

Reflection 4

Over this project you have probably had to acquire new knowledge. Engineers are involved with a range of technologies that are constantly changing and evolving. Over a working lifetime this change can be significant. If you are responsible for your own knowledge development over your career, reflect on how you would try to manage that knowledge development? Consider also that an engineer may need to acquire knowledge and skills in areas such as accounting, management, law and other languages.

Knowledge Development

Throughout this project I have had to learn how to solve problems I have never encountered before. This has caused a lot of frustration but has also lead me to learn new skills that I can use in the future if ever I face similar challenges.

I have had to learn to work with variuos technologies that I had little or no experience with. This meant that I often spent hours trying to figure out how something worked, but once I understood it, doing it again would take a fraction of the time. I also found that skills I learned with one technology I could use in another; skills are transferable between certain technologies (e.g. c++ and python).

As an engineer, I will need to learn new skills to both keep up with the current technologies, and because improving my skills means designing better products. Bt understanding how to design a product that can be tested more quickly, the product development can be speed up dramatically. By designing a product to be assembled and manufactured easily, production costs can be brought down, and potentially reduce waste and damage to the environment. There are many benefits to improving one's engineering skills.

There are many ways to improve one's skills. Traditionally, this involved reading lots of books. In today's internet age, it revolves heavily on video content. Many companies are paying for subscriptions for their employees to video streaming services such as PluralSight. This is very useful because you can both listen to what the instructor is saying, and watch how they do it. This is better than learning something by only listening, watching, or reading since it involved 2 senses. It also allows for pausing and rewatching certain sections so the lesson only goes as fast as is needed.

Another good way of learning new skills is to create side projects. This is an excellent way to experiment and try new tools. This will teach you new way of approaching old problems, since you will have different constraints from school or work.

Additionally, it may be important to improve skills not directly related to engineering while working as an engineer. These may be useful when working on higher up positions. You may be consulting a company, and having skills about legal requirements or cost analysis may be critical to the development of the project. Having an understanding of these concepts may help you create a better project, or ensure the project doesn't break any law, or whether it is completely unfeasible.