Skills

CSC424: Software Engineering II

Rebecca Grantland

April 23, 2021

Introduction

In this paper I want to talk about some important skills when it comes to working in the world of software development. The goal will be to clearly define each skill that will be talked about in this paper, and explain how it is important. In this paper we will discuss a few topics including the difference between leadership and management, how to run an efficient, effective meeting, and risk analysis.

Differences in Leadership and Management

When we think of leaders in the workplace, we generally think of managers and upper management. What we should understand is that leading and managing are two different things. Just because someone is part of management in a company does not make them a leader by default and vice versa. A good way to think of it is that "leaders have people follow them while managers have people who work for them. [3]" Now let's highlight some things that make someone a leader rather than a manager and vise versa.

Going off the previous example of "leaders have people that follow them[,]" what are some qualities that make leaders [3]? There are many different qualities that would fit here. People like to follow someone that is inspiring [3]. They also like to follow people that are honest with them [3]. It can also be said that people like to follow someone who has a vision of where they want things to go [3]. There are many other qualities as well, but I think these are really key to being a leader, so let's break these down some.

Let's start with leader's having a vision of where they want things to go [3]. Another way to think of it, is how can you steer a ship if you do not know where you are going. A leader needs to have a longer term goal to work toward and point their followers to. This helps keep the leader and followers focused. It also can be used to keep the followers motivated. For example, a startup company is not likely to have a lot of benefits because there is not enough funding yet to have anything fancy, but they have clearly defined goals of where they want to go. When they pitch their company to receive funding, they talk about where they are going and how they are going to get there. Most anyone who works there is likely focused on the longer term vision of the company as well, and it can help keep them motivated.

The next quality I would like to talk about is leader's having the ability to inspire those around them [3]. Everyone wants to feel appreciated and part of the group, leaders are generally good at making this happen. They find ways to keep followers inspired and encourage them to keep doing their best no matter what that looks like. They can do this by helping everyone see the vision they are all working toward, then help explain how an individual role helps them get closer to that vision. It helps each person feel valued and important.

Lastly, let's talk about honesty. A good leader should always be honest [3]. No one likes to be lied to, and most anyone can appreciate the truth even if it is something they do not want to hear. For example, who would want to hear that the company they work for did not get the big deal that would help them bring in more money? No one, but a leader would not be ashamed to

share this with their team anyway if it was the honest truth. Not an easy task as a leader, but necessary and deeply appreciated by their followers.

Now, let's start looking at the qualities of a manager. Returning to the same example that "managers have people that work for them[,]" what are some qualities that make a good manager [3]? I am sure that everyone would come up with something different from past experiences. A few I think should always be important to include are being able to direct what work needs to be done, establish rules and standards, and make sure everyone is looked after [3]. So let's go over these with a little more depth.

A good manager should be able to direct what work needs to be done [3]. They should be able to assign tasks and keep everything on schedule. This is a pretty broad area to cover as it goes from long term to day to day. They have the long term to focus on and schedule how they get the team there. A common way to do this is to break everything down into tasks, then divide the tasks between workers or small groups of workers. No matter how they do it, they need to have tasks ready for workers to work on to keep them productive and working toward the common goal.

Another excellent quality to have as a manager is being able to establish rules and standards [3]. Everyone needs clearly defined rules to know where the line is. One way to think of this in a work setting is breaks. Breaks at work are normally clearly defined to make sure time workers spend at work is appropriately spent working. This is important to show a clear line of when you are present at work, you should be working; but also offer designated times that you can have some time to yourself and refresh. By clearly defining when breaks are, it prevents confusion and contention between management and workers. A manager should be fair when establishing rules and standards, but should have them defined somewhere so anyone who is under them can understand what is expected of them.

The last quality I would like to mention is managers should always make sure their workforce is well looked after [3]. They should check to make sure everyone has what they need to do their job, listen to input, and involve the workers wherever you can. These are all basic things that people tend to forget about. How can a worker be expected to clean a bathroom without gloves, sponges, and cleaner? How can improvements be made to working conditions if a manager never listens to what their workers have to say? How can workers feel valued and stay well informed if they never get to be involved with anything outside their daily tasks? A good manager makes sure to involve their workers, value their input, and get them what they need to work.

I think an important thing to note about both leaders and managers is that you need both to run anything. They could be the same person or multiple different people playing off each other's strengths. A fun way to think of the two roles is like front end and back end programming. You want to have a fancy front end to keep people interested and excited, and a well made back end to keep everything running smooth as butter. Both are important and valuable and having someone who is good at the job can make all the difference.

Running Effective Meetings

  I know meetings never seem to be well liked at work, but they can be a powerful tool if used correctly. I do not think there is a better way to get everyone in a group all on the same page effectively as a meeting. Sure group messages work too, but there are a lot of times where there have been misunderstandings through messages. While this can happen in person too, I see it happen a lot less often than through text or written mediums. So what are some good key things that can help one run an effective meeting? Efficient meetings should always have agendas, set attendees up for success, and have attendees leave with something to do [2].

  Agendas are amazing when it comes to running efficient meetings [2]. It is an easy thing to look at to remember where you are in the meeting, it is a good template for those taking notes, and it keeps people focused and on task when used effectively. They can be very easy to make before the meeting as well. Most people have an idea of what they want to talk about before a meeting, so an agenda is taking the idea of what you want to talk about and putting it all on paper in an organized way. A really useful thing you can do when making an agenda is to put time markers of how much time it should take you to talk about a topic. This can help you realize when you are going to run out of time before you finish everything before you actually run out of time so you can prioritize what you need to talk about.

  A meeting leader should also set attendees up for success. Part of this would be passing out the agenda notes for longer meetings, but there are a lot of other things to do as well. For instance, a meeting leader should consider time differences if it is an online meeting, or a time when the majority of the team will be most awake and attentive [2]. Very few people like an 8am meeting because most people have hardly finished their first cup of coffee or had time to boot their work computer, but on the flip side, pick a 4pm meeting and everyone is just waiting to be excused and go home. These are things to consider when you need people to pay attention. Another thing that you should have meeting attendees do is put away their tech. It is a hard thing to ask but hand written notes have still been proven to be the best method to take notes [2]. The last thing I would like to mention that you should do to set attendees up for success is regularly engage them in the meeting [2]. Ask for input, do a small activity, break people into groups while they talk and think of ideas; all these are good examples of engagement.

  Meetings should always end with assigning tasks for people to do before the next meeting. This gives people a goal to work toward before a designated check in to show their progress. They know what they need to do and when to do it. It also keeps everyone accountable. Everyone was there for the assignment, everyone knows what you had to do. It adds a little pressure and accountability. It also gives people someone else to ask if they forget. If a manager held a meeting five days ago and is expecting to check in again in two days, but the employee totally spaced and forgot their task. If the manager assigned them the task privately, and is now out sick for the day, the employee is now out of luck until the manager hopefully comes in tomorrow. Now, no one should put off work for that long, but by assigning the task in the meeting where hopefully other attendees were paying attention, the employee can now go ask someone else who was in the same meeting. Not the best thing to do still, but it would be better than nothing.

Risk Analysis

What is risk analysis? A direct definition would be "is the process of identifying and analyzing potential issues that could negatively impact key business initiatives or projects." In simpler terms, it seems to be more or less a business term for pros and cons when specifically talking about security and finances.

So what is risk analysis used for? Well, a lot. It can be used to look at if a project is worth going through with by weighing pros and cons [1]. It could also be used to anticipate the effects natural disasters would have on the business, and how best to prepare for them within reason by calculating how likely one would occur [1]. It could be used to calculate losses based on system failure due to things like human error [1]. It all boils down to what is a risk that we could take, what are the statistics it will be a problem, what are options to mitigate adverse effects, and what are the pros and cons of leaving it as is and different prevention plans.

So what are the steps involved with risk analysis? There are about six steps involved in the process. The first is to take surveys of where the risks are. Ask managers all the way down to your most basic workers if you really want to, and almost everyone could probably list something that could be considered a risk [1]. After this, find what is definitely a risk you should look into and you should analyse [1]. Once you have identified a risk, look into the chances it will occur. If it is unlikely, like a volcano going off on the gulf coast, then you probably do not need to look into infurter, but if the chance is higher, like a hurricane hitting the gulf coast, then we move to the next step [1]. Next is to make some plans on how best to mitigate the negative effects of the risk, and find the best plan if you come up with multiple [2]. After this you would want to implement your plan [1]. This could be backing up data, structurally reinforcing the office building, renting some equipment so that someone else can replace it quickly in the event it is damaged, etcetera. Just implementing a plan so that the risk will no longer be or will be less of a risk for the business. Lastly, keep your eye on risks that have been presented and analysed [1]. If the chance something will happen goes up drastically, then plans might need to change, and same if the chance goes down drastically. It is all about the pros and cons with the statistics.

References

1.   What is Risk Analysis?
      https://searchsecurity.techtarget.com/definition/risk-analysis

2.   Run Effective Meetings
      https://slack.com/blog/productivity/run-effective-meetings

3.   Understanding the Difference: Leadership vs Management
      https://www.go2hr.ca/retention-engagement/understanding-the-differences-leadership-vs-management