Based on your feedback forms, class survey, and personal conversations, **many of you foresee a career in management and business.**

Read and discuss with your group the articles published in ASME Magazine:
http://memagazine.asme.org/Articles/

**5 Myths**
When it comes to selecting managers, there are common assumptions that doom many to failure
February 2009 Issue

**To a Higher Degree**
How do you decide which advanced course of study is the best option for your career?
March 2008 Issue

**Additional reference**
Finding the right MBA
http://www.economist.com/node/21014607

Write a **500** word essay in reply to
"Is management just another engineering skill?"
“What do I need to learn and to do to become an effective manager?"

We will also discuss the topic and your comments in class

Luis San Andrés (lecturer)
Engineering management

After graduating, many engineers will enter the workforce at an entry-level position and work their way up to a higher position, which often involves becoming a manager. This poses the question of whether engineers have the skills required to effectively manage a project or group of people without any specific training. There are five myths about engineering management that address this question and some of the possible solutions. Another important decision for engineers to consider as they advance their careers is whether to pursue an M.B.A., an M.S.A, or a specialization in engineering, as these are beneficial. The following will explore advantages and disadvantages of all three.

With the rapid growth of companies, an present days, more and more engineers are attaining managerial positions. There are myths that are used frequently to justify the selection of a new manager. These include:

1. Choosing an engineer that is great at their job,
2. Learning a new key managerial skill will get them through,
3. Having a good mentor or working with a good manager who can help them succeed,
4. Competition will allow the best manager to appear, and
5. Anyone can manage as long as they have the right skills.

While some of these myths might work for certain instances, they usually lead to failure because an engineer is missing key skills that will make them a successful manager. Engineers usually have very individualized, specialized tasks, and management is not a traditional role. As an important issue, engineers have to have understanding of self-awareness, how others work, and communication as well as a tool and personal flexibility as critical.

Without training, it is difficult for engineers to encompass all of these skills. Companies like G.E. A have proven that these myths are not always true if you do provide some extra training. G.E. A singles out their very best engineers for special training and has spent $1 billion on training, a most of which is at their elite management college.

Unfortunately, most companies do not have the funds to ensure that their best engineers can get adequate training. When pursuing higher-level positions, many engineers ask whether an M.B.A. or an M.S. is a more advantageous degree. They are both given different pursuits, but have very different expectations and outcomes. M.B.A. programs are especially good at getting engineers to become managers. They offer a variety of programs that can fit the needs of many engineers. On the downside, differentiation among M.B.A. students is organizationally becoming increasingly difficult.

Although many people are pursuing these higher degrees, they can still set a person apart. The market is tougher, the degree is harder scrutiny, and those for many professions, getting an MBA from a top school can help a student get a better job.

There are a few things that are true:

1. Any engineer (BS graduates) who will enter as an entry-level engineer?
2. With reference needed here, Terri [1].

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1. Any engineer (BS graduates) who will enter as an entry-level engineer?

2. With reference needed here, Terri [1].
Engineering Management is not a variety of programs like the ones offered to M.B.A. students but they (who? The programs?) are typically allowed to take master’s level classes immediately. Ultimately, it really depends on the preference of the engineer in deciding which higher degree to pursue.

References

Use ASME format for citations:
Author Last name, Initial first name (period), year, “title of article,” Publication (book, magazine, journal or web address)

Notes from reader:
Excellent opening paragraph, strong and fluid. Second paragraph sums well Ref. [1]. Last paragraph: closing OK but next to last sentence is rather obscure. Good job.
Completing an engineering degree program from an accredited university is a respected accomplishment and one that prepares the graduate to be successful. It will bring value to his or her future employer. Engineering curriculum focuses almost exclusively on the technical aspects of the particular degree plan so that the graduate can make difficult engineering decisions based on scientific and mathematical data. As many entry level engineers learn after logging time in the working world, there are many non-technical skills that were not taught in depth during school. These skills can be of equal or greater importance to the success of an individual in the workplace. For the numerous engineers who aspire to continue progressing into a position of management, these soft skills are vital in determining who is capable of performing admirably in these sought after jobs.

Management is not merely a single skill that can be learned by reading a book. It is much more in depth than that. Steven Cerri wrote, “It’s about motivating, and communicating and dealing with people [1]”. There are many skills required in order to be a successful manager. The proficiency of paramount importance is the ability to communicate clearly and effectively to other people. Nothing will impede the progress of a team more than if the leader cannot convey what he or she wants done without confusing or frustrating others. On all projects, situations will arise where something has not gone exactly as planned. These may range from a disagreement between personnel to an unforeseen technical challenge. Regardless, the manager is responsible for effectively organizing the team and handling the situations with professional integrity, without compromising the company, the end result, and the relationships between team members.

Balancing these crucial components for a successful business can be tricky and requires a skill set that develops over time. A Masters of Business Administration (M.B.A.) degree has long been a popular choice for those engineers hoping to bridge the gap between their technical expertise and business aspirations. One of the objectives that these engineers hope to fulfill through this degree is acquiring the ability to become an effective manager. The M.B.A. degree will prepare an engineer for a business career because “…you should be well versed in the language of business … You should have a clearer appreciation of how your actions affect the business bottom line” and “You should also have acquired a skill set that is applicable to many different types of organizations [2]” by the time you graduate.

However, getting an M.B.A. will not necessarily make a person a better manager. Some business professors believe that many didn't learn the "importance of social responsibility, common-sense skepticism and respect for the risk they were taking with other people's money [3]" and that this was a contributing factor for the financial meltdown in 2008. Similar to engineering, the M.B.A programs need to not only teach knowledge but stress how their actions can affect the world. Many people still believe that getting an M.B.A. will help engineers become better managers. But having more knowledge is not the most important aspect of becoming a good manager. Knowledge in various areas such as business and engineering will make people into better managers. To become a great manager, a person must not only see the

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1Reader understands: that many professors, rather than managers.
short term effects of their decisions, but understand the long term effects that will appear in the future.

References


Use ASME format for citations:
Author Last name, Initial first name (period), year, “title of article,” Publication (book, magazine, journal or web address)

Notes from reader:
Improvement in citation format. Good (catchy) title – invites reader to read!
Well crafted and well thought essay. Uses references (material read) to build knowledge and too advance sound (original) recommendations. Thanks
Deciding what to do after college was a lot easier in the past than it is today. Years ago most students just graduated with their bachelors and started working for a company right away. Then after several years they worked their way up to managerial positions. Today those positions are so competitive that a higher education degree is really recommended. But should you get a MBA or an advanced MS in your area? There is really no specific answer for this as it depends on the individual. Some companies may be more involved in business transactions thus a MBA would be recommended; others might be really technical and an advanced degree in a specific area could help you become the lead engineer. “Each discipline supports the organization in its own way. Each has distinct advantages and disadvantages, and it is up to you to decide which one supports your career objectives more appropriately.” [1]

It is essential to any engineer who wishes to progress in any industry to show effective leadership and managerial skills. Some might argue that it is paramount to higher pay grades in industry, however others express these ideas as simply myths.

Steve Cerri states in his 5 Myths that the biggest myth for engineers going into management is that if “you seem to follow directions well, therefore you can probably give directions well.” This is false because receiving directions deals with the physical world whilst the directing deals primarily with the emotion world making an achievement in one area mean little in the other. Another myth that Cerri debunks is that “management is a ‘no-brainer’ that ... is dependent on the successful execution of certain tasks or hard skills...and that any bright person could do it.” His argument is that management is a different way of thinking that regular physical problem, its about motivating and communicating and dealing with people.[2]

So if management is a skill that must be trained and perfected, there must be resources that permit easy access to that information. Perhaps the best way to practice these skills is in an MBA (Masters in Business Administration) program offered by a University. The problem now becomes which one should you (one) chose? Well, the answer is not so simple because it depends on the necessities of the individual. The Economist, provides a good guideline to what priorities should be seen before a choice can be made. First off what do “you” want to get out of the MBA? Most people need improvement on their people skills such as active communication, written communication, breaking international boundaries and...
basics to become an entrepreneur. Some others, however, use an MBA as a way to further their job situation such as business contacts, being more mobile, and improving a pay grade. Having these thoughts in mind can help narrow down the school choices (along with price and location) and focus on what is really important for you in an advanced managerial career.

Bibliography:

1. To a Higher Degree – March 2008 Issue
2. Steven Cerri
3. The Economist

Use ASME format for citations:

Author Last name, Initial first name (period), year, "title of article," Publication (book, magazine, journal or web address)

Notes from reader:

Essay is uncritical, it merely paraphrases portions of articles read. Poor citation format. Too many times the same mistake? A

MBA instead of a MBA.
Myths on Engineering Management

The difference between being a manager and a leader is whether one has subordinates or followers respectively. This was said\(^1\) by John G. Falcioni, Editor-in-Chief for the ASME Magazine in an article he wrote over the differences between leading and managing as an engineer. Engineers typically do not receive much training on how to manage or lead during their college careers; however subtle opportunities are presented to them during general group project work. Learning how to manage how a group works together to achieve a common goal is a skill engineers have the opportunity of learning throughout their college career. However, this expertise can only be attained if college students have the dedication to learn the necessary tactics most successful managers practice.

There are many ways engineers can attain the knowledge to better their managerial skills such as seminars and classes. Steven Cerri with STCerri International offers training to engineers to help develop their soft skills. He offers classes and seminars that work on team building, leadership, productivity, and several other interpersonal skills. Essentially, he is providing a service that will help engineers possess and retain the managerial skills that one would attain in a MBA program. The service is not a substitute for getting an MBA, however it is a good service that one can participate in while still working full time. Getting an MBA is a decision that should never be taken lightly because there is a big time commitment along with a substantial monetary investment. The pros to getting the MBA is one would have written proof that they (\(^a\)) possess the skills necessary to fulfill a manager roll overseeing a group of people\(^2\). Having an MBA would most likely give the quickest and smoothest transition from an engineering position to a manager position overseeing engineers. The down side to getting an MBA is that one would solely possess the engineering skills learned as an undergraduate and while working\(^3\).

A Masters of Science (M.S.) or a Masters of Engineering (M.Eng) would provide more knowledge about a particular subject and give written proof that one has substantially more knowledge about a field than an engineer with an MBA. The trade off when deciding whether to get an MBA, M.S., or M.Eng for potentially becoming an engineer manager comes down to whether one believes the managerial soft skills outweigh the extra knowledge gained in a M.S. or M.Eng program or vice versa. It is indistinguishable as to which program would give the edge in fast-tracking one’s path to becoming a manager and how long that may take. The most efficient way to become an engineering manager will come down to whichever way one attains the additional engineering knowledge while also developing their (\(^b\)) soft skills that most managers possess. The route one takes such as getting an MBA, M.S., M.Eng, or taking classes and attending seminars is a decision the engineer will have to make that they believe will (\(^c\)) most efficiently fast-track their career goals.

REFERENCES Missing. A poor near sighted essay with many obscure sentences

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\(^1\) Reader: please give a proper citation, when (date) and provide a resource

\(^2\) Reader: A nearly incomprehensible sentence.

\(^3\) Reader: Same comment as in footnote 1. Perhaps you mean the downside to NOT getting a MBA. What is AN MBA?
Management is not an engineering skill but is a specific set of acquired talents and abilities gained through experience and training in a corporate setting. Thanks to recent improvements in engineering programs, modern engineering schools¹ lay the foundation for engineers to become managers by stressing critical thinking skills, teamwork, and time management. However, that is where the management training ends. Engineers often lack the ability to lead and motivate people and understand the thought process as well as the need for a diverse, multi-disciplined group.

Management requires individuals to understand how they, themselves (?), function before beginning to understand the functioning of those whom they are in charge of [1]. A manager needs to have a keen awareness of his/her own character flaws and tendencies before trying to lead and motivate a large group. Once all these weaknesses are discovered and recognized, a manager must be willing to change his or her personality to lead more effectively. After establishing this groundwork, the engineer can more effectively lead and empathize with his/her employees.

Another key shift in skill set an engineer must make is the realization that there may be more than one right answer to a given problem [1]. This is something that engineers often struggle with, as through most of engineering schools there is only one right answer to the given problem (?). In the real world and especially in management roles, the exact opposite is often true; there exist multitudes of seemingly equally valid solutions to a challenge. A manager must therefore be able to analyze and evaluate these solutions, often using intangible rather than technical criteria to judge the validity of these possible answers. Social and political impact and even customer goodwill can all play surprisingly critical roles in the decision making process. An engineer must be able to identify and gauge the influence of each of these elusive effects in order to become an effective manager.

Speaking to people with a non-technical background is an important skill for any engineer to learn, especially one who aspires to go into management. Being able to verbalize their thoughts and concepts is important and being able to express them simply enough that everyone in the room can understand is a valuable and powerful skill. One can have the best design there is, but without being able to communicate it to others, it will never be put on for display.

¹ Reader: good opening – support for the claim is important; otherwise it is merely speculative
To gain the necessary skill for management, many seek an MBA. When comparing the cost of tuition to the possibility of advancement, one may want to consider a degree in another area, such as communications. Texas A&M University is ranked number one in the United States by *Financial Times* for the money value of an MBA [3], and total cost of getting the degree is roughly $52,000 [4], which is a major investment. Bearing in mind that some consider an MBA to be less of a requirement for advancement [2], it might be better to explore other options to gain the required management skills. For example, it could be significantly more economical to earn a Master’s in Communications to gain better communication skills. There is no guaranteed path to management; one must take into consideration the needed qualities to perform and the financial aspects to succeed.

References


Use ASME format for citations:
Author Last name, Initial first name (period), year, “title of article,” Publication (book, magazine, journal or web address)

Notes from reader:
Good essay with strong and well crafted arguments. Style is uniform throughout
Closing paragraph highlights important information on cost of a TAMU MBA (rank 44 in the world) and offers an interesting option: MS in Communication.
Introduction
The switch from a technical engineering position to management requires more NEW learning and skills than one would think. One cannot just pick up this trade on the fly, it takes training in people skills, motivation skills, and communication skills coupled with the passion to lead. Engineers contemplating a management position have a lot more to think about and learn than they really know, but if the following topics are understood beforehand then a smooth transition to this exciting position is possible.

Osmosis
A common belief is that if (you are) one is around, watching, and talking to management; one can eventually become a decent manager. This is not the case. Managerial skills don’t come from just a good manager, but from one that can teach his knowledge and experiences. Learning from someone you will eventually replace is good for you and your company. The reason is because you can learn what your supervisors want but negatively one could learn his teacher’s faults and repeat them. (hard to read – combines 2nd and third persons in the same sentence – you and one (him/her))

Size Does Matter
Just because a task seems miniscule or not very important does not mean anyone can manage it. Though it seems that simply watching over a “small” task doesn’t take much effort or one will do (??) any real damage is not the right mentality. The main reason it (who is it) does not work is the fact that there is no training, skill, preparation, or even worse – possibly no communication skills.

The Great Engineer
A great mechanical engineer does not necessarily make a great manager. I (group essay?) have personally seen this happen. A person, who is great at solving technical problems, fails miserably when tasks with managing people problems. There is a reason many large corporations have separate paths for management and for technical routes. Knowing math and calculations does not directly translate to dealing with people problems. This is not to say that great engineers cannot become great managers. Some skills of a good engineer do translate into sound management
practice. They must both have good communication skills (written and verbal), must possess good time management skills, and must understand the concept of time value added. One can always spend more time on a project to improve it, but the trick is to know at what point the time you spend to improve adds less value to the product.

The Decision for Transition

Many engineers must decide during their careers whether to move into management or stay in the technical side of things. Every year engineers get chosen to move into management and every year there are as many failures as successes (a source for your claim is needed here). One reason for the failures is the assumption that since a person is a good mechanical engineer they will be a good manager of mechanical engineers. Unfortunately technical management is a very separate discipline from mechanical engineering. There is also some belief that picking up a few hard skills is enough to be a good manager because people assume that it is a “no-brainer” and any smart person can do it. Good management is not about hard skills, but is about motivating, communicating, and dealing with different personalities.

Works Cited (where? I don’t see any citation in your essay)


Use ASME format for citations:
Author Last name, Initial first name (period), year, “title of article,” Publication (book, magazine, journal or web address)

Notes from reader:
An essay with mixed language – not clear in many places
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that there are not engineers that possess these skills. On the contrary, many engineers have become successful managers and gone on to lead successful companies. However, basic communication skills, conflict resolution, leadership, and self-awareness are not skills that are generally taught in engineering programs. In the coming years, perhaps engineering and management education will see some kind of merger, like a hybrid degree program. But until then, it is not a safe assumption that an excellent engineer will make a good manager.

References

[1] = 5 Myths
http://www.asme.org/kb/news/articles/articles/career-development/is-management-for-me

Use ASME format for citations:
Author Last name, Initial first name (period), year, “title of article,” Publication (book, magazine, journal or web address)

Notes from reader:
Good opening paragraph. But later, essay mixes language and is not clear in many places. Over abuse of “them” and “their” makes difficult reading. Reference citation remains poor. Closing statement offers insight: a merger of disciplines.