in stress management is also included. The problem of stress present may only be due to communication problems. When you are able to develop good communication skills with yourself and with others you will be able to minimize if not entirely eliminate the stress. The ten techniques to manage stress is then taught. This will help you in combating stress and its unpleasant effects. You will also find out if you are stressed by your work. The three ways you can reduce negative effects of stress are diet, relaxation techniques and exercise. However, it is important that the three ways of combating stress should be done with cautions care so that you do not over-exert yourself, especially in the area of exercise.

The last team-building skill taught is managing conflict<sup>12</sup>. Part of this subject matter is covered by what is taught in team coaching when you act as a counsel. It is very important first of all to understand that conflict is inevitable and will always exist. Identifying the five myths about conflict is made. The next step is identify the stages of conflict from stage one or daily events to stage two, challenges and finally stage three, the action which identifies positive relationship during conflict. Developing approaches to conflict management is explained. The five styles of conflict management are then explained. These are integrating, dominating, avoiding compromising and obliging.

Each of these styles may be used in managing conflict, but be doubly sure to remember not to involve your emotions in solving the conflict. There is no right or wrong style; what you do is fit your style to the present existing conflict.

The emotional aspects of conflict is discussed. The three emotional dynamics of conflict are identified. The next lesson is the interpersonal gap

or problems of communication. The next aspect is emotional reflexively moving away from cooperation. The few elements present of emotional reflexively are given.

The last aspect is effective intervention in conflict resolution. When both parties cannot resolve the conflict, an intervention team is introduced. The composition of the team is explained as well as what should the team should do. The intervention team will establish the parameters of conflict, collect data, reframe the users and finally generate the alternatives. When a decision has been made the rest of the team should then be informed of the decision. When all of this is taught and you will learn it well, you will be ready and be able to learn another team-building skill.

## ► CONCLUSION

There are two contradicting views of engineering education today in the Philippines. One view is that of industry which wants academe to train engineers so that they will be ready to work with them at once. The concept means engineering education should cover the practice-based aspect and less of the theory part. In the case of academe it believes that they should understand the theory and be trained for lifelong learning. How to balance the views so that both industry and academe will be satisfied with the graduate engineers that the engineering school produce? There are four important task of engineering education and these are the following:

- a. Expanding intellectual horizon
- b. Providing discipline-specific knowledge base
- c. Preparing for lifelong learning
- d. Teaching how to function in society

The first two task are already in the Engineering curriculum and may be considered "native" or indigenous to it, the last two had been ignored and so neglected. Recently, however, their importance was realized, making its inclusion in the curriculum vital.

The introduction of the subject on Team-Coaching and Team-Building will be a step in answering the need for engineering students to learn how to function in society. While it is true that it will not cover all the necessary areas, it is still a step forward. The introduction of preparing a self-development, team-coaching and team-building will equip students of the College of Engineering of Central Philippine University with know how to work with industry. It is unique since it is one of the first schools

to do so. It should be mentioned that some of these subjects are offered in the Management Engineering course but not in other engineering disciplines.

It is high time to find out if other engineering schools will offer this subject especially those in Civil Engineering. It is also very important to remember that these topics are being offered abroad and it is about time that our Engineering schools should offer it to abreast with the rest of the world of preparing our graduates.

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