Unless you are planning to take up a monastic lifestyle and vow of silence, teamwork and collaboration will be an inevitable part of your future career. Indeed, communication is often ranked at or near the top of desirable qualities for employees in virtually every profession. An unfortunate reality, however, is that communication practices often fail, especially in group contexts. The ability to effectively deal with tensions and communication obstacles as they arise is vital for guaranteeing that projects and tasks are completed successfully. But how, exactly, can team members collaboratively improve group dynamics and avoid major problems?

In a recent article, Dr. Marianne LeGreco of the University of North Carolina at Greensboro proposes that communication should be conceptualized as a ‘circuit of interaction’ that is constantly in flux and must be managed. She highlights five key practices that should be emphasized to achieve desirable group outcomes:

1) Reflexivity - Group members should constantly be self-aware of the impact their actions and words might have on overall group dynamics. How do your communication practices relate to the atmosphere your group is trying to create? Being productively critical of yourself and your team will help to mitigate any negativity before it snowballs out of control.

2) Managing Paradox - What is said is often very different from what is actually done. This type of communication paradox can lead to highly contentious interactions when teams hit bumps in the road. “Re-framing” communication expectations is one way of dealing with this sort of tension—rather than treating paradoxical moments as instances of irreconcilability, find ways to seek new solutions that will help the team evolve.

3) Addressing Ambiguity - As famed psychoanalyst Sigmund Freud once observed, “Neurosis is the inability to tolerate ambiguity.” Team members will inevitably have different understandings and perspectives that may be incompatible. Strive to be as clear and direct as possible so that ambiguity is minimized and team members are all operating on the same page.

4) Attending to the Unintended - Although certainty and finality are sought by most engineers, real life situations are rarely clear cut and direct. When unexpected circumstances arise, strive to be flexible and receptive to potential change. Teams that are static and unwilling to compromise will ultimately be unable to move forward in positive ways.

5) Navigating Communication Webs - Communication happens in a variety contexts that can sometimes be very difficult to understand or observe. Who are the participants in a discussion? What skills or qualities do they bring to the table? Who might not be included in an interaction and what are the implications of that exclusion? Be aware of the ‘webs’ you are communicating in and the impact they have on your colleagues.

Although these “best practices” may, at a surface level, seem very simplistic, these strategies are very rarely actively employed in group situations. Developing effective teamwork skills is not something that magically occurs—it requires a conscious, deliberative effort that many team members overlook. Integrating these strategies into your next team interaction may make all the difference between success and failure.
You walk into a room, sit down, the lights dim and you mentally check out: There it is, a PowerPoint presentation from the early 90’s, complete with sentences, clip-art, crazy transition noises. Even the thought of this image makes you check out, because presentations with these features are “so last decade.”

Don’t be caught in the past! Just as engineering designs and strategies are changing, so are communication techniques. The following are just a few major changes industry is begging for and that the CLEAR Program is already including in their teaching.

First, start with a plan. This means that every visual aid should start with a plan or storyboard before being crafted into PowerPoint slides. This process requires organization to be at the forefront of creation.

If your ideas matter, then your design matters. Your visual aid should not be the last part of your presentation creation. Using this aid allows you the opportunity to better connect with and show your audience you idea, rather than just telling them about it. Remember, say it and then show it.

Display one idea per slide. Less is more! This is your chance to communicate ideas rather than decorate. Your design should express what is necessary; minimize and eliminate the excess.

Last, but definitely not least, your design should be incomprehensible without you. The visual aid is a tool for your presentation, not speaking notes, or a speaking outline. Remove unneeded writing from slides and increase the effectiveness of your visual. The focus should be on the presenter. A visual aid is meant only to enhance what the speaker is saying rather than replace the speaker.

Next time you give a presentation with visual aids, strive for the excited eye raise and attentive posture rather than the audible sigh from the 90’s.
"Well, an engineer would understand what this means." Have you ever said this? If so, there is something you can learn that will get you better grades, win you more friends, and make you fewer enemies. Presented for you here is that lesson, free of charge.

Modern linguists use the concept of markedness to explain why a particular bit of language is acceptable to some people while others would call those same words ungrammatical. “This floor needs swept.” You may or may not feel that the previous sentence is acceptable, grammatical English. This is because the sentence is marked. In the same way, someone who has learned English as a second language generally marks their speech with an accent. If English is your first language, imagine for a moment how your friends and family would react if you started affecting a foreign accent in your everyday speech. They might find your new habit amusing, annoying, or alienating. One thing they would not find it is normal. Your speech would be marked, and that mark would grate on those who knew you could do without the mark.

Now you understand the concept of markedness in general terms. Next, you need to know that as an Engineer, you have an accent. You speak Engineer-ese. Engineer-ese is not a separate language from English; it is a dialect or variety of English. The thing to be aware of is that when you say: "The neologistic-hyperbolt needs to be pseudorarified at a rate of thirty-nine furlongs/fortnight before ultracompundulating its gigawatt-rated crystaltron" to someone who does not speak Engineer-ese, your language is marked. While you may feel that these are the marks of intelligent speech, to the other person, it just sounds foreign and marked. It sounds like this: “I done gone said the thing what y’uns might could do, y’hear?”

There are several possible reasons you might use the wrong set of marks in communication.

1) You didn’t know they were there. Many people are unaware that their speech is marked by their community. You have been enlightened. Make it a goal to adapt to the language style others use, and your communication will be clearer.

2) You think it makes you sound smarter. Intelligence is the ability to take a complex idea and make it understandable to those unfamiliar with that idea. In his book, A Brief History of Time, Stephen Hawking clearly demonstrates that he is a very intelligent man. Strive from this time forward to communicate with Hawking-like intelligence.

3) You want others to feel less intelligent. If you actively seek to show others that they don’t belong with you, others will make sure not to be with you. The stereotypical engineer has few non-engineer friends; this is why. Alienating others alienates you. Seek to join the speech communities of those around you, and those around you will like you. This includes writing teachers, bosses, and members of the interesting sex who are not engineers.

Make a new goal today: work on your English accent.
Engineers Without Borders-USA recently held its international conference in Las Vegas, celebrating their first 10 years. The three day conference included learning sessions, project presentations, and dialogue sessions designed to prepare engineers to respond to emerging global issues – including one session on how universities can better prepare engineering students to make meaningful global contributions. Keynote presentations were given by Dr. Bernard Amadei, the founder of EWB-USA, Dr. John Tracy, the CTO of The Boeing Company, and Dan Roam, author of the international bestseller The Back of the Napkin: Solving Problems and Selling Ideas with Pictures. There are over 12,000 student and professional members of EWB-USA who are engaged in projects in 45 developing countries. Interested in joining a student chapter of EWB? Information is at the web site: www.ewb-usa.org

Engineers from CDM Smith, Inc. have been recognized by the American Council of Engineering Companies’ 46th Annual Engineering Excellence Awards—“the Academy Awards of the engineering industry”—for their 5.1 mile extension of the TRAX light rail system to West Valley City. As part of the extension, the project team designed cost-effective bridges to span I-215, the Jordan River, and two major thoroughfares. The project also included three rail stations and a central transfer station, and engineering of the train electrical systems and a traffic impact analysis. CDM Smith also designed the 6 mile Airport line which includes solar powered station platforms and planned green space.

You might know that Utah beat Dartmouth College for the NCAA basketball title in 1944. Did you know that some of those players went on to be successful engineers? One of them was Wataru “Wat” Misaka, the first Asian-American to play professional basketball. Already inducted into the Utah Sports Hall of Fame and the Japanese American Sports Hall of Fame, Mr. Misaka will receive the University’s highest award at this year’s commencement, an honorary Doctorate of Humane Letters. Mr. Misaka graduated from the U (BS ’48) and spent his post-basketball career as an electrical engineer in Bountiful where he and his wife still live. (Interested in Mr. Misaka and the rest of the team? A new book by Josh Ferrin (BA ’04) tells more of the story, Blitz Kids: The Cinderella Story of the 1944 University of Utah National Championship Basketball Team.)

In the 1960’s during the heat of the space race, NASA decided it needed a ballpoint pen to write in the zero gravity conditions of its space capsules.

After considerable research and development, the Zero Gravity Pen was developed at a cost of over $1 million. The pen worked and even enjoyed modest success as a novelty item back here on earth.

Faced with the same problem but a tighter budget, the Soviet Union devised another solution: Soviet cosmonauts used a pencil.

*CLEAR cannot guarantee that everyone will find this joke funny.