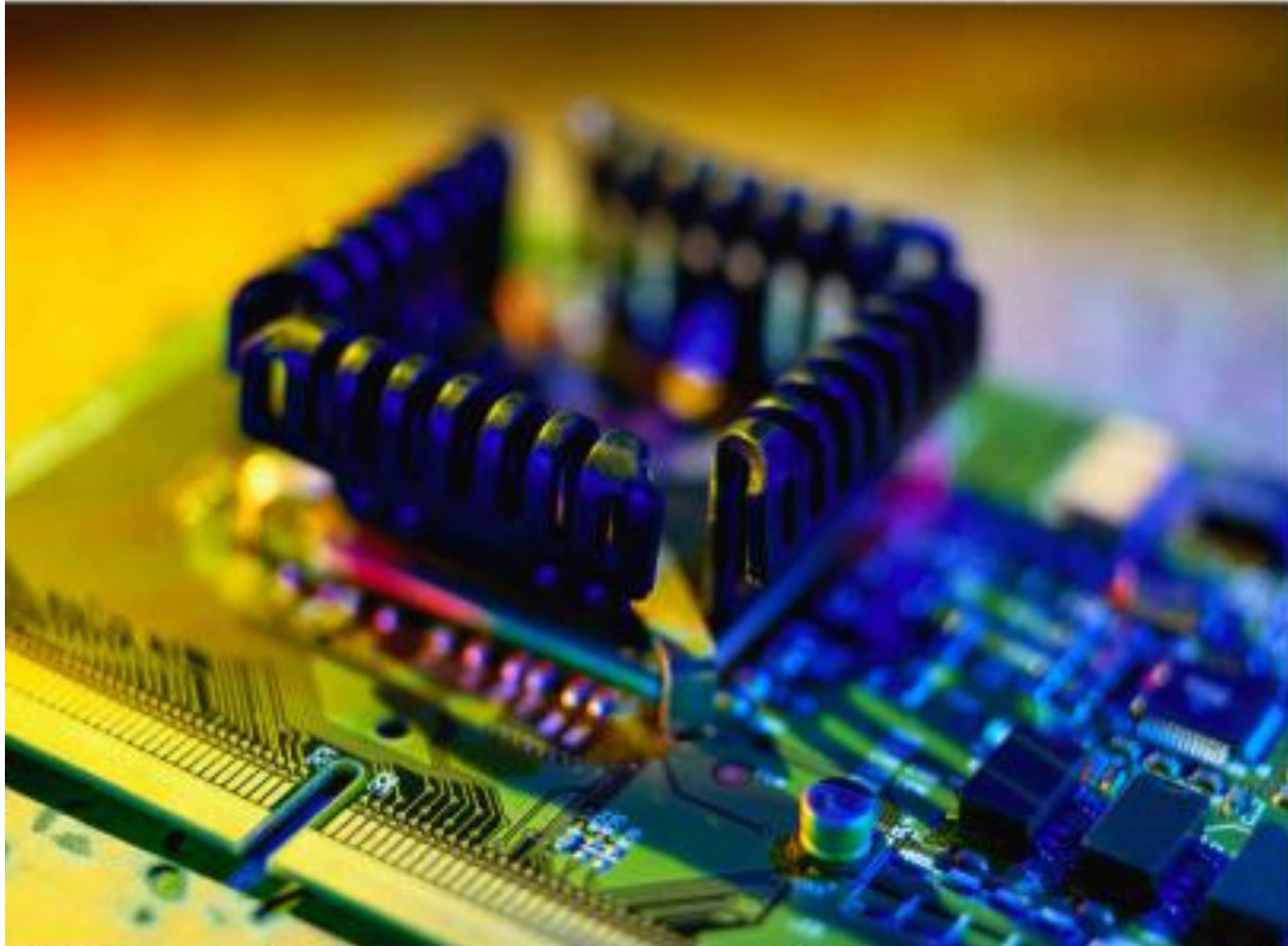


# INSPIREEE

INSPIRATIONAL SCRIPTS, PERSONALITIES AND INNOVATIVE RESEARCH

NEWSLETTER/ EEE/ VOLUME 4: ISSUE 1- JULY-2015



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**K.L.N. COLLEGE OF ENGINEERING**  
Approved by AICTE and Affiliated to Anna University  
An ISO 9001 : 2008 Certified Institution  
Pottapalayam - 630 612, Sivagangai Dt., Tamilnadu.

# INSPIREEE

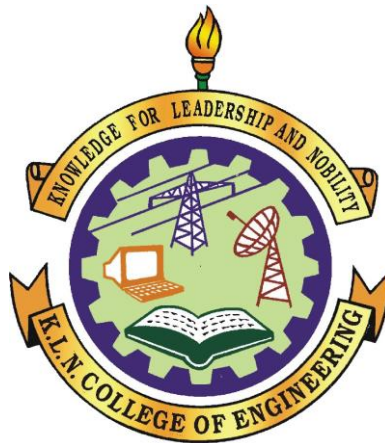
*INspirational Scripts, Personalities and Innovative Research of EEE*

## VISION

To become a high standard of excellence in Education, Training and Research in the field of Electrical and Electronics Engineering and allied applications

## MISSION

To produce excellent, Innovative and Nationalistic Engineers with Ethical values and to advance in the field of Electrical and Electronics Engineering and allied areas.



**K.L.N. College of Engineering**

Pottapalyam – 630 612, Sivagangai District, Tamil Nadu, India

# CONTENTS

	Message from Head of the Department	1
	Editorial Crew	2

<b>S. No.</b>	<b>Content Name</b>	<b>Page No.</b>
---------------	---------------------	-----------------

---

## **ENVIRONMENTAL PROTECTION AND GLOBAL WARMING**

1	Global Warming	4
2	Climatic Change	6

## **EFFECTIVE COMMUNICATION**

3	Effective Communication	10
4	Effective Communication	13

5	<b>PROFESSIONAL ETHICS</b>	20
---	----------------------------	----

## **PROJECT MANAGEMENT**

6	Project Management & Budgeting	22
7	Project Management	23

8	<b>Dr. A P J ABDUL KALAM</b>	30
---	------------------------------	----

## **ROLE & IMPACT OF ENGINEER IN SOCIETY**

9	E-Governance	33
---	--------------	----

## MESSAGE FROM HEAD OF THE DEPARTMENT

**Dr. S.M. KANNAN, M.E., Ph.D.,  
FIE, MISTE, MIEEE (USA)  
Professor & Head, EEE,  
K.L.N. College of Engineering**



### MESSAGE

In this issue, students were asked to submit articles covering the Program outcomes as given in NBA. This to create an awareness on the POs and to understand well so as to apply in their career. The articles on, Professional ethics and Social responsibility in life, ways to improve communication skills, Role of engineers and Society, Global warming will motivate the students to inculcate in their career. A section on life of Abdul Kalam will inspire everyone.

Best wishes to the contributors

(Dr. S.M. Kannan)  
Head of the Department – EEE



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# **ENVIRONMENTAL PROTECTION AND GLOBAL WARMING**

# GLOBAL WARMING

**RADHIKA S (132036) & PRATHIBAH S (142907), III year**

The serious problem that is faced by the people is the rising of the Earth temperature.

Our Earth is warming. Earth's average temperature has risen by 1.4°F over the past century, and is projected to rise another 2 to 11.5°F over the next hundred years. Small changes in the average temperature of the planet can translate to large and potentially dangerous shifts in climate and weather.

The evidence is clear. Rising global temperatures have been accompanied by changes in weather and climate. Many places have seen changes in rainfall, resulting in more floods, droughts, or intense rain, as well as more frequent and severe heat waves. The planet's oceans and glaciers have also experienced some big changes - oceans are warming and becoming more acidic, ice caps are melting, and sea levels are rising. As these and other changes become more pronounced in the coming decades, they will likely present challenges to our society and our environment.

## **Health and Environmental Effects:**

Greenhouse gas emissions could cause a 1.8 to 6.3° Fahrenheit rise in temperature during the next century, if atmospheric levels are not reduced. Although this change may appear small, it could produce extreme weather events, such as droughts and floods; threaten coastal resources and wetlands by raising sea level; and increase the risk of certain diseases by producing new breeding sites for pests and pathogens. Agricultural regions and woodlands are also susceptible to changes in climate that could result in

increased insect populations and plant disease. This degradation of natural ecosystems could lead to reduced biological diversity.



## **Environmental protection**

It is a practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans. Due to the pressures of population and technology, the biophysical environment is being degraded, sometimes permanently. This has been recognized, and governments have begun placing restraints on activities that cause environmental degradation. Since the 1960s, activity of environmental movements has created awareness of the various environmental issues. There is no agreement on the extent of the environmental impact of human activity, and protection measures are occasionally criticized.

Academic institution now offer courses, such as environmental

studies, environmental management and environmental engineering, that teach the history and methods of environment protection. Protection of the environment is needed due to various human activities. Waste production, air pollution, and loss of biodiversity (resulting from the introduction of invasive species and species

extinction) are some of the issues related to environmental protection. Environmental protection is influenced by three interwoven factors: environmental legislation, ethics and education. Each of these factors plays its part in influencing national-level environmental decisions and personal-level environmental values and behavior.



## Climatic change

**VAHITHA SULTHANA A (132002) & SRINITHI TRISHNA S  
(132000), III year**

### **What do we mean by global climate change?**

There is increasing scientific evidence showing that human enterprises -- especially burning fossil fuels such as coal, oil and natural gas - are altering the earth's climate. Burning fossil fuels releases carbon that has previously been locked up in coal, oil and natural gas for millions of years. The carbon in these fossil fuels is transformed into carbon dioxide (CO<sub>2</sub>), the predominant gas contributing to the "greenhouse effect," during the combustion process.

The greenhouse effect allows energy from the sun to pass through the earth's atmosphere and then traps some of that energy in the form of heat. This process has kept global temperatures on earth relatively stable - currently averaging 60 degrees Fahrenheit (33 degrees Celsius) -- and livable for human populations. Nonetheless, jumps in emissions of CO<sub>2</sub> and other gases, such as methane, traced to fossil fuel burning and other human endeavors, boost heat trapping processes in the atmosphere, gradually raising average world-wide temperatures.

The US Environmental Protection Agency observes that the surface temperature this century is as warm or warmer than any other century since at least 1400 AD. The ten warmest years on record have all occurred since 1980. The warmest year so far on record was 1998.

The release of vast stores of fossilized carbon threaten to raise average global temperatures at an accelerated pace. Scientists have observed that the earth's surface warmed by approximately 1 degree Fahrenheit during the 20th century. The Intergovernmental Panel on

Climate Change (IPCC), the scientific advisory body created by the United Nations to analyze the science of global climate change, reports that unless the world takes drastic and immediate steps to reduce the emissions of gases that are creating a magnified greenhouse effect, global temperatures could rise another 1.6 to 6.3 degrees Fahrenheit by the year 2100. This would represent the fastest rate of warming since the end of the last ice age more than 10,000 years ago.

It is difficult to know precisely how quickly the earth's temperature will jump since human influences mix with natural events that may slow or accelerate these long-term trends. It is quite possible, however, to identify actions to reduce causes of climate change, thereby reducing the intense risks associated with such a hot planet. Energy-related ventures account for about 86 percent of all greenhouse gas emissions linked to human activities. Since power plants, and related electricity generation operations, produce 36 percent of total US greenhouse gas emissions, reductions in this sector can play a major role in slowing global climate change.

### ***What are the consequences of global climate change?***

#### **Human health impacts**

Global warming poses a major threat to human health by way of increased infectious diseases. Increasing temperatures nurture the spread of disease-carrying mosquitoes and rodents. IPCC scientists project that as warmer temperatures spread north and south from the tropics and to

higher elevations, malaria-carrying mosquitoes will spread with them, significantly extending the exposure of the world's people to malaria. Scientists at the Harvard Medical School have linked recent US outbreaks of dengue (break bone) fever, malaria, hantavirus and other diseases to global climate change.

**Extreme weather impacts:** The IPCC identifies more frequent and more severe heat waves as a potential lethal effect of global warming. Some segments of the population, especially people in a weakened state of health, are vulnerable to heat stress. Recall the deadly 1995 Chicago heat wave that stretched on for days and killed 669 people during the summer of 1995. Though imprecise in their predictions, global weather models indicate that extreme weather events are more likely to occur from increases in global average temperatures. The ocean temperature shifts, especially the El Nino and La Nina events in the southern Pacific Ocean, may occur more rapidly and more often, generating major changes in global weather patterns.

**Coastal zones and Small Island flooding:** As global temperatures rise, sea levels will also rise. The seawater expands as it warms. Water previously bound to mountain and polar glaciers melts and flow into the world's seas. Much of the world's population, especially the poorer people of the world, live at or close to sea level, areas vulnerable to the lethal combination of rising sea level and increasingly severe ocean storms. The rising water table along coastlines could also encourage the release of pathogens into septic systems and waterways. More than half the world's people live within 35 miles of an ocean or sea. Areas at risk include developed coastal cities, towns and resort areas, saltwater marshes, coastal wetlands, sandy beaches, coral reefs, coral atolls, and river deltas. Sea levels have already risen 4 to 10 inches over the last century.

## **Forest devastation**

Forest ecosystems evolve slowly in response to gradual natural climate cycles. The rapid pace of global climate change resulting from combustion of fossil fuels and other industrial and agricultural activities disrupts such gradual adjustments. Many tree species may be unable to survive at their present sites due to higher temperatures. Increased drought, more pests and disease attacks, and higher frequency of forest fires, are all projected to occur at spots throughout the globe. The IPCC report states that "averaged over all zones, the [global] models predict that 33 percent of the currently forested area could be affected . . ."

## **Agriculture**

Agriculture depends on rainfall, which impacts how to manage crop production, the types of seeds planted, and investments in irrigation systems. Changing weather patterns associated with changing global climate patterns pose major challenges for the farmers, small and large, who feed the world's growing population. Just as forest ecosystems face the stress of loss of traditional habitat, so will the world's farming community.

## ***How does electric power production affect the global climate?***

The generation of electricity is the single largest source of CO<sub>2</sub> emissions in the United States. The combustion of fossil fuels such as coal is the primary source of these air emissions. Coal supplies 57 percent of the total energy harnessed to generate electricity (and approximately 86 percent of all coal consumed in the United States is used for electricity generation). Burning coal produces far more CO<sub>2</sub> than oil or natural gas. Reducing reliance upon coal combustion has to be the cornerstone of any credible global climate change prevention plan.

Some methods of electricity production produce no or few CO<sub>2</sub> emissions - solar, wind, geothermal, hydropower, and nuclear systems particularly. Power plants fueled by wood, agricultural crop wastes, livestock wastes, and methane collected from municipal landfills release CO<sub>2</sub> emissions but may contribute little to global climate change since they also can prevent even greater releases of both CO<sub>2</sub> and methane.

Biomass fuels that depend on forest resources must be evaluated carefully since the stock of forests world wide represent a storehouse for CO<sub>2</sub>. If forests are harvested for fuel to generate electricity, and are not replaced, global climate change could be accelerated. If electricity generators use forest or other plant stocks that are being regrown in a closed cycle of growth, combustion and regrowth, the CO<sub>2</sub> emissions may be offset by plant and animal growth that withdraws CO<sub>2</sub> from the atmosphere. Closed cycle systems such as this one are carbon "neutral." These neutral biomass systems represent progress since they displace the fossil fuel combustion that would otherwise increase the CO<sub>2</sub> linked to rising temperatures.

On a pound for pound basis, methane has over 20 times the heat trapping capacity of CO<sub>2</sub>. Power plants that capture methane -- or prevent methane releases -- are therefore extremely beneficial when it comes to slowing global climate change. Methane is produced by the natural decay of organic materials underground or in other spots lacking oxygen. Municipal landfills, large piles of animal wastes, and other sites where plant wastes decay without exposure to the air, generate large volumes of methane that escape into the atmosphere. Natural gas is simply methane produced by the decay of plant and animal matter that is captured beneath the earth's surface over millions of years. It is

therefore important to stop methane production or capture and burn it so that it does not escape into the atmosphere, where it may accelerate global climate change.

### ***How can consumer electricity choice address global climate change?***

The impact of climate change may be pervasive. Still, it is quite difficult to predict specific outcomes. The potential impacts cited are but a sample of a much longer and even more sobering litany in the scientific literature. Most of the steps consumers can take to reduce levels of greenhouse gases will have beneficial effects on public health and the environment -- regardless of the actual degree of future changes in global climates.

The new opportunity to choose among electricity suppliers in competitive retail markets allows all of us to select power sources that generate the fewest CO<sub>2</sub> and methane emissions when they generate electricity.

If concerned about global climate change, seek out companies and products that do not rely on coal for electricity generation. Renewable energy -- wind and solar fuels in particular -- release negligible amounts of gases contributing to climate change, even when the manufacturing of the hardware is considered. Buying electricity from landfill gas power plants is also a good response to the global climate change threat since methane is not allowed to seep into the atmosphere. Because fossil fuels still remain a major part of most energy diets in the short term, consumers can encourage their service providers to seek out fossil fuels with the lowest carbon content, beginning with natural gas power plants and then a ranking of oil-fired facilities.

# **EFFECTIVE COMMUNICATION**



# Effective communication

SASIKUMAR D (142914), III year

Communication is about more than just exchanging information. It's about understanding the emotion and intentions behind the information. Effective communication is also a two-way street. It's not only how you convey a message so that it is received and understood by someone in exactly the way you intended, it's also how you listen to gain the full meaning of what's being said and to make the other person feel heard and understood..

## Barriers to effective interpersonal communication

- **Stress and out-of-control emotion.** When you're stressed or emotionally overwhelmed, you're more likely to misread other people, send confusing or off-putting nonverbal signals, and lapse into unhealthy knee-jerk patterns of behavior. Take a moment to calm down before continuing a conversation.
- **Negative body language.** If you disagree with or dislike what's being said, you may use negative body language to rebuff the other person's message, such as crossing your arms, avoiding eye contact, or tapping your feet. You don't have to agree, or even like what's being said, but to communicate effectively without making the other person defensive, it's important to avoid sending negative signals

## Improving communication

People often focus on what they should say, but effective communication is less about talking and more about listening. Listening well means not just understanding the words or the information being communicated, but also understanding the emotions the speaker is trying to communicate.

By communicating in this way, you'll also experience a process that lowers stress and supports physical and emotional well-being. If the person you're talking to is calm, for example, listening in an engaged way will help to calm you, too. Similarly, if the person is agitated, you can help calm them by listening in an attentive way and making the person feel understood.

## How do you become an engaged listener?

If your goal is to fully understand and connect with the other person, listening in an engaged way will often come naturally. If it doesn't, try the following tips. The more you practice them, the more satisfying and rewarding your interactions with others will become.

**Focus fully on the speaker,** his or her body language, tone of voice, and other nonverbal cues. Tone of voice conveys emotion, so if you're thinking about other things, checking text messages or doodling, you're almost certain to miss the nonverbal cues and the emotional content behind the words being

spoken. And if the person talking is similarly distracted, you'll be able to quickly pick up on it. If you find it hard to concentrate on some speakers, try repeating their words over in your head—it'll reinforce their message and help you stay focused.

- **Favor your right ear.** The left side of the brain contains the primary processing centers for both speech comprehension and emotions. Since the left side of the brain is connected to the right side of the body, favoring your right ear can help you better detect the emotional nuances of what someone is saying. Try keeping your posture straight, your chin down, and tilting your right ear towards the speaker—this will make it easier to pick up on the higher frequencies of human speech that contain the emotional content of what's being said.
- **Keep stress in check**

To communicate effectively, you need to be aware of and in control of your emotions. And that means learning how to manage stress. When you're stressed, you're more likely to misread other people, send confusing or off-putting nonverbal signals, and lapse into unhealthy knee-jerk patterns of behavior.

### Staying calm under pressure

In situations such as a job interview, business presentation, high-pressure meeting, or introduction to a loved one's family, for example, it's important to manage your emotions, think on your feet,

and effectively communicate under pressure. These tips can help:

- **Use stalling tactics** to give yourself time to think. Have a question repeated, or ask for clarification of a statement before responding.
- **Pause to collect your thoughts.** Silence isn't necessarily a bad thing—pausing can make you seem more in control than rushing your response.
- **Make one point** and provide an example or supporting piece of information. If your response is too long or you waffle about a number of points, you risk losing the listener's interest. Follow one point with an example and then gauge the listener's reaction to tell if you should make a second point.

### Quick stress relief for effective communication

When things start to get heated in the middle of a conversation, you need something quick and immediate to bring down the emotional intensity. By learning to quickly reduce stress in the moment, though, you can safely face any strong emotions you're experiencing, regulate your feelings, and behave appropriately. When you know how to maintain a relaxed, energized state of awareness—even when something upsetting happens—you can remain emotionally available and engaged.

To deal with stress during communication:

- **Recognize when you're becoming stressed.** Your body will let you know if you're stressed as you communicate. Are your muscles or

your stomach tight and/or sore? Are your hands clenched? Is your breath shallow? Are you "forgetting" to breathe?

- **Take a moment to calm down** before deciding to continue a conversation or postpone it.
- **Bring your senses to the rescue** and **quickly manage stress** by taking a few deep breaths, clenching and relaxing muscles, or recalling a soothing, sensory-rich image, for example. The best way to rapidly and reliably relieve stress is through the senses: sight, sound, touch, taste, and smell. But each person responds differently to sensory input, so you need to find things that are soothing to you.
- **Look for humor in the situation.** When used appropriately,

humor is a great way to relieve stress when communicating. When you or those around you start taking things too seriously, find a way to lighten the mood by sharing a joke or amusing story..

#### **To improve assertiveness:**

- **Value yourself and your opinions.** They are as important as anyone else's.
- **Know your needs and wants.** Learn to express them without infringing on the rights of others.

**Express negative thoughts** in a positive way. It's OK to be angry, but you must be respectful as well.

# Effective communication

DEEPTHI HASHINI

Improving Communication Skills in Your Work and Personal Relationships.

It sounds so simple: say what you mean. But all too often, what we try to communicate gets lost in translation despite our best intentions. We say one thing, the other person hears something else, and misunderstandings, frustration, and conflicts ensue.

Fortunately, you can learn how to communicate more clearly and effectively. Whether you're trying to improve communication with your spouse, kids, boss, or coworkers, you can improve the communication skills that enable you to effectively connect with others, build trust and respect, and feel heard and understood.

What is effective communication?

Communication is about more than just exchanging information. It's about understanding the emotion and intentions behind the information. Effective communication is also a two-way street. It's not only how you convey a message so that it is received and understood by someone in exactly the way you intended, it's also how you listen to gain the full meaning of what's being said and to make the other person feel heard and understood.

More than just the words you use, effective communication combines a set of skills including nonverbal communication, engaged listening, managing stress in the moment, the ability to communicate assertively, and the capacity to recognize

and understand your own emotions and those of the person you're communicating with.

Effective communication is the glue that helps you deepen your connections to others and improve teamwork, decision making, and problem solving. It enables you to communicate even negative or difficult messages without creating conflict or destroying trust.

While effective communication is a learned skill, it is more effective when it's spontaneous rather than formulaic. A speech that is read, for example, rarely has the same impact as a speech that's delivered (or appears to be delivered) spontaneously. Of course, it takes time and effort to develop these skills and become an effective communicator. The more effort and practice you put in, the more instinctive and spontaneous your communication skills will become.

Barriers to effective interpersonal communication

- **Stress and out-of-control emotion.** When you're stressed or emotionally overwhelmed, you're more likely to misread other people, send confusing or off-putting nonverbal signals, and lapse into unhealthy knee-jerk patterns of behavior. Take a moment to calm down before continuing a conversation.
- **Lack of focus.** You can't communicate effectively when you're multitasking. If you're



planning what you're going to say next, daydreaming, checking text messages, or thinking about something else, you're almost certain to miss nonverbal cues in the conversation. You need to stay focused on the moment-to-moment experience.

- **Inconsistent body language.** Nonverbal communication should reinforce what is being said, not contradict it. If you say one thing, but your body language says something else, your listener will likely feel you're being dishonest. For example, you can't say "yes" while shaking your head no.
- **Negative body language.** If you disagree with or dislike what's being said, you may use negative body language to rebuff the other person's message, such as crossing your arms, avoiding eye contact, or tapping your feet. You don't have to agree, or even like what's being said, but to communicate effectively without making the other person defensive, it's important to avoid sending negative signals.

#### Improving communication skills #1: Become an engaged listener

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People often focus on what they should say, but effective communication is less about talking and more about listening. Listening well means not just understanding the words or the information being communicated, but also understanding the emotions the speaker is trying to communicate.

There's a big difference between engaged listening and simply hearing. When you really listen—when you're engaged with what's being said—you'll hear the subtle

intonations in someone's voice that tell you how that person is feeling and the emotions they're trying to communicate. When you're an engaged listener, not only will you better understand the other person, you'll also make that person feel heard and understood, which can help build a stronger, deeper connection between you.

By communicating in this way, you'll also experience a process that lowers stress and supports physical and emotional well-being. If the person you're talking to is calm, for example, listening in an engaged way will help to calm you, too. Similarly, if the person is agitated, you can help calm them by listening in an attentive way and making the person feel understood.

#### How do you become an engaged listener?

If your goal is to fully understand and connect with the other person, listening in an engaged way will often come naturally. If it doesn't, try the following tips. The more you practice them, the more satisfying and rewarding your interactions with others will become.

- **Focus fully on the speaker,** his or her body language, tone of voice, and other nonverbal cues. Tone of voice conveys emotion, so if you're thinking about other things, checking text messages or doodling, you're almost certain to miss the nonverbal cues and the emotional content behind the words being spoken. And if the person talking is similarly distracted, you'll be able to quickly pick up on it. If you find it hard to concentrate on some speakers, try repeating their words over in your head—it'll reinforce their message and help you stay focused.

- **Favor your right ear.** The left side of the brain contains the primary processing centers for both speech comprehension and emotions. Since the left side of the brain is connected to the right side of the body, favoring your right ear can help you better detect the emotional nuances of what someone is saying. Try keeping your posture straight, your chin down, and tilting your right ear towards the speaker—this will make it easier to pick up on the higher frequencies of human speech that contain the emotional content of what’s being said.
- **Avoid interrupting or trying to redirect the conversation to your concerns,** by saying something like, “If you think that’s bad, let me tell you what happened to me.” Listening is not the same as waiting for your turn to talk. You can’t concentrate on what someone’s saying if you’re forming what you’re going to say next. Often, the speaker can read your facial expressions and know that your mind’s elsewhere.
- **Show your interest in what’s being said.** Nod occasionally, smile at the person, and make sure your posture is open and inviting. Encourage the speaker to continue with small verbal comments like “yes” or “uh huh.”
- **Try to set aside judgment.** In order to communicate effectively with someone, you don’t have to like them or agree with their ideas, values, or opinions. However, you do need to set aside your judgment and withhold blame and criticism in order to fully understand a person. The most difficult communication, when successfully executed, can lead to the most unlikely and profound connection with someone.
- **Provide feedback.** If there seems to be a disconnect, reflect what has been said by paraphrasing. “What I’m hearing is,” or “Sounds like you are saying,” are great ways to reflect back. Don’t simply repeat what the speaker has said verbatim, though—you’ll sound insincere or unintelligent. Instead, express what the speaker’s words mean to you. Ask questions to clarify certain points: “What do you mean when you say...” or “Is this what you mean?”
- Hear the emotion behind the words by exercising your middle ear muscles

By increasing the muscle tone of the tiny middle ear muscles (the smallest in the body), you’ll be able to detect the higher frequencies of human speech that impart emotion and be better able to understand what others are really saying. As well as by focusing fully on what someone is saying, you can exercise these tiny muscles by singing, playing a wind instrument, and listening to certain types of music (high-frequency Mozart violin concertos and symphonies, for example, rather than low-frequency rock or rap music).

#### Improving communication skills #2: Pay attention to nonverbal signals

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When we communicate things that we care about, we do so mainly using nonverbal signals. Nonverbal communication, or body language, includes facial expressions, body movement and gestures, eye contact, posture, the tone of your voice, and even your muscle tension and breathing. The way you look, listen, move, and react to another

person tells them more about how you're feeling than words alone ever can.

Developing the ability to understand and use nonverbal communication can help you connect with others, express what you really mean, navigate challenging situations, and build better relationships at home and work.

- You can enhance effective communication by using open body language—arms uncrossed, standing with an open stance or sitting on the edge of your seat, and maintaining eye contact with the person you're talking to.
- You can also use body language to emphasize or enhance your verbal message—patting a friend on the back while complimenting him on his success, for example, or pounding your fists to underline your message.

#### Tips for improving how you read nonverbal communication

- **Be aware of individual differences.** People from different countries and cultures tend to use different nonverbal communication gestures, so it's important to take age, culture, religion, gender, and emotional state into account when reading body language signals. An American teen, a grieving widow, and an Asian businessman, for example, are likely to use nonverbal signals differently.
- **Look at nonverbal communication signals as a group.** Don't read too much into a single gesture or nonverbal cue. Consider all of the nonverbal signals you receive, from eye contact to tone of voice to body language. Anyone can slip up

occasionally and let eye contact slip, for example, or briefly cross their arms without meaning to. Consider the signals as a whole to get a better "read" on a person.

#### Tips for improving how you deliver nonverbal communication

- **Use nonverbal signals that match up with your words.** Nonverbal communication should reinforce what is being said, not contradict it. If you say one thing, but your body language says something else, your listener will likely feel you're being dishonest. For example, you can't say "yes" while shaking your head no.
- **Adjust your nonverbal signals according to the context.** The tone of your voice, for example, should be different when you're addressing a child than when you're addressing a group of adults. Similarly, take into account the emotional state and cultural background of the person you're interacting with.
- **Use body language to convey positive feelings** even when you're not actually experiencing them. If you're nervous about a situation—a job interview, important presentation, or first date, for example—you can use positive body language to signal confidence, even though you're not feeling it. Instead of tentatively entering a room with your head down, eyes averted, and sliding into a chair, try standing tall with your shoulders back, smiling and maintaining eye contact, and delivering a firm handshake. It will make you feel more self-confident and help to put the other person at ease.

### Improving communication skills #3: Keep stress in check

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To communicate effectively, you need to be aware of and in control of your emotions. And that means learning how to manage stress. When you're stressed, you're more likely to misread other people, send confusing or off-putting nonverbal signals, and lapse into unhealthy knee-jerk patterns of behavior.

How many times have you felt stressed during a disagreement with your spouse, kids, boss, friends, or coworkers and then said or done something you later regretted? If you can quickly relieve stress and return to a calm state, you'll not only avoid such regrets, but in many cases you'll also help to calm the other person as well. It's only when you're in a calm, relaxed state that you'll be able to know whether the situation requires a response, or whether the other person's signals indicate it would be better to remain silent.

#### Staying calm under pressure

In situations such as a job interview, business presentation, high-pressure meeting, or introduction to a loved one's family, for example, it's important to manage your emotions, think on your feet, and effectively communicate under pressure. These tips can help:

- **Use stalling tactics** to give yourself time to think. Have a question repeated, or ask for clarification of a statement before responding.
- **Pause to collect your thoughts.** Silence isn't necessarily a bad thing—pausing can make you seem more in control than rushing your response.

- **Make one point** and provide an example or supporting piece of information. If your response is too long or you waffle about a number of points, you risk losing the listener's interest. Follow one point with an example and then gauge the listener's reaction to tell if you should make a second point.
- **Deliver your words clearly.** In many cases, how you say something can be as important as what you say. Speak clearly, maintain an even tone, and make eye contact. Keep your body language relaxed and open.
- **Wrap up with a summary** and then stop. Summarize your response and then stop talking, even if it leaves a silence in the room. You don't have to fill the silence by continuing to talk.

Quick stress relief for effective communication

When things start to get heated in the middle of a conversation, you need something quick and immediate to bring down the emotional intensity. By learning to quickly reduce stress in the moment, though, you can safely face any strong emotions you're experiencing, regulate your feelings, and behave appropriately. When you know how to maintain a relaxed, energized state of awareness—even when something upsetting happens—you can remain emotionally available and engaged.

To deal with stress during communication:

- **Recognize when you're becoming stressed.** Your body will let you know if you're stressed as you communicate. Are your muscles or your stomach tight and/or sore? Are your hands clenched? Is your breath



shallow? Are you "forgetting" to breathe?

- **Take a moment to calm down** before deciding to continue a conversation or postpone it.
- **Bring your senses to the rescue** and quickly manage stress by taking a few deep breaths, clenching and relaxing muscles, or recalling a soothing, sensory-rich image, for example. The best way to rapidly and reliably relieve stress is through the senses: sight, sound, touch, taste, and smell. But each person responds differently to sensory input, so you need to find things that are soothing to you.
- **Look for humor in the situation.** When used appropriately, humor is a great way to relieve stress when communicating. When you or those around you start taking things

too seriously, find a way to lighten the mood by sharing a joke or amusing story.

- **Be willing to compromise.** Sometimes, if you can both bend a little, you'll be able to find a happy middle ground that reduces the stress levels for everyone concerned. If you realize that the other person cares much more about something than you do, compromise may be easier for you and a good investment in the future of the relationship.

**Agree to disagree**, if necessary, and take time away from the situation so everyone can calm down. Take a quick break and move away from the situation. Go for a stroll outside if possible, or spend a few minutes

# PROFESSIONAL ETHICS

# Professional Ethics

## VEERALAKSHMI M, III year

### EEE 250

EEE 250, *Environmental and Ecological Engineering Systems*, is an overview of systems thinking and examples, and applications to environmental, ecological, and engineering systems. Students will develop an understanding of complex and global systems, along with the tools and analysis methods required to deal with them. Basic environmental and ecological science concepts are also included.

### EEE 355

EEE 355, *Engineering Environmental Sustainability*, offers an introduction to the examination of global-scale resource utilization, food, energy and commodity production, population dynamics, and their ecosystem impacts. Learning objectives of this course include that students will be creative thinkers that can collect and analyze appropriate data and information, and perform necessary quantitative analysis to develop original and innovative management strategies for real-world sustainability problems, students will be able to individually and in teams skillfully communicate in writing, orally, and with multimedia their ideas and conclusions about managing sustainability issues in a manner that increases knowledge and understanding of the audience, students will be critical thinkers that can identify the environmental, social, political, and economic dimensions of technical challenges and evaluate their own and others perspectives in forming logical opinions and conclusions, students will be able to effectively identify information needs, efficiently acquire appropriate information, and critically evaluate and use it in an ethical and scholarly fashion to gain understanding of and communicate about sustainability issues, challenges, and

strategies, students will become global citizens and socially aware by gaining knowledge of diverse international and cultural perspectives and display social responsibility and leadership in managing sustainability issues, ultimately increasing their global literacy, students will learn how to be a productive team member, constructively evaluate their own and others' performances, resolve conflicts effectively and encourage the willing contributions of everyone.

### EEE 300

EEE 300, *Environmental and Ecological Systems Modeling*, teaches an introduction to computational methods for describing physical, chemical, and microbiological processes that occur in natural and engineered aqueous systems, including rivers and lakes, and within water and wastewater treatment systems. Emphases on understanding and conceptualizing important processes, data analysis, algorithm development, and competency in the use of programming tools.

### EEE 350

EEE 350, *Environmental Engineering*, offers an introduction to water pollution, air pollution, noise, hazardous and solid wastes, and their control. It includes topics of Environmental impact statements and global pollution issues. Learning Objectives for this course include an ability to apply material balance tools to environmental systems, an ability to describe the different types of air, soil, and water pollutants and how they affect environmental quality on a local or global scale, an ability to explain the principles of water, wastewater, air, soil, and hazardous waste treatment processes, an ability to describe the professional and ethics.

# **PROJECT MANAGEMENT**

# Project Management & Budgeting

NAVEEN KUMAR , III year

## What is a project?

- ◆ A temporary endeavor undertaken to achieve a specific aim
- ◆ In this presentation, we will focus on a particular project: the successful implementation of an EHR in your practice
- **What is project management?**
- ◆ “Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.” (PMBOK, 2003)
- **A project is comprised of phases:**
- ◆ Each phase is defined by completion of one or more deliverables
- Deliverable = a tangible work product
- ◆ The project phases of an EHR Implementation look like the EHR Roadmap:
  - Assessment
  - Planning
  - Selection
  - Implementation
  - Evaluation
  - Improvement
- **Assessment phase is comprised of:**
- ◆ Developing a project charter
- ◆ Determining budget
- ◆ Creating a project team

- ◆ Aligning the organization to the project’s goals
- **Creating a project team**
- ◆ Leadership:
  - Financial staffs are partners, rather than drivers
  - Clinical projects should be driven by clinical leaders
  - Executive leadership is keys
  - Broker the partnership between the business staff, and vendor
- ◆ In smaller organizations, one person may share more than one role
- ◆ In larger organizations, you may find that some roles are split over a few specialists
- **Honest evaluation of implementation skills in the practice**
- ◆ Has anyone led an implementation before?
- ◆ Has anyone tested software before?
- ◆ Has anyone taught staff before?
- ◆ Who can handle the tech issues?
- **Aligning organization to the project goals**
- ◆ Share the charter with the team
- ◆ Recognize that changes may be required based on feedback from other members of the practice

# Project Management

SASIKUMAR D, III year

Is the discipline of carefully projecting or planning, organizing, motivating and controlling resources to achieve specific goals and meet specific success criteria?

## **DEFINITION of 'Project Management'**

The planning and organization of an organization's resources in order to move a specific task, event or duty toward completion. Project management typically involves a one-time project rather than an ongoing activity, and resources managed include both human and financial capital.

A project manager will help define the goals and objectives of the project, determine when the various project components are to be completed and by whom, and create quality control checks to ensure that completed components meet a certain standard.

### **Step 1: Identify the project.**

This isn't necessarily as easy as it sounds. Suppose, for instance, you are an office manager and you have been instructed to set up a satellite office in a neighboring town. When presented with such a broad and general assignment, you need to break it down into its major parts before you involves. In this case, you would need to address such issues as the office size (e.g., number of lanes), services to be offered,

staffing (new or existing staff) and office hours.

### **Step 2: Determine the desired outcome(s).**

When you are put in charge of a project, it's important that you and your supervising physicians sit down together and come to an understanding of the project's goals. Without that meeting of minds, you might be driving the project toward one "finish line" while the physician is waiting for you to cross another. It is therefore crucial that the person you report to agrees to specific criteria for the project's completion.

**Step 3: Delineate each of the project's component tasks.** You need to delineate in thorough detail what's involved in the project. In setting up a satellite office, the major tasks might include negotiating the lease, hiring an architect, putting the plans out to bid, getting a contractor, ordering furniture, ordering communication equipment, ordering medical equipment, hiring staff, training staff, marketing the new office and so on.

**Step 4: Identify the players.** After breaking the project down into its component tasks, you need to identify who has, or will have, responsibility for each of those tasks. Furthermore, these responsibilities should be clearly outlined so that the project's participants understand which person is responsible for which task.

**Identify who the players are within the practice.** These may include doctors, the IT manager, the clinic manager, billers and other members of staff. And remember that when somebody is given responsibility for a task, they must also be given the authority to get that task done.

**Identify any “project killers.”** Is there anyone in the organization who can kill the project or disrupt its timetable? It is very important that you identify and neutralize any such individuals as early as possible.

**Identify the external players.** How do you maintain control of people who are outside your practice? After all, an idle architect or inattentive attorney could doom your project. One approach is to make sure that contracts are performance-based. These might offer rewards when tasks are done on a timely or early basis and penalties for non- or late-performance.

And suppose, for instance, there is one individual at a firm of attorneys whom you particularly want to work with—perhaps Perry Mason, Esq., provided great service when you set up your last satellite office—then specify that you want him again this time around.

**Step 5: Determine a time line (or staged time lines) for each project component.** The project’s major components can be broken down into stages, and each of those stages might have its own segmented time frame. A Gantt chart is a useful tool for keeping track of these time frames. It shows how long each task should take, but it also shows which tasks can be

done at the same time and which must be done sequentially.

## Approaches

A traditional phased approach identifies a sequence of steps to be completed. In the “traditional approach”, five developmental components of a project can be distinguished (four stages plus control):



Typical development phases of an engineering project

1. initiation
2. planning and design
3. execution and construction
4. monitoring and controlling systems
5. completion and finish point

Not all projects will have every stage, as projects can be terminated before they reach completion. Some projects do not follow a structured planning and/or monitoring process. And some projects will go through steps 2, 3 and 4 multiple times. Many industries use variations of these project stages.

## Process-based management

Main article: Process-based management

The incorporation of process-based management has been driven by the use of Maturity models such as the CMMI (capability maturity model integration; see this example of a predecessor) and ISO/IEC15504 (SPICE – software process improvement and capability estimation).

### Agile project management



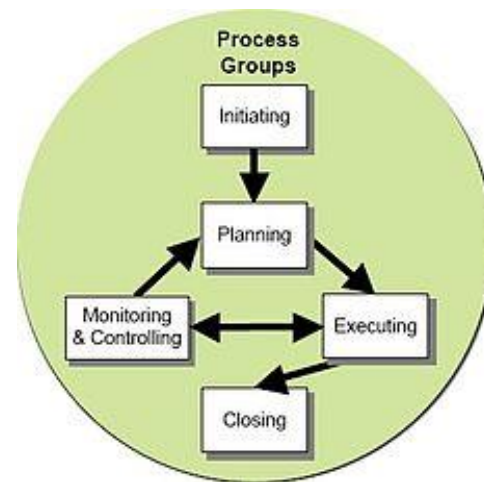
The iteration cycle in agile project management

Agile project management encompasses several iterative approaches, based on the principles of human interaction management and founded on a process view of human collaboration. Agile-based methodologies are "most typically" employed in software development as well as the "website, technology, creative, and marketing industries." This sharply contrasts with traditional approaches such as the Waterfall method. In agile software development or flexible product development, the project is seen as a series of relatively small tasks conceived and executed to conclusion as the situation demands in an adaptive manner, rather than as a completely pre-planned process.

Advocates of this technique claim that:

- It is the most consistent project management technique since it involves frequent testing of the project under development.
- It is the only technique in which the client will be actively involved in the project development.
- The only disadvantage with this technique is that it should be used only if the client has enough time to be actively involved in the project every now and then.

Processes



The project development stages

Traditionally, project management includes a number of elements: four to five process groups, and a control system. Regardless of the methodology or terminology used, the same basic project management processes will be used. Major process groups generally include:

- Initiation
- Planning
- Production or execution
- Monitoring and controlling
- Closing



## Initiating

The initiating stage should include a plan that encompasses the following areas:

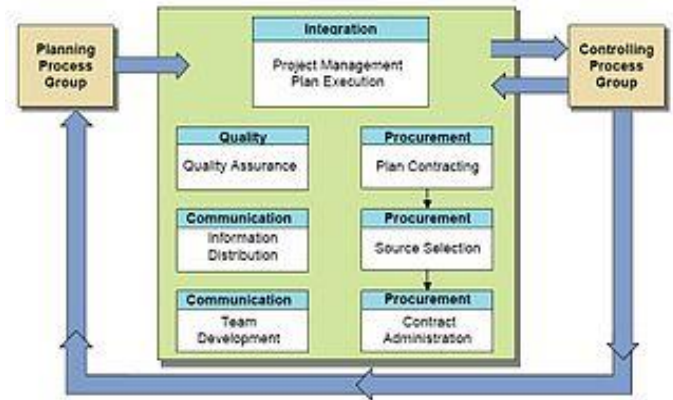
- analyzing the business needs/requirements in measurable goals
- reviewing of the current operations
- financial analysis of the costs and benefits including a budget
- stakeholder analysis, including users, and support personnel for the project
- project charter including costs, tasks, deliverables, and schedules



## Planning

After the initiation stage, the project is planned to an appropriate level of detail (see [example of a flow-chart](#)).<sup>[26]</sup> The main purpose is to plan time, cost and resources adequately to estimate the work needed and to effectively manage risk during project execution. As with the Initiation process group, a failure to adequately plan greatly reduces the project's chances of successfully accomplishing its goals.

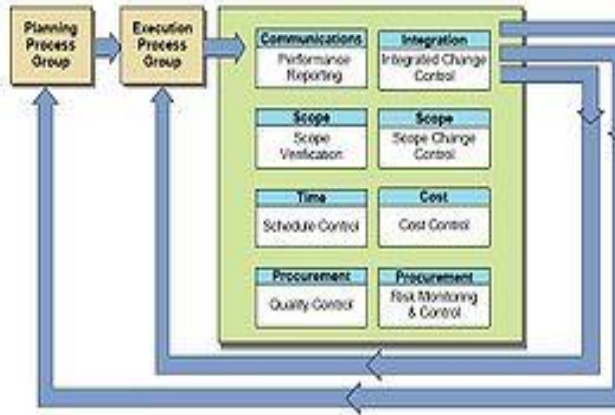
## Executing



The execution/implementation phase ensures that the project management plan's deliverables are executed accordingly. This phase involves proper allocation, co-ordination and management of human resources and any other resources such as material and budgets. The output of this phase is the project deliverables

## Monitoring and controlling

Monitoring and controlling consists of those processes performed to observe project execution so that potential problems can be identified in a timely manner and corrective action can be taken, when necessary, to control the execution of the project. The key benefit is that project performance is observed and measured regularly to identify variances from the project management plan.



## Closing

Closing process group processes.

Closing includes the formal acceptance of the project and the ending thereof.

Administrative activities include the archiving of the files and documenting lessons learned.

This phase consists of:

- **Contract closure:** Complete and settle each contract (including the resolution of any open items) and close each contract applicable to the project or project phase.
- **Project close:** Finalize all activities across all of the process groups to formally close the project or a project phase

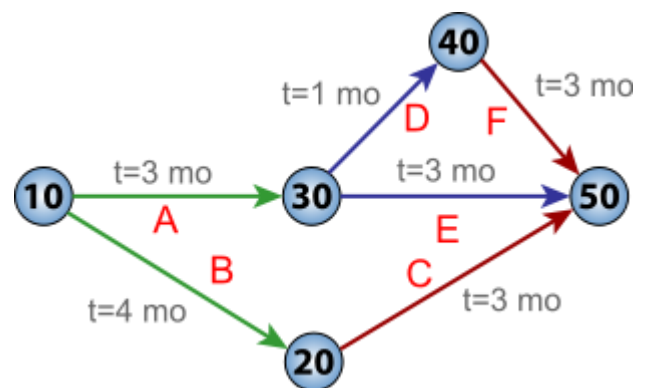
Also included in this phase is the Post Implementation Review. This is a vital phase of the project for the project team to learn from experiences and apply to future projects. Normally a Post Implementation Review consists of looking at things that went well and analyzing things that went badly on the project to come up with lessons learned.



## Estimation

**Estimation** (or **estimating**) is the process of finding an **estimate**, or approximation, which is a value that is usable for some purpose even if input data may be incomplete, uncertain, or unstable. The value is nonetheless usable because it is derived from the best information available. Typically, estimation involves "using the value of a statistic derived from a sample to estimate the value of a corresponding population parameter". The sample provides information that can be projected, through various formal or informal processes, to determine a range most likely to describe the missing information. An estimate that turns out to be incorrect will be an **overestimate** if the estimate exceeded the actual result and an **underestimate** if the estimate fell short of the actual result.<sup>1</sup>

Program evaluation and review technique PERT network chart for a seven-month project with five milestones (10 through 50) and six activities (A through F).



The **program (or project) evaluation and review technique**, commonly abbreviated **PERT**, is a statistical tool, used in project management, which was designed to analyze and represent the tasks involved in completing a given project. First developed by the United States Navy in the 1950s, it is commonly used in conjunction with the critical path method (CPM).

#### Uncertainty in project scheduling:

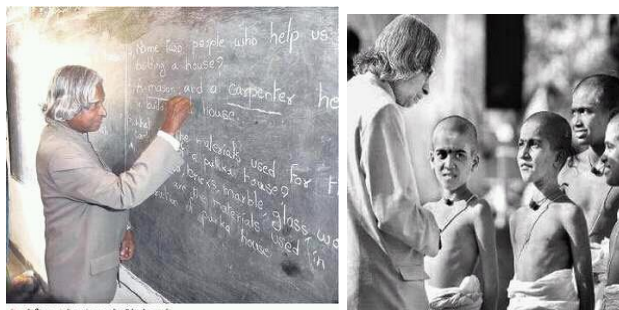
During project execution, however, a real-life project will never execute exactly as it was planned due to uncertainty. This can be due to ambiguity resulting from subjective estimates that are prone to human errors or can be the result of variability arising from unexpected events or risks. The main reason that PERT may provide inaccurate information about the project completion time is due to this schedule uncertainty. This inaccuracy may be large enough to render such estimates as not helpful.

One possible method to maximize solution robustness is to include safety in the baseline schedule in order to absorb the anticipated disruptions. This is called proactive scheduling. A pure proactive scheduling is a utopia; incorporating safety in a baseline schedule which allows for every possible disruption would lead to a baseline schedule with a very large make-span. A second approach, termed reactive scheduling, consists of defining a procedure to react to disruptions that cannot be absorbed by the baseline schedule.

# ABDUL KALAM

## Dr. A.P.J. Abdul Kalam

### RAMKUMAR P (132312), III year



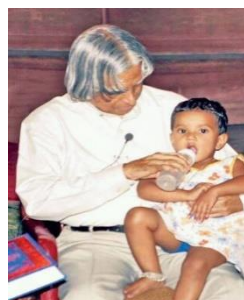
This article about a person who was deeply related to our nation India. Any guess...? I proud to say I written this article about Dr.A.P.J Abdul Kalam. Already I know every citizen in our nation including you and me love him and know well about him through Television, Newspaper, Internet etc...Then why I choose my article about Abdul kalam, because it was my honor, one of my latest dream, my lifetime achievement to speck or write about him .This article about how a person who lives all human hearts through his good things. Until He attains his 83 years old his mindset likes a newly born. Because of this mindset he is easily mingle with other kids.

Man of simplicity ... simplicity means not in the sense of how to dress like a person who wear formal dress then he is a simple man. If a person who wear coat shot

then he is not a simple man. Really man of simplicity means how other people easily approach him.

All the people of India like him based on the Newton's 3<sup>rd</sup> law he love all the peoples of India apart from religion , language ,nationality .Yes he didn't get married and didn't get wife , but his had very huge family. Even Mahatma Gandhi had haters in our India, but kalam has 0% haters in India

He serves as scientist, president of India and professor. But his wish job is serving as a professor. The told by him when I serve as professor I can meet more student. Similarly he invent more inventions and launch rockets



AGNI,PRITHVI .but his wish own invention is the leg model for handicap students.

When he was death All the Indian citizen including me becomes worry why? After his death we see anything like television, newspaper, social websites including peoples whose thing about kalam why? Because we are practiced in our nation like, a person who never told lie his name is Arichandran. People who die for national flag his name is Tiruppur kumaran. A person

sacrifices his young life and whole life for our nation, until his last breath serve for students his name is DR.A.P.J ABDUL KALAM.

I finally concluded that in our childhood days we take peacock feather with some rice in our notebooks because we felt that the peacock feather grow day by day. Now in our next generation kids replace Abdul kalam photo instant of peacock feather then our dreams growth day by day...



# **ROLE & IMPACT OF ENGINEER IN SOCIETY**

# E-Governance

## IMMANUVEL J (142026), II year

### INTRODUCTION:

We are proud to say as “INDIAN”, because we were taught the discipline to the world. And we are most inspiration of other countries. Thousands of years we had a leader as a king and great musician as a poet like “THIRUVALLUVAR”, “KAMBAR” etc., but now we are loss those qualities. Our government is run by the politician such as chief minister, educational minister, electricity minister etc., But I want to know what is the educational qualification for chief minister, and other ministers.

### STATUS OF OUR PEOPLE:

We have great chief minister and other ministers and everything. Because they are all know about anything. For example now we are waiting to when that actor was entering into politics. I want answer from you “If you want a chief minister as an actor or some celebrities, what is the quality they have?”. It is the present state of our people expects the qualities to enter into the politics.

### ENGINEER AS A MINISTERS:

The role of politicians is important to the governance. They must know everything in their department such as education, electricity, etc., this all qualities are in the engineers. They have all qualities of such things. For example

1. EEE engineer know anything about electricity.

2. A mechanical engineer knows anything about transport.
3. A civil engineer knows anything about civilization.
4. ECE engineer know anything about communication.
5. IT engineer know anything about information technology.

If they are all selected in next election for the post of electricity minister, civil minister, transport minister, communication minister, IT minister, and the following act was occur automatically

### IN ELECTRIC FIELD:

One EEE student is selected for the post of electricity minister, his first act was in the transmission line because many accident was occur by cutting of voltage transmission line. He has a plan of against those accidents and how to reduce and rectify that. And he has an innovation projects from electric field.

### IN COMMUNICATION FIELD:

One ECE student was selected for the post of communication minister. He has a plan of how to develop our communication system. We are in back when compared to other countries in communication system. He only knows how to develop our communication. And many space research labs will be opened in our state.



IN TRANSPORT FIELD:

One automobile student was selected for the post of transport minister. He has a many idea for how to improve our transport system. For example now we are going to college by government bus. These buses are coming only at its timings. This disadvantage is rectified by our automobile engineer.

IN CIVIL FIELD:

One civil engineer was selected for the post of civil minister he take an action

against traffic jam through build the bridge where is high traffic jam is occurred. And he has ability to justify the amount of fund to allocate for these project such as build the bridges, government building, hospitals., etc.,

CONCLUSION:

If This all engineer was selected for this post of ministers such as electricity, education, transport and civil activities, our country definite will get a 1<sup>st</sup> place in rich country list. So I suggest that politician must have degree in engineering through this article.

## **VISION**

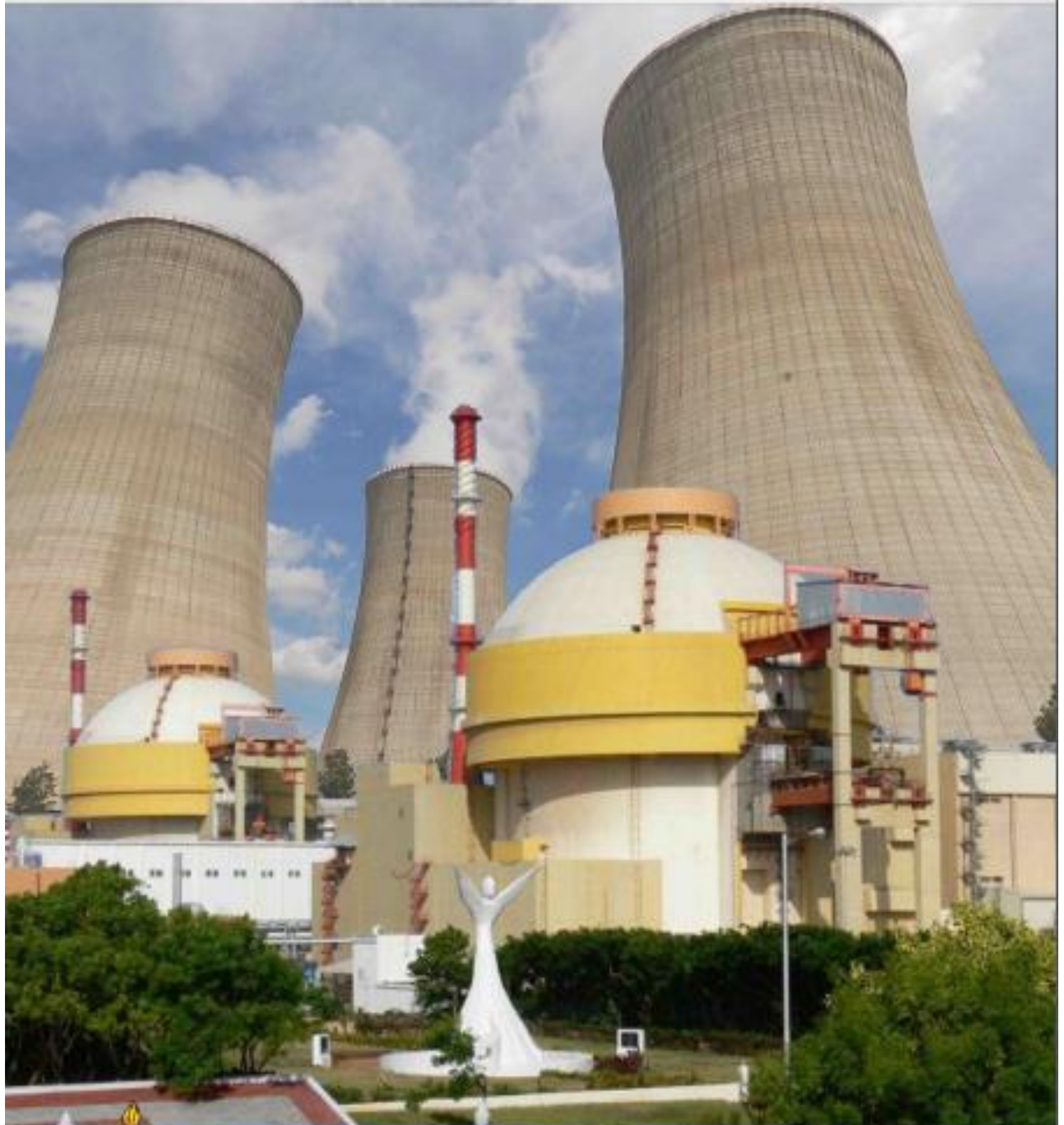
**To become a high standard of excellence in Education, Training and Research in the field of Electrical and Electronics Engineering and allied applications**

## **MISSION**

**To produce excellent, Innovative and Nationalistic Engineers with Ethical values and to advance in the field of Electrical and Electronics Engineering and allied areas.**

# INSPIREEE

INSPIRATIONAL SCRIPTS, PERSONALITIES AND INNOVATIVE RESEARCH  
NEWSLETTER/ EEE/ VOLUME 4 : ISSUE 2- OCTOBER-2015



**K.L.N. COLLEGE OF ENGINEERING**  
Approved by AICTE and Affiliated to Anna University  
An ISO 9001 : 2008 Certified Institution  
Pottapalayam - 630 612, Sivagangai Dt., Tamilnadu.

# INSPIREEE

*INspirational Scripts, Personalities and Innovative Research of EEE*

## VISION

To become a high standard of excellence in Education, Training and Research in the field of Electrical and Electronics Engineering and allied applications

## MISSION

To produce excellent, Innovative and Nationalistic Engineers with Ethical values and to advance in the field of Electrical and Electronics Engineering and allied areas.



**K.L.N. College of Engineering**

Pottapalyam – 630 612, Sivagangai District, Tamil Nadu, India

# CONTENTS

Message from Head of the Department	1
Editorial Crew	2

<b>S. No.</b>	<b>Content Name</b>	<b>Page No.</b>
---------------	---------------------	-----------------

## **PROFESSIONAL ETICS**

1	Social Responsibility and Professional Ethics	4
2	Professional Ethics	6

## **EFFECTIVE COMMUNICATION**

3	Effective Communication	8
4	Effective Communication	9
5	Effective Communication	11

## **ROLE OF ENGINEERS AND THEIR IMPACT ON SOCIETY BUILDING**

6	Role Of Engineers And Their Impact On Society Building	14
7	Role of Impact on Engineers and their impact on Society Building	16

## **GLOBAL WARMING**

8	Steps to reduce Global Warming	19
9	Environmental Protection	21

## **PROJECT MANAGEMENT**

10	Project Management	23
11	Project Management and Budget Estimation	25
12	Project Management	27
13	Fortitude Forever	29
14	Rats and Pied Pipers	30
15	Reasons Why I Like Abdul Kalam	33

## MESSAGE FROM HEAD OF THE DEPARTMENT

**Dr. S.M. KANNAN, M.E., Ph.D.,  
FIE, MISTE, MIEEE (USA)  
Professor & Head, EEE,  
K.L.N. College of Engineering**



### MESSAGE

In this issue, students were asked to submit articles covering the Program outcomes as given in NBA. This to create an awareness on the POs and to understand well so as to apply in their career. The articles on, Professional ethics and Social responsibility in life, ways to improve communication skills, Role of engineers and Society, Global warming will motivate the students to inculcate in their career. A section on life of Abdul Kalam will inspire everyone.

Best wishes to the contributors

(Dr. S.M. Kannan)  
Head of the Department – EEE



# EDITORIAL CREW

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## SENIOR ADVISORS:

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Dr. K. GNANAMBAL [Professor]

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RISHIKESH T K (132021, III – B)	Overall Editing and Poster Creation
RADHIKA S (132036, III – B)	Article Grammar and Spelling Check
RAMKUMAR P (132321, III – B)	Article Grammar and Spelling Check
ROMIKA A (132001, III – B)	Text Alignment Checking
PARTHASARATHY G (132015, III – B)	Text Alignment Checking
PAVITHRA R (132004, III – B)	Article Grammar and Spelling Check

# PROFESSIONAL ETHICS



# **Social Responsibility and Professional Ethics**

## **PAVITHRA R (132004), III Year**

Being Socially Responsible means that people and organizations must behave ethically and with sensitivity toward social, cultural, economic and environmental issues. Striving for social responsibility helps individuals, organizations and governments have a positive impact on development, business and society with a positive contribution to bottom-line results. Professional ethics encompass the personal, organizational and corporate standards of behavior expected of professionals. Social responsibility is an ethical theory

### **THE ROLE OF ENGINEERING IN SOCIETY**

The theory of social responsibility is built on a system of ethics, in which decisions and actions must be ethically validated before proceeding. If the action or decision causes harm to society or the environment then it would be considered to be socially irresponsible. Professionals and those working in acknowledged professions, exercise specialist knowledge and skill. How the use of this knowledge should be governed when providing a service to the public can be considered a moral issue and is termed professional ethics. Professionals are capable of making judgments, applying their skills and reaching informed decisions in situations that the general public cannot, because they have not received the relevant training. The utilization of scientific knowledge over time establishes that some of the knowledge is immediately relevant to societal needs while other parts are less immediately relevant (society may never realize the relevance of a particular scientific inquiry). While the congruence of societal need with scientific knowledge is much more complex than indicated in this article, it may be represented for the purpose of this discussion by a Venn diagram

A business may approach a professional engineer to certify the safety of a project which is not safe. Whilst one engineer may refuse to certify the project on moral grounds, the business may find a less scrupulous engineer who will be

prepared to certify the project for a bribe, thus saving the business the expense of redesigning the conduct of a practicing professional appears to be related to the way they behaved while at university. This suggests that there may be an opportunity within engineering education to influence the ethical behavior of engineers.

*A Professional Is...*

A member of an occupational group (characterized above) who:

1. Sees other members, including those employed elsewhere, as peers/colleagues
2. Exercises judgment in the performance of occupational tasks and follows relevant professional standards.
3. Accepts the profession's agreement to work in a morally permissible way (often expressed as a code of ethics) as determining in part the obligations of the role.

### **PROFESSIONAL CODE OF ETHICS**

A code of ethics...prescribes how professionals are to pursue their common ideal so that each may do the best she can at a minimal cost to herself and those she cares about (including the public...). The code is to protect each professional from certain pressures (for example, the pressure to cut corners to save money) by making it reasonably likely (and more likely than otherwise) that most other members of the profession will not take advantage of her good Conduct...A code is a solution to a coordination problem

*Individual Responsibility:*

1. Sphere of tasks – daily/regular responsibilities
2. For outcome caused by one's actions or decisions
3. Liability = answerability for one's actions or decisions
4. Capacity - to appreciate, to control one's behavior
5. Moral responsibility - looking ahead to and caring about what happens to oneself and others.

Levels of failing to meet one's individual responsibility:

*Negligence* – failure to meet the appropriate standards of care (or that level or quality of service ordinarily provided by other normally competent practitioners of good standing in that field, contemporaneously providing similar services in the same locality and under the same circumstances).

The scientists and engineers cannot predict how their newly generated knowledge and technological innovations may be abused or misused for destructive purposes in the near or distant future. While the excuse of ignorance is somewhat acceptable for those scientists involved in very basic and fundamental research where potential applications cannot be even envisioned, the excuse of ignorance is much weaker for scientists and engineers involved in applied scientific research and technological innovation since the work objectives are well known. Another point of view is that responsibility falls on those who provide the funding for the research and technological developments, which in most cases are corporations and government agencies. Furthermore, because taxpayers provide indirectly the funds for government-sponsored research, they and the politicians that represent them, i.e., society at large, should be held accountable for the uses and abuses of science.

Developing countries can be damaged by poor business ethics. Large companies neglecting to set a good example of Corporate Social Responsibility actively hinder the progression of all business in developing countries. For example, a coffee company which states all their raw beans are picked from sustainable plants where no deforestation has occurred, by people paid a good living wage, in an area where investments have been made to ensure that producing the coffee for a foreign market has not damaged the local way of life, will find that all these elements of their buying strategy become themselves a selling point for their final product.

Reputation is one of a company's most important assets, and one of the most difficult to rebuild should it be lost.

**Conclusion:** Social responsibility of business and professional ethics in management are issues still highly disputed. Both are loaded with ideological charges. Ethics is and remains problematic; but it is good that way because that means that there still are problems about what we think. Thus we will aim to develop a culture of institutional practice in which consideration of ethical, social and environmental issues becomes embedded in its decision-making activities. In reaching difficult ethical judgements, we will be guided by application of the ultimate test of reasonableness.

## **Professional ethics**

### **ROMIKA A, III year**

#### **Internal regulation**

In cases where professional bodies regulate their own ethics, there are possibilities for such bodies to become self-serving and to fail to follow their own ethical code when dealing with renegade members. This is because of the nature of professions in which they have almost a complete monopoly on a particular area of knowledge. For example, until recently, the English courts deferred to the professional consensus on matters relating to their practice that lay outside case law and legislation.

#### *Statutory regulation*

In many countries there is some statutory regulation of professional ethical standards such as the stationary bodies that regulate nursing in England and Wales.

#### *Separatism*

On a theoretical level, there is debate as to whether an ethical code for a profession should be consistent with the requirements of morality governing the public. Separatists argue that professions should be allowed to go beyond such confines when they judge it necessary. This is because they are trained to produce certain outcomes which may take moral precedence over other functions of society. For example, it could be argued that a doctor may lie to a patient about

the severity of their condition, if there is reason to think that telling the patient could cause them so much distress that it would be detrimental to their health. This would be a disrespect of the patient's, as it denies them information on something that could have a great impact on their life. This would generally be seen as morally wrong. However, if the end of improving and maintaining health is given a moral priority in society, then it may be justifiable to contravene other moral demands in order to meet this goal. Separatism is based on a relativist conception of morality that there can be different, equally valid moral codes that apply to different sections of society and differences in codes between societies.

#### *Student ethics*

As attending school after high school graduation becomes a standard in the lives of young people, Colleges and Universities are becoming more businesslike in their expectations of the students. Although people have a differing opinion of if it is effective, surveys state that it is the overall goal of University administrators. Setting up a business atmosphere helps students become adjusted from the more relaxed nature of high school towards what will be expected of them in the business world.

# **EFFECTIVE COMMUNICATION**

## Effective communication

MEEN T G, RADHIKA S, III year

Communication is about more than just exchanging information. It's about understanding the emotion and intentions behind the information. Effective communication is also a two-way street. It's not only how you convey a message so that it is received and understood by someone in exactly the way you intended, it's also how you listen to gain the full meaning of what's being said and to make the other person feel heard and understood.

More than just the words you use, effective communication combines a set of skills including nonverbal communication, engaged listening, managing stress in the moment, the ability to communicate assertively, and the capacity to recognize and understand your own emotions and those of the person you're communicating with.

Effective communication is the glue that helps you deepen your connections to others and improve teamwork, decision making, and problem solving. It enables you to communicate even negative or difficult messages without creating conflict or destroying trust.

### ***BARRIERS TO EFFECTIVE***

#### ***INTERPERSONAL COMMUNICATION***

**Stress and out-of-control emotion.** When you're stressed or emotionally overwhelmed, you're more likely to misread other people, send confusing or off-putting nonverbal signals, and lapse into unhealthy knee-jerk patterns of behavior. Take a moment to calm down before continuing a conversation.

**Lack of focus.** You can't communicate effectively when you're multitasking. If you're planning what you're going to say next, daydreaming, checking text messages, or thinking about something else, you're almost certain to miss nonverbal cues in the conversation. You need to stay focused on the moment-to-moment experience.

**Inconsistent body language.** Nonverbal communication should reinforce what is being said, not contradict it. If you say one thing, but your body

Language says something else, your listener will likely feel you're being dishonest. For example, you can't say "yes" while shaking your head no.

**Negative body language.** If you disagree with or dislike what's being said, you may use negative body language to rebuff the other person's message, such as crossing your arms, avoiding eye contact, or tapping your feet. You don't have to agree, or even like what's being said, but to communicate effectively without making the other person defensive, it's important to avoid sending negative signals.

### ***IMPROVING COMMUNICATION SKILLS***

When we communicate things that we care about, we do so mainly using nonverbal signals. Nonverbal communication, or body language, includes facial expressions, body movement and gestures, eye contact, posture, the tone of your voice, and even your muscle tension and breathing. The way you look, listen, move, and react to another person tells them more about how you're feeling than words alone ever can.

You can enhance effective communication by using open body language—arms uncrossed, standing with an open stance or sitting on the edge of your seat, and maintaining eye contact with the person you're talking to.

You can also use body language to emphasize or enhance your verbal message—patting a friend on the back while complimenting him on his success, for example, or pounding your fists to underline your message.

Developing the ability to understand and use nonverbal communication can help you connect with others, express what you really mean, navigate challenging situations, and build better relationships at home and work.

# Effective Communication

**KARTHIK VIKRAM K G K., EEE, III year**

Communication is the thread that binds our society from one individual together. Communication is sometimes classified as human, animal or machine communication. Communication consists of expressing ideas or transmitting information or group to another individual or group. People communicate in many different ways, according to their age, cultural background, language and other individual particularities. Speech is still probably the most common way of communication.

Effective communication skills are very important in all aspects of life, be it work or in relationships. People in organizations typically spend a major part of their time in interacting with people. It is no surprise to find that at the root of a large number of organizational problems is poor communications. This is most obvious in cross-cultural situations where language is an issue. But it is also common among people of the same culture. Effective communication is an essential component of organizational success whether it is at the interpersonal, intergroup, intergroup, organizational, or external levels. Also in developing social relationships, communication skills are of utmost importance. Proper communication skills help people in understanding each other and work together towards a goal.

Often a person wants to say something but communicates something totally different through vocal intonation and body language. These mixed signals force the receiver to choose between the verbal and nonverbal parts of the message, which may not help to get ones message across to that individual because most often, the receiver chooses the nonverbal aspects.

There are a number of situations when you need to solicit good information from others; these situations include interviewing candidates, solving work problems, seeking to help an employee on work performance, and finding out reasons for performance discrepancies at work. In society it helps in judging an individual's ability to communicate with people from diverse backgrounds.

Mixed messages create tension and distrust because the receiver senses that the communicator is hiding something or is being less than candid. Thus one must understand that communication skills are not only important to develop an impression on the other person and get the required work done, but also to not get a bad idea about themselves in society.

Communication falls into two categories:

Verbal and Non Verbal communication. Verbal communication entails the use of words in delivering the intended message. The two major forms of verbal communication include written and oral communication.

Written communication includes letters, emails, sms, and chat. While writing a formal letter neat spacing between the words is important. Using a standard font in case of emails and SMS makes them more legit and understandable.

Communicating to people around the globe has its own perks and most importantly it is the one most distinguishing feature that says humans apart from animals. It binds our societies together and promotes globalization .Effective communication is an art that requires the speaker and listener to pass information from one to the other and have complete understanding.



How to speak well so that everyone listening to you understands is the essence of effective communication.

*A few points to be followed for effective speaking*

- Use a neutral slang while speaking (Indian Slang).
- Use simple words while speaking. Too many complex words may distract the listener's attention.
- Maintain a decent pause between words .The longer the pause the better it is.
- Slow speaking makes your speech understandable.
- Maintain eye contact with all listeners when speaking on a stage.
- Use mild body language (hand gestures) to express the main ideas of your speech.
- Avoid sarcasm.

There are many ways to communicate one's idea to others other than speaking.

Visual communication is another way of communication .This type includes televisions, pictures, and paintings. Bright colors and large figures attract the crowd .This type of communication is faster and more appealing to people.

In addition, as a result of the huge advances in technology in the last ten years, there are many new kinds of communication and human interaction technology widely available for those who can afford to acquire it. For example: The internet, e-mailing, video conferencing, WAP (wireless application protocol) mobile phones that give access to the internet and modern multimedia computers that play music, DVD videos and perform all the tasks the previous computers did, but in incredibly less time and in a more intelligent and effective way. Nonverbal communication entails communicating by sending and receiving wordless messages. These messages usually reinforce verbal communication, but they can also convey thoughts and feelings on their own.

Physical nonverbal communication, or body language, includes facial expressions, eye

contact, body posture, gestures such as a wave, pointed finger and the like, overall body movements, tone of voice, touch, and others.

Facial expressions are the most common among all nonverbal communication. For instance, a smile or a frown conveys distinct emotions hard to express through verbal communication. Research estimates that body language, including facial expressions, account for 55 percent of all communication.

Paralanguage is the way something is said, rather than what is actually said, is an important component of nonverbal communication. This includes voice quality, intonation, pitch, stress, emotion, tone, and style of speaking, and communicates approval, interest or the lack of it. Research estimates that tone of the voice accounts for 38 percent of all communications.

# EFFECTIVE COMMUNICATION

## R.SUBASHINI 132017 III year



Communication is about more than just exchanging information. It's about understanding the emotion and intentions behind the information. Effective communication is also a two-way street. It's not only how you convey a message so that it is received and understood by someone in exactly the way you intended, it's also how you listen to gain the full meaning of what's being said and to make the other person feel heard and understood.

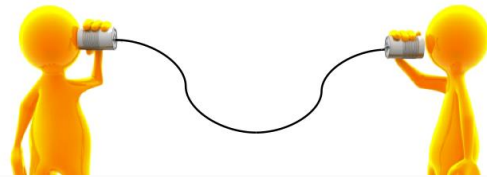
Effective communication is the glue that helps you deepen your connections to others and improve teamwork, decision making, and problem solving. It enables you to communicate even negative or difficult messages without creating conflict or destroying trust.

Effective communication skills are fundamental to success in many aspects of life. Many jobs require strong communication skills and socially people with improved communication skills usually enjoy better

interpersonal relationships with friends and family.

+ Effective communication

The right people,  
getting the right information,  
at the right time



According to the 7 Cs, communication needs to be:

1. Clear.
2. Concise.
3. Concrete.
4. Correct.
5. Coherent.
6. Complete.
7. Courteous.

People in organizations usually spend 75 percent of their daily time on communication through writing, reading, listening, speaking, inter-debate etc. Poor communication skills, low confidence levels and improper body language have resulted out in the job race. The person recruited will have to deal with the global clients directly. The command over the language and accent neutralization also plays a vital role in the recruitment process

### **Staying Focused**

Staying focused is one of the best skills not only for communicating under pressure, but



for all types of communications ranging from lunch chitchats to board discussions.

If you go out of focus, there is a high chance that the end result of the communication may not be effective.

### **Listening Carefully**

Although people think that they are listening when another person talks, actually they are spending time planning what to say next.

This is what we actually do! Therefore, you need to make an extra effort in order to listen to what the other person says and then come up with what you want to say. If you are not sure what you've heard, repeat it and ask for their confirmation

### **Taking Ownership**

Taking personal responsibility is strength. When it comes to effective communication, admitting what you did wrong is respected and required.

### **Compete for Your Objective**

Although there can be a lot of obstacles on your way, do not give up what you are fighting for.

Surely you may have to compromise, but clearly stand for what you believe in. When it comes to communication, all the parties involved should satisfy with the outcome of it.

### **Ask for Help**

Sometimes, you might have difficulties to communicate certain things to certain parties. This could be due to an issue related to respect or something else. In such cases, seek help from others.

In a corporate environment, effective communication is the key to win your way to success.

Regardless of whether you are targeting your career growth or winning the next big project, effective communication can make your way to the objective

Your behavior most probably will inspire others to take responsibility for their share.

### **Compromise if Necessary**

We love to win arguments all the time, but how often have you felt empty inside after

winning an argument? Sometimes, winning an argument does not make sense.

You may win the argument but might lose the corporation of other people. Communication is not about winning, it's about getting things done.

For the objective of getting things done, you may have to compromise in the process. If it is necessary, please do!

### **Take a Time-Out if Necessary**

Sometimes, you need to take a break in the middle of the discussion. If the communication is intensive, there can be ineffective communication pattern surfaced.

Once you notice such patterns, you need to take a break and then continue. When you continue after the break, all the parties involved in the discussion will be able to constructively contribute for the discussion.



### **Compete for Your Objective**

Although there can be a lot of obstacles on your way, do not give up what you are fighting for.

Surely you may have to compromise, but clearly stand for what you believe in. When it comes to communication, all the parties involved should satisfy with the outcome of it.



# **ROLE OF ENGINEERS AND THEIR IMPACT ON SOCIETY BUILDING**

# Role of Impact on Engineers and Their Impact on Society Building

MUTHUMATHI T (132023), EEE, III YEAR.

“Engineering is a great profession. There is a fascination of watching a figment of the imagination emerge, through the aid of science, to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings jobs home to men. Then it elevates the standards of living and adds to the comfort of life. That is the engineer's high privilege....To the engineer falls the job of clothing the bare bones of science with life, comfort, and hope...”

--Herbert Hoover

## SOCIAL RESPONSIBILITIES OF ENGINEERS

- Ensure the safety and well-being of the public
- Ensure that society's funds and resources concerning technology are well used
- Refusing to work on a particular project or for a particular company
- Speaking out publicly against a proposed project
- Blowing the whistle on illegality or wrongdoing
- Professional Societies' obligation to provide protection for whistleblowers
- Individual and organizational concern about the impact of engineering projects on society
- Contributing one's services to worthy, non-profit groups and projects
- Engineering schools' commitment to educating future engineers about their social responsibilities

The concept of “Organization Man”:

- An “organization man” is someone who represses or suppresses his or her individual desires and values and molds their personal behavior to conform to the demands of the organization he or she works for; a conformist
- Another definition is an employee of large corporations who has adapted so completely to what is expected in attitudes, ideas, and

behaviors of the corporation so that they lose a sense of personal identity or independence

- Someone who so fully adapts that their personal identity and values are absorbed by organizational objectives and values
- Someone who sacrifices his or her own individuality for what is perceived as the good of the organization

Rationales for the Social Responsibility of Engineers:

1. Codes of Ethics
2. Professionalism
3. Social Contract Model
4. Engineering Societies
5. Principle of Proportionate Care
6. Engineering as Social Experimentation
7. The Intrinsic Purpose of Engineering Itself
8. The Impacts of Technology on Society

Rationales for Social Responsibility of Engineers:

- Fundamental Canons (NSPE):
- 1. Hold paramount the safety, health, and welfare of the public
- 2. Perform services only in areas of their competence
- 3. Issue public statements only in an objective and truthful manner
- 4. Act for each employer or client as faithful agents or trustees
- 5. Avoid deceptive acts

## ENGINEERING CODE OF ETHICS

- ASCE Code of Ethics:
  - Fundamental Canon 1. Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.
  - Software Engineering Code of Ethics

– Principle 1.03. Approve software only if they have a well-founded belief that it is safe, meets specifications, passes appropriate tests, and does not diminish quality of life, diminish privacy or harm the environment. The ultimate effect of the work should be to the public good.

#### The Implicit Contract between Society and the Engineering Profession

- Self-regulation places the burden of proof collectively on the organization to ensure that individual members are technically competent to perform their duties according to high ethical standards and that engineers have genuine concern for how technology impacts society, both negatively as well as positively
- To voluntarily claim the benefits of a profession a member of that profession is

obligated to follow the rules and norms of that profession—If not, they would be taking unfair advantage of a voluntary cooperative practice. The engineer recognizes that the greatest merit is the work and exercises his profession committed to serving society, attending to the welfare and progress of the majority. By transforming nature for the benefit of mankind, the engineer must increase his awareness of the world as the abode of man, his interest in the universe as a guarantee of overcoming his spirit, and knowledge of reality to make the world fairer and happier. The engineer should reject any paper that is intended to harm the general interest, thus avoiding a situation that might be hazardous or threatening to the environment, life, health, or other rights of human beings.

# Role of Impact on Engineers and Their Impact on Society Building

## S. NAVANEETHA (132026) EEE, III YR

*“Engineering is a great profession. There is a fascination of watching a figment of the imagination emerge, through the aid of science, to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings jobs home to men. Then it elevates the standards of living and adds to the comfort of life. That is the engineer's high privilege. To the engineer falls the job of clothing the bare bones of science with life, comfort, and hope”.*

*-Herbert Hoover*

### IMPACT OF TECHNOLOGY:

- Technology can be used to implement political and social values
- Technology can change our life world.
- It produces “forms of life”.
- Technology can change our relationship to nature.
- Technology can require a certain type of political or social organization.
- Technology can have embedded values.

### IMPACT OF ENGINEERS:

The Engineers are the creators of such technology. Nowadays without Engineers and Engineering nothing can be done in this world. So the impact of the Engineers is present everywhere and in every field Engineers are required. Not only in the technology development, but also in the other fields which play an important role in the day to day life. Society grants the professions the autonomy to define their own norms of behavior and action because it values their knowledge and the discretion to use it towards some socially recognized ends. Society gives professions and professionals special powers not granted to ordinary citizens to perform their socially defined roles.

### SOCIETY BUILDING AND RESPONSIBILITY:

Social responsibility means a commitment from the engineering profession, and, by proxy, the individual engineers who belong to the profession, to place the public safety and interest

### ENGINEERS ARE ACTION ORIENTED:

ahead of all other considerations and obligations (with certain caveats to be explained later). It means that engineers take into account and show due regard for the consequences of their conduct for the well-being of others as well as for the impact of their work on society and the citizenry. This requires the engineer to make determined efforts to discover all of the relevant facts concerning the design, development, and deployment and all of the possible outcomes of the choices available that may positively and negatively affect/impact society and the citizenry.

### Social responsibilities of an Engineer,

- Ensure the safety and well-being of the public. Ensure that society's funds and resources concerning technology are well used
- Refusing to work on a particular project or for a particular company
- Speaking out publicly against a proposed project
- Blowing the whistle on illegality or wrongdoing
- Professional Societies' obligation to provide protection for whistleblowers
- Individual and organizational concern about the impact of engineering projects on society
- Contributing one's services to worthy, non-profit groups and projects
- Engineering schools' commitment to educating future engineers about their social responsibilities

- Different Segments of Society Have Different Goals and Values

- Good Intentions Can Produce Unexpected and Unwanted Results
- Only Six Percent of the Public Are Scientifically Literate
- Actions Have Unforeseen Scientific, Political, and Social Consequences

**RESOURCES AVAILABLE:**

- Codes
- Phased Implementation of Laws
- World Initiatives
- Professional Societies

**UNDERSTANDING OF THE IMPACT OF ENGINEERING:**

- Is familiar with the current trends and developments in electrical and computer engineering
- Respects the historical aspects of engineering solutions and their impacts
- Reads and is familiar with the content of periodicals that are relevant to understanding the global and societal impact of engineering
- Has a personal perspective on the importance of engineering and technology in today's world

# GLOBAL WARMING

## **Steps to Reduce Global Warming**

**KOWSALYA M (132069), EEE, III year**

Though a variety of local, state, national and international measures are in place to reduce global warming, there are also steps that individuals can take. Many involve reducing an individual's personal carbon dioxide emissions—a major contributor to global warming. The everyday choices we make in the home, office, school, or community can have an impact on global climate change.

In the Home Major changes one can make in the home to reduce global warming involve heating and cooling. Turning the thermostat lower in the winter and higher in the summer can cause a carbon dioxide reduction of approximately 500 pounds for each two-degree adjustment. Placing the water heater temperature to the recommended 120 degrees can save 500 pounds of carbon dioxide annually. In addition, washing two loads of laundry each week in cold rather than in hot water can also save up to 500 pounds of carbon dioxide each year. When purchasing new appliances look for models that have the Energy Star label—awarded by the Environmental Protection Agency. While these models may initially cost more than non-Energy Star models, the energy savings will repay the investment within a few short years. It is estimated that if every U.S. household used only the most energy efficient appliances available, it could save nearly \$15 billion in energy costs and reduce heat-trapping gas emissions by 175 million tons.

Some of the simplest actions in the home include turning off all lights and appliances when they are not in use and recycling. Changing to energy-efficient compact fluorescent bulbs can reduce annual carbon dioxide emissions by nearly 500 pounds for each bulb replaced. When shopping, purchasing minimally-packaged goods easily reduces waste. Cutting down on household garbage by 25% can reduce carbon dioxide emissions by up to 1,000 pounds a year.

Finally, having the utility company do a home energy audit to find out where a home is poorly insulated or energy-inefficient can result in an additional reduction of thousands of pounds of carbon dioxide each year.

Getting around whenever possible, individuals should try to walk, bike, carpool, or use public transportation to get from place to place. For every gallon of gas that is saved, carbon dioxide emissions are reduced by 20 pounds. When purchasing a car, one should do research to find a car that can meet one's needs while providing good gas mileage. If a new car purchase can get 10 miles per gallon more than the old one, it could save around 2,500 pounds of carbon dioxide a year.

For car owners, keeping up with the maintenance of the vehicle—getting the engine tuned-up and tires properly inflated will help increase overall fuel efficiency. If all Americans kept their tires properly inflated, gasoline use nationwide could be reduced by nearly two percent. Cleaning or replacing a car's air filter can save an additional 5% of the energy needed and reduce carbon dioxide emissions by 175 pounds per year.

In the Office If the office does not already have measures in place, any individual can help institute several energy and waste saving steps. Although not always an option, start an office carpool with co-workers that live in the same community. Make sure to turn off all lights and appliances that do not need to be on at the end of the day. Suggesting the use of ceramic cups in place of disposable ones can also reduce waste.

With respect to paper waste, using both sides of a sheet for printing, copying, writing and drawing can eliminate a lot of paper waste. For every pound of office paper that is recycled, it can reduce carbon dioxide emissions by four pounds. Try instituting an office recycling program; use waste paper for printing drafts or meeting agendas or reuse them in plain paper fax machines since faxes only print on one side. In the Community Join or



start a community group in the neighborhood and dedicate a day to planting trees throughout the community. Trees store carbon and provide shade during the summer, which can cool houses and result in lower energy use. Encourage the use of bikes with bike rack placement at public buildings and businesses to promote biking over driving. If driving, try to start a neighborhood carpool with people that work in similar areas.

Be sure to stay informed about environmental issues in the community. This may include keeping track of local candidates' voting records, and calling or writing to express any ideas or concerns. Finally ask that governors, state legislators, and public utility regulators promote energy efficiency and the development of clean, renewable sources of energy.

#### Recommended Resources

**Global Warming Actions** the Environmental Protection Agency's website provides a variety of resources on how individuals can make a difference.

**The Low Carbon Diet** This Consumer's Guide to Fight Global Warming by Environmental Defense includes tips on how individuals can fight global warming in the home, yard, on the road, and even on vacation.

**Fuel Economy** This DOE website provides information on how to improve the fuel efficiency of a vehicle. Some of the topics include gas mileage tips, energy efficiency, and hybrid and alternative fuel vehicles.

For the Classroom Household Energy Audit the partnering of the United Nations Environment

Programme (UNEP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) formed youth exchange, a program to help raise awareness of sustainable consumption and empower youth to put theory into practice. This particular exercise can help explain household economics as part of a home energy audit.

**EPA: Energy Star Home Interactive Tool** This tool provides energy-efficient home improvement ideas. Learn how to save energy and protect the environment by making simple changes in your home.

**Get the Kids Involved!** Environmental Defense created this checklist geared towards kids to help get them involved in saving energy.

**EPA: Global Warming Wheel Card Classroom Activity Kit** This activity kit for grades 6-8 educates students on global warming and the possible impacts. Students are encouraged to think about ways to reduce individual, family, school, and community contributions to global warming. Teachers can request the kit by contacting the EPA.

#### **Protect our children's future**

That's what happened when we helped mobilize public opinion and support for the president's Clean Cars Program, the big initiative that's driving Detroit to make cars that get better gas mileage and that will ultimately prevent more than 6 billion metric tons of carbon dioxide pollution by 2025 – more than the entire country emitted in 2010.

# ENVIRONMENTAL PROTECTION

KOWSALYA M (132012), III year

Due to the pressure of population and technology, the biophysical environment is being degraded.

Everyone has some form of impact on their natural environment in an industrialized world; this is an unavoidable in reality. There are many ways that everyone can do their part to preserve the health of the environment.

□ Compact fluorescent bulbs last longer and use less energy than incandescent bulbs, so we will save money by using them.

□ Many municipalities already offer good recycling programs. All the glass, cans and paper should be recycled, along with as much plastic as possible.

□ Invest in a set of canvas bags.

□ Utilize grey water for things like flushing the toilet and watering the garden. If we use natural soaps without harsh chemicals, the water from your bath or shower can be reused for garden, to flush your toilet.

□ Use your electronics until they're completely dead and impossible to use. Consumer electronics create an immense amount of waste and not only when it comes to the components piling up in landfills. Electronics use a number of minerals that are often mined in countries without proper environmental protection. Buying fewer electronics will help you to drastically reduce your imprint on the environment.

□ When possible, buy bamboo kitchen tools. Spatulas, spoon, and salad tongs are generally very easy to find in bamboo.

Bamboo grows quickly and bamboo fields use very little space to yield a productive crop.

□ Buy organic, shade grown coffee. The coffee industry is one of the most destructive agricultural industries on the planet. Shade grown coffee is coffee that has been grown in such a way as to create an agricultural ecosystem that promotes animal habitation in harmony with growth of the coffee. This is much better than the pesticide laden monocultures.

□ Buy second-hand clothing at thrift stores. The cotton industry is another industry that uses an obscene level of pesticides, and there is a lot of energy that goes into creating even a blank t-shirt.

□ Repair your clothes when they tear. The clothing industry is simply enormous, and a lot of people will

buy a new pair of jeans every time they tear a little hole in the old ones. This is a massively wasteful process, and it can be easily mitigated by simply taking some time to repair your torn clothes.

□ Unplug your appliances when you're not using them. Some people don't realize that their appliances pull electricity from the grid even when they're powered down. This is what's known as a 'vampire draw', and it accounts for an average of 5 percent of the yearly electrical usage in American homes.

□ Instead of using foil or plastic wrap to store leftovers, use reusable containers. Glass is your best option and it has the advantage of being microwaveable.

□ Old clothes that are unsuitable for charity shops can be cut up into rags, so that you can stop using paper towels. They won't take up much more space in the washing machine.

1. Try to use common transportation. It not only reduces the amount of greenhouse gases but it will also save the money.
2. Recycling is one of the basics of green living" reduce, reuse, and recycle". ENVIRONMENTAL ORGANISATIONS IN TAMILNADU: Zoo outreach organization in Coimbatore.
3. Care earth trust in Chennai.
4. Exnora international in Chennai.
5. Madras crocodile bank trust in Chennai.
6. Kenneth Anderson nature society in melagiri hills.
7. Center for Indian knowledge systems.

*"Nature is not a place to visit. It is home"*

*"Two favorite things in life are libraries and bicycles. They both move people forward without wasting anything. The perfect day is riding a bike to the library"*

*"Coming together is a beginning; keeping together is a process; working together is a success:*

*Therefore form a group, keep a goal and work as a team to make our environment better.*

# PROJECT MANAGEMENT

## **PROJECT MANAGEMENT**

### **VARSHITHA S (132019), III year**

#### **Cost Estimation and Project Budgeting**

Cost estimates and project budgets are continually revised. A well-researched and planned cost estimation and budget is necessary for the successful completion of any project. Project managers need to thoroughly scope the project in order to secure sufficient funding. Scoping involves estimating labor hours, materials, supplies and other miscellaneous expenses. Cost estimations and budgets are a work in progress and should contain room for change.

A good cost estimate is unbiased. It should not be made by someone who would over- or under-state the numbers. The cost estimate should clearly define the purpose of the project, what it will accomplish, what assumptions are made, how long the estimate is valid, and how much the project will cost. It should show all interested parties everything relevant, without holding back information. The estimate should be flexible, adaptable and provide a range of the costs involved.

Cost estimates start out broad, and as various stages are completed, they are more accurately defined.

#### **PROJECT MANAGEMENT SOFTWARE**

An effective and simple way to estimate costs and prepare a project budget is to use project management software. Most software has features that identify the types, quantities, and phasing of different types of labor. It also has capabilities for estimating the costs for individual project pieces and adding them together to reach a project total. The pieces can differ in size and number from a few large phases of a project with known costs to hundreds or thousands of small tasks.

##### *Accuracy*

Management needs to assess the accuracy of cost estimates and budgets. Unanticipated

expenses can result in the project being abandoned. Cost estimates that are overstated also have negative consequences. If they are too liberal, they can kill an otherwise viable project by making it look unaffordable. Good cost estimating requires access to a historical cost database. For example, in the software industry, there should be a cost a base that contains information regarding cost per line of code, software sizing algorithms and costs for functional descriptions and tasks.

##### *Considerations*

Not scoping the project thoroughly enough, misunderstanding technical difficulties, and making changes are the most common reasons projects do not adhere to cost estimates and budgets. Cost estimates can never be too detailed. Every change should be documented thoroughly. Management should consider how changes affect other phases of the project. A simple, yet effective tool is to use a spreadsheet to prepare the cost estimate, and keep all of the important data visible in cells, instead of hidden in formulas.

#### **ESTIMATING COSTS TO COMPARE AND SELECT PROJECTS**

During the conceptual phase when project selection occurs, economic factors are an important consideration when choosing between competing projects. To compare the simple paybacks or internal rates of return between projects, an estimate of the cost of each project is made. The estimates must be accurate enough so that the comparisons are meaningful, but the amount of time and resources used to make the estimates should be appropriate to the size and complexity of the project. The methods used to estimate the cost of the project during the selection phase are generally faster and consume fewer resources than those used to create detailed estimates in later phases. Estimates in the earliest stages of project selection are usually based from

previous projects that can be adjusted—**scaled**—to match the size and complexity of the current project or by applying standardized formulas.

#### *Analogous Estimate*

An estimate that is based on other project estimates is an **analogous estimate**. If a similar project cost a certain amount, then it is reasonable to assume that the current project will cost about the same normally, this judgment is based on many years of experience estimating projects, including incorrect estimates that were learning experiences for the expert.

#### Parametric Estimate

If the project consists of activities that are common to many other projects, average costs are available per unit. The estimator knows the average cost per square foot of a typical office building and adjustments for local labor costs. Other parameters such as quality of finishes are used to further refine the estimate. Estimates that are calculated by multiplying measured parameters by cost-per-unit values are **parametric estimates**.

#### ESTIMATING COSTS TO INITIATE PROJECTS

Once the project is selected, more accurate estimates are often needed to raise funds and agree on contracts with vendors in the initiation phase.

#### Vendor Bid Analysis

If services or products will be provided by vendors, the cost of those services can be determined by issuing a **request for proposal (RFP)**. The RFP describes the work, service, or product to be provided by the vendor and the quality level required. The RFP is sent to a list of vendors who are **qualified**—meet standards of reliability and capability—to perform this type of work. They respond with a proposal for completing the work described in the RFP,

including an estimate of the cost. Some government organizations are required to use the qualified vendor with the lowest bid. Other organizations are not bound to take the lowest bid but are usually required to justify their reasons for not doing so.

The project management team can review the responses by several vendors to the RFP to determine if their estimate of the cost of that aspect of the project is close to the estimate made during the project selection stage. If the estimates by the vendors are much higher than expected, and if the project cannot be completed for the cost that was used to select the project, the selection decision might have to be reconsidered. Reconsidering the selection of the project should take into consideration the economic ratings of the competing projects that were not chosen and who the project champions are for the projects that would be affected.

Some vendors may suggest an alternative way to meet the objective of the RFP in a more cost-effective manner that does not match the specifics of the RFP. Such alternatives can reduce costs if they are acceptable.

#### MANAGING CASH FLOW

If the total amount spent on a project is equal to or less than the amount budgeted, the project can still be in trouble if the funding for the project is not available when it is needed. The financial people prefer to keep the company's money working in other investments until the last moment before transferring it to the project account. The contractors and vendors have similar concerns, and they want to get paid as soon as possible so they can put the money to work in their own organizations. The project manager would like to have as much cash available as possible to use if activities exceed budget expectations.

# Project Management and Budget Estimation

PRIYANKA R R, EEE, III year

## PROJECT MANAGEMENT

*Project management is the discipline of carefully projecting or planning, organizing, motivating and controlling resources to achieve specific goals and meet specific success criteria.*

A project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables) undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value. The temporary nature of projects stands in contrast with business as usual (or operations), which are repetitive, permanent, or semi-permanent functional activities to produce products or services. In practice, the management of these two systems is often quite different, and as such requires the development of distinct technical skills and management strategies.

The primary challenge of project management is to achieve all of the project goals] and objectives while honoring the preconceived constraints. The primary constraints are scope, time, quality and budget. The secondary — and more ambitious — challenge is to optimize the allocation of necessary inputs and integrate them to meet pre-defined objectives.

A traditional phased approach identifies a sequence of steps to be completed. In the "traditional approach", five developmental components of a project can be distinguished (four stages plus control):

Typical development phases of an engineering project

1. initiation
2. planning and design
3. execution and construction
4. monitoring and controlling systems
5. completion and finish point

Not all projects will have every stage, as projects can be terminated before they reach completion. Some projects do not follow a structured planning and/or monitoring process. And some projects will go through steps 2, 3 and 4 multiple times.

Many industries use variations of these project stages. For example, when working on a brick-and-mortar design and construction, projects will typically progress through stages like pre-planning, conceptual design, schematic design, design development, construction drawings (or contract documents), and construction administration.

## BUDGET ESTIMATION

Approximation of the cost of an activity, job, program or project, prepared for budgeting and planning purposes only. Not accurate enough to provide a basis for a firm commitment, it represents only the budget maker's understanding of the scope and expense of what needs to be done.

### What Cost Estimates Include

A good cost estimate is unbiased. It should not be made by someone who would over- or under-state the numbers. The cost estimate should clearly define the purpose of the project, what it will accomplish, what assumptions are made, how long the estimate is valid, and how much the project will cost. It should show all interested parties everything relevant, without holding back information. The estimate should be flexible, adaptable and provide a range of the costs involved. Cost estimates start out broad, and as various stages are completed, they are more accurately defined.

### Accuracy

Management needs to assess the accuracy of cost estimates and budgets. Unanticipated expenses can result in the project being abandoned. Cost estimates that are overstated also have negative consequences. If they are too liberal, they can kill an otherwise viable project by making it look

unaffordable. Good cost estimating requires access to a historical cost database. For example, in the software industry, there should be a cost database that contains information regarding cost per line of code, software sizing algorithms and costs for functional descriptions and tasks.

### **Considerations**

Not scoping the project thoroughly enough, misunderstanding technical difficulties, and making changes are the most common reasons projects do not adhere to cost estimates and budgets. Cost estimates can never be too detailed. Every change should be documented thoroughly. Management should consider how changes affect

other phases of the project. A simple, yet effective tool is to use a spreadsheet to prepare the cost estimate, and keep all of the important data visible in cells, instead of hidden in formulas.

*A well-researched and planned cost estimation and budget is necessary for the successful completion of any project. Project managers need to thoroughly scope the project in order to secure sufficient funding. Scoping involves estimating labor hours, materials, supplies and other miscellaneous expenses. Cost estimations and budgets are a work in progress and should contain room for change.*



## Project management

**S R AKSHAYSRINIVAS (122108)**

Hello friends, few students in our departments were still not aware of the funds that have been provided by the institutions like IEI, IIPC, QC-ARD etc., none other colleges were giving funds for the students for doing projects. So please make use of it! Some students were surprised when I shared about the funds given in our college.

We struggled with few doubts while filling our application form like how to name our project, how to prepare abstract, what is methodology and so on... So I would like to share about it. You can apply as many of the fund for the same project but it must be included in the application form.

### Procedure for applying fund for project.

**Step 1:** Select a good title for your project.

**Note:** Place a name that answers a problem faced by public or industries.

**Step 2:** Team members.

**Note:** for the maximum number of team members refer the application of the organization that provides fund.

**Step 3:** abstract.

**Note:** make sure that your concept is explained crispy. According to the words strength mentioned in your application design your abstract.

\*do not copy paste from the internet. Go with your own words.

**Step 4:** methodology and work plan.

**Note:** the methodology differs from the abstract “your abstract consists of what are your project and the solution you have found for a problem” but “your methodology should explain the procedure how it works”.

Decide how you are going to approach your project and have a plan of your work. (Month wise)

It will be better if u test your prototype of the model for the entire last month.

\*your work plan must consist of 5000 words nearly. Have a clear path how are you going to design your project from the top to bottom.

**Step 5:** future plans.

**Note:** the fund will be easily provided for the projects that have future value so design a project that has future value.

**Step 6:** Details of the funding requirement.

**Note:**

Sl	Details of expenditure	Type (R/NR)	Estimated Cost In Rs.	Fund to be arranged by student's Instt. / other sources*	Fund required from ***** **** ***** ***** In Rs.

R: Recurring: can be used in future (voltmeter, etc.)

NR: Nonrecurring: cannot be used in future (lead, etc.)

\*should use the price value of the components to be used very nearer to the market price.

\*your expenditure details must maximum consists of non-recurring materials.

**Step 7:** presentation

Prepare the slides that cover the entire details few organization expect the entire project few



concentrate on the working of the project so prepare according to the expectation.

Start doing your project before the presentation of your project for fund and demand the money in terms of percentage from the target price.

The approval of the fund depends not only on your project but also on the presentation on that day so prepare well for the presentation.

**Step 8: Final Presentation.**

After the completion of the project, hand-over the prototype to the institution where few funding institutions demand on the prototype.

\*After graduation at least one of the members of the batch will have the presentation in front of the principal and this should be attended.

\*the project must be hand over completely with all papers and the bills.

# FORETITUDE FOREVER

**DHARUN BASKAR S (122007), IV year**

Purity Knowledge is always come with simplicity. Learn ability is a lifetime process sometimes I am taking some great peoples thoughts which will intentionally very useful to deserve success in my personal and professional life. Some few peoples in the world should have that great fortitude such as Dr.APJ Abdul Kalam. Every speeches he said encourage ourselves from failures, eventually his devotion to our mother tong. Yes, one should be respect with his mother tong other languages will easily approach that person. His talks are so cheerful to youngsters especially for students. I am preparing myself to read more books. Art is free from religion he

spent his precious time to play veena, awesome man. We can't read his books instead of we have seen his face daily that will give more enthusiasm. His habit of reading thirukural that's a prestigious one, everything is in that treasure of knowledge. The qualities of a leader ,the importance of education and good listening, understanding the wisdom, cherishing good company, seeking aid of the worthy, and meanness these are his bricks of success's wish to improve my patience and perseverance in my all walks of life.

**RATS AS PIED PIPERS**  
**(Team work and Leadership)**  
**INDIRA.G (132003), EEE, III Year**

A team comprises a group of people or animals linked in a common purpose. Teams are especially appropriate for conducting tasks that are high in complexity and have many interdependent subtasks. Teams normally have members with complementary skills and generate synergy through a coordinated effort which allows each member to maximize his/her strengths and minimize his/her weaknesses. Team members need to learn how to help one another, help other team members realize their true potential, and create an environment that allows everyone to go beyond their limitations.

**TYPES OF TEAM**

**1) INDEPENDENT AND INTERDEPENDENT TEAMS**

**A. IN AN INTERDEPENDENT TEAM:** No significant task can be accomplished without the help and cooperation of any of the members within that team members typically specialize in different tasks (running the ball, goal kicking & scrum feeding), and the success of every individual is inextricably bound to the success of the whole team

**B. IN AN INDEPENDENT TEAM:** Matches are played and won, or points are scored, by individuals or partners, every person performs basically the same actions. How one player performs has no direct effect on the performance of the next player. If all team members each perform the same basic tasks, such as students working problems in a math class, or outside sales employees making phone calls, then it is likely that this team is an independent team. They may be able to help each other — perhaps by offering advice or practice time, by providing moral support, or by helping in the background

during a busy time — but each individual's success is primarily due to each individual's own efforts.

**2) SELF-MANAGED TEAMS:** The main idea of the self-managed team is that the leader does not operate with positional authority. Self-managed teams operate in many organizations to manage complex projects involving research, design, process improvement, and even systemic issue resolution, particularly for cross-department projects involving people of similar seniority levels. While the internal leadership style in a self-managed team is distinct from traditional leadership and operates to neutralize the issues often associated with traditional leadership models, a self-managed team still needs support from senior management to operate well.

**3) SPORTS TEAMS:** A sports team is a group of people which play a sport together. Members include all players (even those who are waiting their turn to play) as well as support members such as a team manager or coach.

**4) VIRTUAL TEAMS:** A virtual team is a group of people who work interdependently and with shared purpose across space, time, and organization boundaries using technology to communicate and collaborate. Virtual team members can be located across a country or across the world, rarely meet face-to-face, and include members from different cultures.

**5) INTERDISCIPLINARY AND MULTIDISCIPLINARY TEAMS:**

Multidisciplinary teams involve several professionals who independently treat various issues a patient may have, focusing on the issues in which they specialize. Interdisciplinary team approach involves all members of the team

working together towards the same goal. In an interdisciplinary team approach, there can often be role blending by members of the core team, who may take on tasks usually filled by other team members

## **TEAM DEVELOPMENT PROCESS**

The five stages of team development have been characterized as:

### **FORMING**

- Formation of team happens & the team comes together.
- Members feel anxious and spend their time finding out about each other.
- Individual roles and responsibilities are unclear.
- Highly depending on the manager/leader.
- Equivalent Situational Leadership style: *Directing*

### **STORMING**

- Team members come up with ideas through debates on how to proceed with the task, about task priorities and clarity on purpose of the task.
- Roles & responsibilities and processes to follow, influence of ideas and power struggles may arise.
- Compromises may be required to enable progress.
- Team members may challenge the leader & leader coaches.
- Equivalent Situational Leadership style: *Selling*

### **NORMING**

- Work as a team starts.
- Roles and responsibilities are clear and accepted.

- Team begins to exhibit participative behavior & decision making happens by group agreement.
- Commitment, trust and unity increases.
- Equivalent Situational Leadership style: *Supporting*

### **PERFORMING**

- This stage is characterized by high levels of goal orientation, interpersonal relations, independence, motivation, knowledge and competence in team members.
- Team know what, why & how of the task they are executing.
- High level of respect in the communication between team members.
- Team expects delegation of task instead of instruction/assistance.
- Equivalent Situational Leadership style: *Delegating*

### **ADJOURNING**

- Happens when project completes.
- Members moving out of the group after project goal achievement.
- Everyone can move on to new things.
- Achievement celebrated.

## **REASONS BEHIND THE PROBLEMS GENERATED IN TEAMS**

Team work is individuals working together to accomplish more than they could do alone but more than that it is exciting, satisfying and enjoyable. Some of the indicators of poor team work are Symptoms of frustration, Unhealthy competition, Rigid group norms & procedures, Quality of relationship is poor, Absence of trust, People not developing, Dearth of new ideas & creativity, Domination by the leader, Warring cliques or sub-groups, Avoidance approach to potential conflicts, High turnover,

more absenteeism, more grievances and more transfer requests, Work schedule delays etc..

### **TEAM WORK- A KEY TO LEADERSHIP SKILLS....**

*Leadership is the art of getting someone else to do something you want done because he wants to do it. - Dwight D. Eisenhower*

It is not just the soft skills that comprise this “Leadership quality”. A true leader comes from within under different situations. It is not created or ingested rather it is developed implicitly. Gaining something implicitly sustains for a longer time. Acting as situational leaders in the team helps us to mold into a Team leader or a Managing head. The basic skills and qualities that a leader should possess basically are

- Creates an inspiring vision of the future.
- Motivates and inspires people to engage with that vision.
- Manages delivery of the vision.

- Coaches and builds a team, so that it is more effective at achieving the vision.
- Skill of agility and adaptability.
- Skill of self-awareness.

### **ORGANISATIONAL BENEFITS ASSOCIATED WITH TEAM AND THE TEAMWORK:**

Teams always recognize itself as a useful machine in achieving organizations goals. This is because of its characteristics which influence the performance of the organization. Organizational behavior integrates individual process, group process and organizational processes and further these are intergraded to psychology, social science, sociology and other facts. So a team in an organization reacts with all these factors that are why success of an organization always rely on teams. As a result of these teams are formed in organizations to solve management problems as well as to be successful organizations in foreseeable future.

## **REASONS WHY I LIKE ABDUL KALAM**

**VARSHITHA S (132019), EEE, III year**

The country is mourning over the demise of one of India's great scientists and former President APJ Abdul Kalam. This inspirational, Bharat Ratna recipient has left behind us a legacy of inspiration and guidance, to succeed in every aspect of life. He breathed his last while doing what he was known best for—imparting knowledge at IIM Shillong. Abdul Kalam was a people's president, who was loved by one and all. Here's why India's youth will be forever inspired by the missile man of India.

1. Avul Pakir Jainulabdeen Abdul Kalam came from a financially poor background and used to distribute newspapers after school, to support his family's income.
2. He was never the first ranker at school, but he was known for his bright mind and hard work. His strong desire to learn mathematics set him apart from the other students.
3. His poor financial condition never stopped him from dreaming to be a literate. After completing his school, he did not give up his education to work. He attended Saint Joseph's College, Tiruchirappalli and graduated with a degree in Physics, in 1954.
4. By the end of the course, he lost interest in Physics, but that didn't make him feel guilty. Instead, he pursued what interested him the most. He secured a scholarship and joined a course to study aerospace engineering, from Madras Institute of Technology. He taught us that dreams can be fulfilled with perseverance.
5. He also taught us to never fear deadlines and targets. Everything is possible if we have the will to do it. Once, he had to complete a science project, which had a deadline of three days. The dean of the college threatened APJ Abdul Kalam that he would lose his scholarship if he didn't complete the project within the deadline. But our dear President worked tirelessly, completed the project and impressed the dean.
6. APJ Abdul Kalam too had some unfulfilled dreams. He wanted to become a fighter pilot. However, he was placed ninth in the qualifier and only eight positions were available at the Indian Air Force (IAF). It's a wonderful lesson that one should never give up in life, in any situation.
7. This missile man started his scientific career by designing a small helicopter for the Indian Army. An idea can change several lives. This is an important take-away for entrepreneurs to never belittle their ideas. Persistence and patience will pay off.
8. Kalam was also a part of the Indian National Committee for Space Research (INCOSPAR) team, working under another great Indian scientist, Vikram Sarabhai. When the opportunity rises, make the most of it.
9. Kalam who rigorously worked for the development of ballistic missile was bestowed with the title of Missile Man. It's true that a human being's worth is measured by his hard work and sincere efforts.
10. Kalam was invited by Raja Raman to witness the country's first nuclear test, Smiling Buddha, as the representative of Terminal Ballistics Research Laboratory (TBRL), even though he had not participated in its development. Work hard and fame will follow you.
11. Kalam served as the Chief Scientific Adviser to the Prime Minister and the Secretary of the Defense Research and Development Organization from July 1992 to December 1999.
12. Kalam served as the 11th President of India, succeeding K. R. Narayanan. He won the 2002 presidential election with an electoral vote of 922,884. He served as the President from July 25, 2002 to July 25, 2007. From a boy-next-door to the President of India, this is a remarkable achievement.
13. After completing his second term as the President of India, Kalam launched a programme for the youth of India, What Can I Give

Movement, with the idea and central theme of defeating corruption in our nation. We should carry forward the former President's legacy of working against corruption in our country.

14. APJ Abdul Kalam holds the highest civilians honor of our country. In 1997, the Government of India honored him with the highest civilian title, Bharat Ratna. A man of this stature and caliber, one of his greatest lessons is to be humble and stay grounded, even after tasting success and fame.

15. He has several honorary doctorates from 40 universities, from across the globe. Education is the key to growth and evolution. It's important to be a student of life, always.

16. He also has various biographies on his life and work as a scientist. Despite his success, Dr Kalam was one of the most endearing presidents because of his compassion, kindness and unconditional love for everyone.

17. There are various documentaries made on his life. The famous Bollywood movie, I Am Kalam, was inspired by his work and life. Be an inspiration and pave the path for change.

18. Abdul Kalam once said, "Don't declare holiday on my death, and instead work an extra day, if you love me." This quote by him is enough to suggest how every day we need to work hard to achieve our desired goals and aspirations. And India, indeed, fulfilled his wish, a day after his death; India worked.

Don't you aspire to be like the man, who was known for his honesty, hard work and compassion?

Former President & eminent scientist Dr APJ Abdul Kalam passed away in Shillong on Monday. Kalam collapsed during a speech at IIM Shillong and was immediately rushed to the nearby Bethany Hospital.

Here are some of Kalam's inspirational sayings through which he will be remembered forever...

"You have to dream before your dreams can come true."

"If a country is to be corruption free and become a nation of beautiful minds, I strongly feel there are three key societal members who can make a

difference. They are the father, the mother and the teacher."

"My message, especially to young people is to have courage to think differently, courage to invent, to travel the unexplored path, courage to discover the impossible and to conquer the problems and succeed. These are great qualities that they must work towards. This is my message to the young people."

"To succeed in your mission, you must have single-minded devotion to your goal."

"Let me define a leader. He must have vision and passion and not be afraid of any problem. Instead, he should know how to defeat it. Most importantly, he must work with integrity."



## **VISION**

**To become a high standard of excellence in Education, Training and Research in the field of Electrical and Electronics Engineering and allied applications**

## **MISSION**

**To produce excellent, Innovative and Nationalistic Engineers with Ethical values and to advance in the field of Electrical and Electronics Engineering and allied areas.**