Adapting To Change

“Technology is always changing so you’re always going to have to keep changing ... if the skill you are learning now isn’t something that could have been used 5 years ago then it’s probably not going to be relevant in five years time.”

LUCY’S STORY

Lucy* graduated with a Bachelor of Computer Science, with honours in artificial intelligence in 2004. She is currently employed in a telecommunications organisation where she manages multiple projects around data access and analytics, and deals with a number of contractors. About her current role Lucy remarks:

“The job itself didn’t exist when I graduated, which is not unusual.”

Prior to her current job, Lucy held a number of teaching roles in different universities. She also worked in a number of positions to do with website development for the private and public sector, and also contributed to a friend’s consultancy business.

Although Lucy’s story is about someone with a technological degree it is relevant to students from all disciplinary backgrounds.

The Changing Nature Of Technology

Rapid developments in technology have had a major influence on Lucy’s career. When she was studying, Lucy assumed she would end up working in the defence industry as “I thought they were the only ones dealing with large amounts of data, and at the time they probably were”. But since that time there have been enormous advances in the range of organisations mining large data sets.

Lucy does not feel that her degree adequately equipped her for the need to continuously evolve to keep up with technological changes. For example, she reflects about the programming languages that she was taught during her degree:

“The things that were popular languages when I went through were not going to necessarily be popular when I finished, or now, and I think that’s one thing that’s really lacking [in university degrees] ... they taught a couple of popular industry languages but they didn’t teach the underlying “here’s what programming is, here’s how to think about it,” which actually helps you when you’re dealing with contracts or when you’re dealing with contractors, you’re actually thinking more about the mechanics than the actual, you know, the little micro detail, or the outline rather the colouring in pencil.”

*Details changed to protect anonymity of research participant
The Need For Continuously Evolving Skills

As Lucy’s career has evolved she has found that she has needed to keep gaining skills. Even though she trained as a programmer, and expected to be using her programming skills at work, she has found that this is not the case. As she states:

“Even when I’ve worked in IT, and even now when I’m working in a very technical role, I don’t have much opportunity to use any programming, development sort of skills ... I’m usually required to operate at the level above that, or beside it, coordinate it and manage it a lot more, and even in entry level jobs I didn’t have much of an opportunity to do the development and programming. It’s not to say that there aren’t jobs out there in smaller companies ... but a lot of it is outsourced.”

Lucy has found that she has needed to engage in a large amount of ongoing professional development. In addition to constantly updating her technical skills and knowledge she has also completed courses in project management and leadership. She is currently considering doing a masters degree in either business or law. This is to reflect the demands of her role. As she says:

“I’ve been thinking about either doing an MBA or a legal post-grad, just because I’ve done a lot of contractual work and a lot of procurement and a lot of management and strategic leadership in my career to date.”

The Realities Of Work

Lucy does not remember much discussion about employment during her degree, something she tried to change when she was teaching herself. She thinks that the absence of discussion about the realities of work was due to the lack of industry exposure of academics, resulting in very little in the way of professional role models.

As a result her degree lacked relevance to the real world. As Lucy puts it, “people don’t draw the parallels for you so you don’t necessarily start drawing them yourself”.

However, all these years later she still remembers a talk during orientation week when a speaker told the incoming first year computer science students:

“If you don’t love learning then this probably isn’t the degree for you because you are going to have to keep learning every year and every day. We are teaching you about IT and computer science but computer science always exists in a different discipline, so you are always going to have to learn a different discipline, technology is always changing so you’re always going to have to keep changing.”

Lucy has found that this advice has proved correct and has been the defining characteristic of her career. As she says, “that was probably the most accurate information that I got”.

Lucy reflects that one of the key demands in her professional roles has been trying to explain complex technological topics to non-technical colleagues and superiors. She feels that this is a critical skill for successful computer science graduates as most of the people they will work with in the future will not have much, or any, technical understanding. Lucy reflects that “communicating technology to different audiences ... it’s probably the one thing that most people don’t seem to get”.

When she interviews computer science graduates for jobs, Lucy finds that they tend to fall into a number of traps:

- They are arrogant about their technical skills.
- They can’t explain technology to the non-technical people on the interview panel.
- They can’t demonstrate their ability to apply knowledge and skills to new situations and scenarios.

Lucy also finds that when she hires graduates they expect that they will be doing exactly what the job description says. Instead she thinks it is essential for students to understand that this is often not the case.

“Just because you apply for a specific job doesn’t mean that’s the work you’ll actually be doing, which for new graduates can be almost derailing, because usually they go to a subject and that’s what the subject’s about. Whereas in a real company ... ideally you’ll be working on what you were hired for but that’s not always the case, and some self-sabotage when they can’t deal with that.”
ADAPTING TO CHANGE AND ENHANCING YOUR SKILLS

Lucy is a successful computer science graduate and she highlights a number of critical areas for students to consider if they wish to be successful in their careers.

Take this opportunity to consider each of these in relation to yourself by responding to the following questions:

Ensuring Your Skills Are Up-To-Date

Lucy says that “if the skill you are learning now isn’t something that could have been used 5 years ago then it’s probably not going to be relevant in five years time”.

Which of your current skills fall into this category?

What action could you take to make sure that these skills remain up-to-date?

Lifelong Learning

Lucy’s experience suggests that graduates should expect to engage in lifelong learning, particularly around non-technical skills.

What non-technical skills do you think you will need to learn to be successful in your desired career?

Communication Skills

Lucy emphasises the need for graduates to be able to communicate their skills and knowledge to non-specialist audiences.

What strategies could you use to develop these skills?
Demonstrating Application
Lucy finds that many graduates are unable to demonstrate that they can apply their skills and knowledge to new situations.
What strategies could you use to develop this ability?

Adapting To Changing Job Demands
Lucy reports that many graduates do jobs that are different to what they were employed to do.
What strategies could you adopt if you were faced with this situation?