People Skills

The Tau Beta Pi Engineering Futures Program

The Tau Beta Pi Engineering Futures Program teaches the "soft", i.e., non-technical, skills that you will need to be successful in your careers. Engineering Futures courses may be presented to any college students, but only in sessions sponsored by Tau Beta Pi chapters. Because much of the training material is copyrighted, handouts and other course materials must not be distributed outside of these sessions.

Groups that would benefit from these courses include Tau Beta Pi chapter officers, officers of other engineering student organizations, student design project teams, and other non-affiliated students. The materials work best for groups of 15 to 25 students, and a group this size makes it worthwhile for a facilitator to travel to the school to present the material. However, an exception may be made for a group of less than 15 if the facilitator lives in the local area. If you are interested in hosting a session, please go to www.tbp.org, Chapters, Engineering Futures, Schedule a session, then fill out the session request or call Tau Beta Pi headquarters at 1-800-TAU-BETA.

The Engineering Futures curriculum comprises five courses: People Skills, Team Chartering, Group Process, Analytical Problem Solving, and Effective Presentation Skills.

- **People Skills**
  - Communicating Interpersonal Problems
  - Diagnosing Interpersonal Problems
  - Dealing with Motivational Problems
  - Dealing with Ability Problems
  - Dealing with Emergent Problems
- **Team Chartering**
  - Defining the Role of Teams
  - Developing the Team's Charter
- **Group Process**
  - Planning Effective Meetings
  - Conducting Effective Meetings
- **Analytical Problem Solving**
  - The Problem Solving Model
  - Creative Thinking
  - Decision Making
- **Effective Presentation Skills**
  - Overcoming the Fear of Public Speaking
  - Impromptu Speaking
  - Effective Use of Visual Aids

Communicating An Interpersonal Problem

People generally prefer to avoid confrontations. When a person is not behaving the way you think he/she should, you often put off mentioning it. Resentment grows until you can stand the situation no longer and you confront the other person in a very punishing way.

We call this "**gunnysacking**." Each time you do not confront a situation is like putting another rock in a gunnysack (a burlap bag normally filled with 100 pounds of potatoes) you are carrying around on your back. Eventually the gunnysack becomes too heavy of a load to bear, it bursts, and you dump out all the rocks at once with little concern for the damage they might cause. To mitigate the risk of exacerbating a difficult situation, you should follow the following three rules for interpersonal problem communication:

• **Be Direct!**

To avoid the risk of "gunnysacking," you should communicate the problem when it first occurs, before the frustration and anger build to the point where you can no longer contain them. When communicating the problem, don't play games such as "sandwiching" (paying an insincere complement before stating the problem), acting as if you and the other person are BFFs, asking dumb questions. Come quickly to the point.

• **Be Specific!**

Just being direct is not enough. The other person must understand, very clearly, what you perceive the problem to be. You must communicate the problem in terms of how the observed behavior was different from what was expected. The more specific you are, the lower the probability of further misunderstanding.

• **Be Non-punishing!**

If the other person's actions have made you angry, wait until you have calmed down before confronting him or her. This does not mean putting off the problem indefinitely, but you should wait until you can discuss the problem in a relatively unemotional manner.

The worst mistake you can make is to allow your anger to treat the other person in an abusive way. Not only will it likely not solve the problem, it will definitely not build the kind of relationship with the other person that would lead to cooperation in the future.

You must communicate, then resolve, problems in a way that builds the relationships necessary to not only get the immediate problem solved but also to able to work effectively with the other person in the future. It is of little use being direct and specific if you do it in such a way that it makes the other person angry and unwilling to work to resolve the problem. Always deal with the behavior you wish to see changed – never attack the other person.

Diagnosing The Cause Of The Problem

When the other person understands what you perceive the problem to be, you can begin dialogue with the person to find a solution.

After communicating the problem, you, the problem solver, must determine the root cause of the problem. The other person is not behaving the way you think he or she should because he or she is either:

• **Unwilling,**

• **Unable, or**

• **Both.**

Unwillingness to modify one's behavior is due to a lack of motivation. Inability to modify one's behavior is due to a lack of motivation or to a lack of knowledge. Frequently, the lack of knowledge is caused by unwillingness to learn, or the unwillingness to behave in the desired manner is due to a lack of knowledge. In other words, the cause of the problem is a combination of both ability and motivation.

It is important for you to determine the cause accurately, as motivation problems are dealt with differently than ability problems. When the problem is due to both, the motivation component has to be dealt with first.

It is essential to diagnose the problem correctly. Some diagnostic probes you might use are:

* **It doesn't sound as if you really want to get it done.**

* **Are you saying you can't get the job done?**

* **I'm not sure I understand what the problem is.**

Dealing With Motivational Problems

Motivational problems are solved by making the other person want to change his or her behavior, either because of the positive consequences of changing that behavior or the negative consequences of not changing that behavior.

There are two types of consequences:

* **Natural**
    * **To the task**
    * **To others**
    * **To yourself**
* **Imposed.**

Natural consequences can be to a task the other person is expected to perform, to others who are affected by the person's behavior, or to you. Natural consequences will result if no action is taken to resolve the problem

Imposed consequences are sanctions that you impose on the other person if he or she does not comply.

It is sometimes easier to threaten imposed consequences than to think of natural consequences. However, the imposed consequences only work as a motivator as long as the other person fears the threat. Natural consequences, on the other hand, appeal to the person's desire to do the right thing. Consequently, they have a much longer lasting effect. Natural consequences also provide valuable information and help build or maintain good interpersonal relationships.

Only use imposed consequences as a last resort.

Dealing With Ability Problems

Rarely do you face pure ability problems or "impossibility blocks", where a person simply cannot do a task you have assigned. More often, a person has an "ability block" that makes the task difficult but not impossible, e.g. the person considers the task hard, boring, dangerous, etc.

In such cases, the problem is caused partly by motivation, partly by ability. Many times, correcting the "difficulty block" solves the motivational problem. In other situations, e.g., if the task needs to be completed quickly, it is often better to fix the motivational problem immediately and handle the ability problem later.

With an "impossibility block", even if you held a gun to the person's head, he or she would not be able to perform the task. To solve pure ability problems, you should get the other person involved in finding a solution.

* **Ask the person for his or her ideas on how to solve the problem**

* **"Prime the pump," if necessary**

* **But try not to "poison the well"**

* **And don't play games!**

If the person has no idea where to start, you should get the conversation started by "priming the pump," i.e., throwing out a suggestion and encouraging the other person to offer alternatives. However, there is a risk of "poisoning the well" if the other person believes that your suggestion is the solution you believe is correct. You must, essentially, initiate a **brainstorming** session to get the other person thinking of ideas. Also, be open to all the other person's ideas. Don't play the game of leading the person to come up with your pre-conceived solution. If an idea of the person is unacceptable, explain why, but be willing to accept ideas that may not agree with your own.

Dealing With Emergent Problems

An emergent problem is one that emerges in the middle of solving another interpersonal problem. It is different from the original problem that you are working on, and stands in the way of fixing that original problem. Emergent problems can be manifested as anger, high emotion, obfuscation, sarcasm, etc. The emergent problem must be acknowledged and handled in some way before returning to the original problem. Some emergent problems must be solved before returning to the original problem; others may be set aside for later resolution once acknowledged.

A tool you can use when you observe an emergent problem is to cut the person some "**SLAC**" to get to the source of the problem.
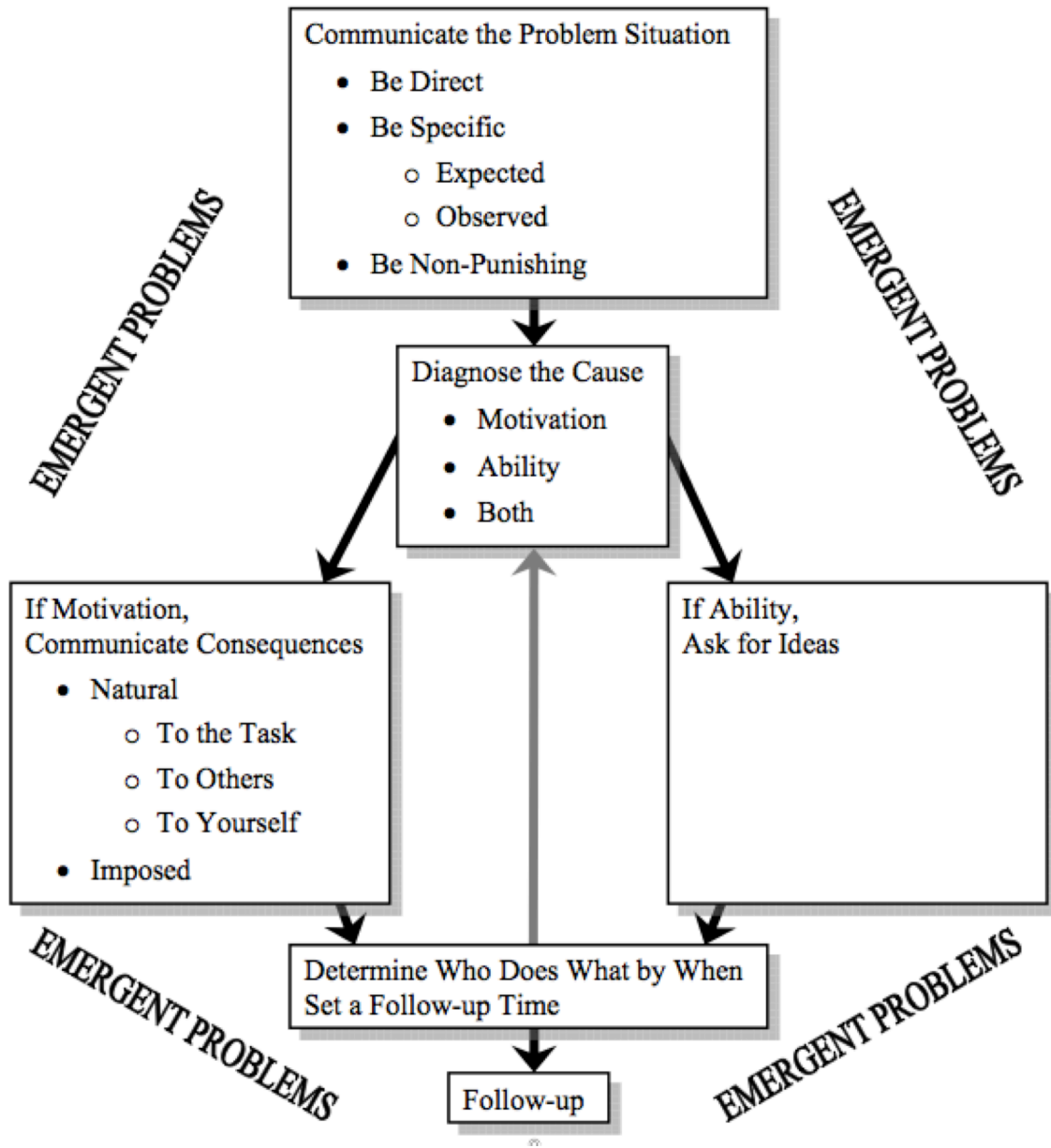
• **S**top your original line of questioning – show concern

• **L**ook and **L**isten for the underlying causes

• **A**sk questions

• **C**heck for understanding.

Always schedule a follow-up meeting.

Once you are sure you understand the nature of the emergent problem, you must decide whether it needs to be solved immediately or if it can be acknowledged then set a time to solve it later. Ask the other person if he or she is satisfied with your decision before continuing with the problem solving process.

On the following page is a diagram illustrating the entire process.

Communicate the Problem Situation
- Be Direct
- Be Specific
  - o Expected
  - o Observed
- Be Non-Punishing

EMERGENT PROBLEMS

EMERGENT PROBLEMS

Diagnose the Cause
- Motivation
- Ability
- Both

If Motivation,
Communicate Consequences
- Natural
  - o To the Task
  - o To Others
  - o To Yourself
- Imposed

If Ability,
Ask for Ideas

EMERGENT PROBLEMS

EMERGENT PROBLEMS

Determine Who Does What by When
Set a Follow-up Time

Follow-up

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