Furthering Your Career – A report from the Institution of Engineering and Technology

Introduction

The Institution of Engineering and Technology (IET) recently announced record numbers of engineers and technicians becoming professionally registered in the previous twelve months – just another demonstration of the growing appetite for, and importance of professional qualifications. However, despite these encouraging figures, a significant skills shortage still exists in the engineering and technology industries. The IET’s 2011 skills survey found that almost half of organisations in the IT and engineering sectors are finding it increasingly difficult to recruit suitably skilled engineers in senior roles, while a third of respondents reported that new engineers, IT and technical recruits did not meet reasonable expectations for the level of skill required.

With regard to the engineers of the future, September 2012 will see major tuition fee rises applied by universities, which will likely lead to many potential undergraduates to consider alternatives to a degree. Given these issues faced by the engineering and technology sectors, what are the other routes that budding engineers could consider?

The aim of this report is to consider the answers to this question, through opinion-based analysis of the benefits of professional qualifications, from both an employer and employee perspective, how they work in compliment to a degree and the other paths young people can take into engineering.

Methodology

In February and March 2012, the IET interviewed seven professionals from within the engineering and technology industries – for their views as employees and employers as appropriate. Some had undertaken Professional Registration with the IET, some had undertaken other vocational training and most had a degree.

The subjects were interviewed about the advantages of professional qualifications and on-the-job training, and the importance of this in along with theoretical training.
How professional qualifications benefit employees
The interviews revealed a wide variety of benefits that professional qualifications could have on an engineer’s career. Professional registration was identified by respondents as a great way of giving you career goals and to really feel like you’re working towards something.

Damon Johnstone, Project Engineer, Engineering + Infrastructure, Brookfield Multiplex Australasia commented, “Working towards professional registration for me personally was a huge motivator in my working life, it encouraged me to continue further education and to constantly seek new challenges and ways of improving my skills and behaviour on a professional level. It sets a bar of high achievement that you must meet, it is hard work but you will be better for it.”

Whether you are planning on staying with the same company and advancing internally, or moving to progress your career, professional qualifications were identified as something that can really open doors for an employee, with the achievement of professional registration cited as a mark of competence and commitment to the profession that employers recognise.

Michelle Watt, Asset Improvement Engineer at Tata Steel is a Chartered Engineer at the age of just 26 and believes it is invaluable for her career progression. “Professional registration is very much a preferred requirement and is seen as an advantage pretty much everywhere you look in the engineering sector. It shows people you’re of a professional level, highlights your motivation to achieve and demonstrates your commitment and dedication to the profession,” she commented.

Discussing how professional registration can prepare you for a job role, Johnstone added, “Achieving CEng develops your sense of judgement on an engineering level, it means you are better prepared to deal with unfamiliar problems.” This level of preparation and experience however, only comes through experience and a wide variety of training. To attain CEng you must gain considerable engineering experience and competence through years of working, training and education. A degree is not a requirement to achieve and IEng or CEng professional registration, but many engineers do work towards them based on proven competencies that are achieved post-graduate.

The benefits to employers
The high regard for professional qualifications and registration within the engineering industry is cited as a major factor here, as having a professionally registered workforce is considered as sign of employing high quality people that will deliver top class work. Johnstone commented, “The long-term benefits for an employer such as mine, is the mark of a professional organisation employing the highest quality people.”

Indeed, organisations themselves are often the driving forces behind many of their employees to get registered. “The company really do drive it and strive for its employees to get the accreditation. So much so, that it has an accredited training scheme for graduates,” added Watt.

There is a career ladder within the engineering industry and people can join it in a number of places, not necessarily through a degree. An alternative is an apprenticeship, which will lead to an EngTech registration, with options to progress to IEng and CEng later in your career.

One high profile organisation that is heavily in favour of apprenticeships and professional qualifications is Royal Mail. Royal Mail recruited 18 apprentices last year and is in the process of recruiting 16 advanced apprentices this year for its three year programme in which they are
expected to achieve qualifications such as the B-Tech National Diploma in engineering operation, NVQ Level 3 in maintenance engineering and the EngTech professional registration.

Paul Wilkinson, People Develop Manager at Royal Mail is very passionate about the benefits of this programme and these qualifications. “There are two major short-term benefits of professional registration. Firstly, our engineers are recognised as professional to the outside world. This fits in perfectly with new process we are undertaking called world class mail. One of the pillars within this is professional maintenance. Our view at Royal Mail is that we have professional engineers to fulfil professional maintenance. Secondly, it provides a recognised standard that we can apply throughout the business so that we can say that all of our engineers and technicians are a minimum EngTech,” he commented.

“In terms of long-term benefits, it helps build customer confidence as it demonstrates that we approach things in a professional manner focussing on continuous improvement. The fact that we are investing in our people to be of a particular standard certainly demonstrates that we take things seriously with our people and our work,” he adds.

John Druce, Learning and Development Manager at Arqiva argues that the benefits for employers and employees are inherently linked as if you overtly support the development of your employees the company will be regarded as a good place to work. “For the employees, they get recognition and status through professional qualifications and by supporting them in this career development, the organisation gets motivated and engaged employees who support the business,” he commented.

Particularly in the case of apprentices, it was felt that this investment in their careers would lead to high levels of loyalty and commitment.

**On-the-job training combined with theoretical training**

There are obviously a variety of types of both theoretical and on-the-job training, but one advantage cited at the earliest stage of an apprenticeship was having an experienced (often Chartered) mentor to help an apprentice through the programme. Daniel Cherowbrier, Team Leader, Feltham Multiplexing Centre, Arqiva, identifies this as a major benefit. “The apprenticeship mentoring programme allows the apprentices to meet and build professional relationships with very senior people within the company, which can only help their future development,” he said.

All respondents acknowledged that it was important to have a good mix of theoretical and on-the-job training to progress your career to its full potential. Paul Wilkinson, Royal Mail commented, “I prefer on-the-job training, but people learn in different ways. You really need a balance between both. If you go more one way than the other you lose out.”

However, in was felt by many that academic qualifications came into play more as you reach senior positions and require more theoretical-based business and leadership skills, where as professional qualifications were more important for hands-on roles. Damon Johnstone, Brookfield Multiplex Australasia says, “On the job training is invaluable, for me personally it is what I have benefited from most. Learning how to apply things in real life and how what you have been taught actually comes together puts everything in perspective, for a lot of people things only start to click when they can see it action.”

Keith Hayler, Principal Technologist, Arqiva felt that in terms of practical benefits there is not much comparison between new graduates and those who have come through professional training. He
commented, “In my experience, when graduates come in following three years at university, the practical value they hold is incomparable to someone who has spent that same three years learning on-the-job.”

However, the consensus was that a mixture of degrees and professional training can often complement each other. Arqiva currently runs an apprenticeship programme and is looking to complement this with a graduate scheme in the future. John Druce at Arqiva thinks there is room for both as the rise in tuition fees is encouraging young people to look beyond the traditional route of university and so it’s important to offer both options to capture new talent.

However, Cherowbrier cited a possible glass ceiling that people would potentially meet without the right academic or theoretical training. “You need a balance, but the theory is important. On-the-job training gives you the practical skills necessary earlier in your career, but as you get more senior you will need to be much more involved in business-focused activities which require the theoretical skill-sets and the key academic principles never change,” he concluded.

Despite the undoubtedly importance, it was felt by many that professional qualifications were still not held in high enough regard. Watt concluded, “Professional qualifications show that your degree is the start of your learning and I think in some arenas they are still not held in as high a regard, when they should be.”

Druce added, “I feel perceptions are still traditional and the focus of many schools is still on sending pupils to university rather than onto apprenticeships. However, this view may be gradually changing and it’s important to recognise that both routes are valuable.”

Cherowbrier also added that in some engineering circles, professional registrations are held in higher regard, due to the difficulty of achieving them and the proof of competence they provide.

**The role of professional qualifications in addressing the skills gap**

Many respondents identified this as a difficult question as most people undertaking professional qualifications will already have decided or will have entered the industry. It was however agreed that the qualifications play a big role in developing the skills of existing engineers to progress to more senior positions and helps in that it provides recognition for engineers, but work still needs to be done at the base level.

According to Craig Owens, UK Quality Surveillance Engineer, Parsons Brinckerhoff, “I believe apprenticeships will be key to bridging the skills gap, but the big engineering companies will have to deal with them correctly. They’ve got to work with the engineering societies and the government to sell apprenticeships and collaboratively develop a framework to attract new, young engineers.”

In the face of the incoming university fee rises this September, Keith Hayler, Arqiva also identified apprenticeships as the key to addressing the engineering skills gap. “Especially with degrees becoming more expensive, apprenticeships that work towards something like an EngTech qualification will be a more valid route into engineering than a degree, allowing these young engineers to learn on the job while they also gain a qualification.”
Conclusion
With the increasingly tough economic climate and upcoming tuition fee rise, future engineers may be looking for alternative to enter and progress in the industry and apprenticeships and professional qualifications could provide an opportunity to do this.

The IET’s opinion-based report concludes that there are a number of benefits that professional qualifications bring to both engineers and their employers. Employees get clear goals to work towards, recognition of their skills and a key advantage when it comes to going for promotions and moving jobs. Employers on the other hand, get the benefit of external perception of a highly-skilled, top-class workforce. In addition, it was suggested that by supporting engineers in their professional qualifications, employers will get more motivated and engaged staff, invested in the business.

While it was agreed that a balance of theoretical and on-the-job training is required for engineers, with advantages to both a graduate entry route and an apprenticeship route, the overwhelming opinion was that, particularly with the increasing cost of degrees, the practical skills offered by apprenticeships could be a more attractive option for future engineers.
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