SKILLS SEPTEMBER 2018

A Ddylai Robotiad Siarad Cymraeg? (Should robots speak Welsh?)

During the Summer, we hosted our first event at the National Eisteddfod in Cardiff Bay. The subject of debate was, 'Should robots speak Welsh?' Here are the reflections of Meilys and Indeg who sat on the panel.

18/09/2018 **Meilys Heulfryn Smith**
Senior Transformation Manager,
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When invited to participate in a panel discussion titled 'Should Robots Speak Welsh?' at the National Eisteddfod in August, my initial thought was "what on earth do I know about robots?" However, give me the chance to discuss the future of my language, and I'm in!

Gradually, the reality of my daily life dawned on me. Of course I know about robots! I speak to them every day, they help me will all sort of tasks and look after my well-being. Not many are human-shaped, but they definitely speak to me!

I no longer carry an atlas, watch the weather forecast or buy CDs. I have apps, bits of equipment, an array of chargers and the ability to demand or receive commands without a person in sight. That is my life. I'm a first language Welsh speaker, but gradually, more and more of my 'conversations' aren't through the medium of Welsh.

Recently, I've been involved in developing a Virtual Reality experience to help people understand more about dementia. It's a highly emotive subject, and this particular robot had to speak both Welsh and English, so that people in Wales can see, as realistically as possible, how it feels to live with dementia.

This VR project helped me see that technology can speak any language, if you give it the chance and if you give it the words and the voice to express itself. However, this development wouldn't have happened had we not commissioned a bilingual development, together with a bilingual script-writer.

Technology is part of ordinary daily life. Building Welsh robots will help achieve the target of a million Welsh speakers by 2050. Innovation can happen, and does happen in Wales and in Welsh. The Future Generations Commissioner's panel discussion gave me confidence that we'll be walking alongside many more Welsh-speaking robots in the future.

18/09/2018 Indeg Williams
@IndegElen

If you think about 'robots' like Apple Siri, Amazon Alexa, Microsoft Cortana etc, most people recognise these as 'robots' that speak English. Although you can control or question your mobile phone, computer or car in English, there is a long list of languages with fewer resources, like Welsh which are not supported by these big companies.

So, at the moment, 'robots' don't speak Welsh. But I think that they definitely should.

At the moment, if a Welsh-speaking family wants to use Alexa for example, the language of the household must switch to English. Welsh speakers should have the choice to use Welsh if they want to.

Although it's fun to be able to communicate with your devices, don't forgot that other sectors can benefit from this technology. The media can use it to archive and catalogue their work. Schoolchildren can use the technology in the classroom or older learners can use it to practise. Even more important is its use in health sector. Through projects, like Lleisiwr, the technology can be used to store the voices of patients who would otherwise have lost their Welsh for ever.

At the Language Technologies Unit, Canolfan Bedwyr, Bangor University I am collecting Welsh voices to train Macsen, our intelligent personal assistant, to speak Welsh. The more examples Macsen has, the better this 'robot' will work. Through contributing your Welsh voices and apps like Paldaruo or Mozilla Common Voice, you are supporting this campaign to ensure a digital future for the Welsh language.

Our way of communicating has changed dramatically and will continue to do so. It is becoming increasingly clear that technology like this is vitally important to ensure the future of our language for the next generations.

SKILLS SEPTEMBER 2018

To Bacc or not to Bacc?

The deadline for responses to the Welsh Government on the status of the Welsh Baccalaureate Qualification is TODAY.
You can find more information here.

Here are two young people who shared their opinions.

20/09/2018

Ethan Williams
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The Welsh Baccalaureate gives students loads of opportunities to learn new skills and use them practically to fulfil projects and tasks, especially at a higher level, which is undertaken during Year 12 and 13 in school, concurrent with studying for A-levels. It gives students many opportunities to try new things and the course has lots of different elements which suit everyone, and suit the different styles students have of learning e.g. teamwork, or individual working, using numeracy and language skills, and it even gives young people an opportunity to create a creative project such as a song or a film, as part of the individual project.

The individual project was the element which benefited me the most. It's full of key skills as I move on to higher education at university, and even further as I enter the world of work. These skills include how to research, how to decide what information or data is useful to my subject, how to decide whether sources are genuine or not, and how to find reliable sources in the first place. It teaches you how to conduct an interview or a questionnaire, and how to use that data or primary information in your project to develop a standpoint or opinion. It was also crucial to show numeracy skills at Level 3 or higher, so the Baccalaureate gives students an opportunity to learn how to use numeracy effectively. E.g. using a standard correction to account for the veracity of data points. Also, good digital communication skills, and how the project is structured and appears in a document, are very important, especially as you prepare to write extended essays at university, or it will be an important skill after you join the workforce in any field.

Other challenges like the Community Challenge and the Enterprise and Employability Challenge help people work as a team and use time properly, and the Enterprise Challenge allows young people to learn how things work in the business word; the Global Citizenship Challenge gives us an opportunity to research cultures and different ways of life around the world.

The baccalaureate is an excellent qualification which allows students from varied backgrounds, with different strengths and weaknesses to thrive in certain aspects. It's also fantastic as it gives opportunities to pupils who find regular academic courses like History, Maths or the sciences challenging, or those who struggle with course structures (i.e. learning, revising, taking exams). The Bac gives Welsh students an extra impetus on their UCAS forms and makes them stand out from the tens of thousands of other young people who are competing for university places every year. Although, I do think the Bac should be optional for students, because of the amount of time it takes to fulfil.

Normal gets you nowhere, so do something that sets you apart

For most people studying their A Levels in Wales, it has become normal for them to also study a qualification called the Welsh Baccalaureate. It feels like a long time ago that I was in the same position back in 2011. At the time, the Welsh Baccalaureate was a new qualification and I was in the first year in my school to take part in it. Although, the phrase 'take part' isn't entirely apt as it was a compulsory course. I was advised by my school that the premise of the Welsh Baccalaureate would be to give students the same amount of UCAS points as an A grade at A level and that It would expand our communications and numeracy skills, with other opportunities to volunteer and work in teams.

Whilst parts of this sounded appealing, I remember there being a feeling of resentment amongst my peers at the fact that we were being forced to study something that was unrelated to the A Levels that we had chosen to commit to. The various components of the Welsh Baccalaureate were all fairly straightforward and consisted of tasks such as writing a 2500 word essay, doing a presentation, working in a group, taking a maths test and volunteering for 20 hours. The problem that I had with all of these exercises was that I had already been doing all of these things through my entire school career, and I was struggling to see how the qualification was providing me with any new skills.

Fast forward 7 years later and I've attained a Bachelors and Masters degree, worked in the fashion, property, education and broadcasting sectors and I'm still not sure how the Welsh Baccalaureate assisted me in all of that. Having achieved good A Level results, I didn't need the Welsh Baccalaureate to get into University. Furthermore, not one employer has ever asked me about it, what skills were attained from it, or how my experience studying it could benefit their business. To me, this indicates two possibilities; that employers don't know what the Welsh Baccalaureate is, or, that they do know what is and have concluded that it's not a relevant qualification.

It's a myopic and antiquated view to think that a generalised qualification is the answer to helping young people progress to the next stage of life. It's a hot topic in the media that students are choosing to study degrees that don't provide practical skills for the work place and that can actually hinder their careers. What's often forgotten in all of this is the superseding stages to going to University. Perhaps young people would have a stronger sense of self and what they want from this world if they were really told to think more carefully about what they want to do from an earlier age. Whilst I agree that we shouldn't be confined to a career path for the rest of our lives from the age of 16, I do think that that a non-committal attitude is perpetuated by generalised qualifications, including the Welsh Baccalaureate.

If the education system wants to help the young people of Wales, then they need to stop cramming compulsory, generalised courses down their throats. The logic that giving someone a qualification that everyone has, in order to help them to be relevant in a saturated jobs market is completely antiquated. If young people want to set themselves apart, they need to be using their own initiative to go out and contribute something to society that is in their own recognised field of interest. Schools should be encouraging students to go and set up ecommerce businesses, help non-profit companies or to go and explore the tech start-up industry.

Whoever said less is more was right; the less ambiguity within your career path and alignment to vague qualifications, the more attention you have to focus on what is really going on in the world and what you really want to do in it.

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Tackling the changing world of work

27/09/2018

Eliza Easton, Principle Policy Researcher, Creative Economy and Data Analytics

Rob Ashelford, Co-Lead and Head of Y Lab (Programmes)

At Nesta we have spent a lot of time over the last few years thinking about the future of the world of work.

There are certainly challenges ahead, and unless we try to understand how negative impacts might be mitigated, we will further disadvantage those who are most vulnerable – those who don't have family to fall back on if they need to retrain, or who are in jobs with few employee protections.

You only have to wander into your local supermarket and see that the cashier has been replaced by a self service checkout machine, to be reminded of the seismic impact technologies can have on jobs.

If Wales is going to fulfil the demands of the Well-being of Future Generations Act – creating amongst other things, a prosperous and more equal Wales – everyone, from policy makers to employees, needs to know and understand more about the future shape of work – the skills we need and where they're likely to be needed.

Future Trends

In order to get a handle on the future, Nesta looked at the impact of trends including automation, the growing 'green economy' and changing demographics, on the workforce up to 2030. This piece of research, in partnership with Pearson, predicted that around 10 per cent of workers are in occupations which are expected to grow their share of the workforce, whilst 20 per cent are in occupations that are expected to shrink.

As well as shifts in the job market, it predicted which underlying skills will be in greater – or lesser demand in the future. In particular highlighting the increasing need for a group of 'soft' and cognitive skills, from problem solving to communications skills, alongside knowledge in broad areas including English language, philosophy and science.

But it is also likely to be the case that increasing numbers of tech and digital skills will be needed across many jobs in the future. And all over the world, including in Wales, governments have tried to address some of these future challenges by 'investing in digital skills'.

Our paper on future employment and digital skills, looked at 41 million jobs adverts, to identify those digital skills currently needed in those jobs most likely to grow by 2030 and those in the jobs most likely to disappear.

What we found may be surprising. "Disappearing jobs" are actually more likely to need a digital skill than those that are most likely to grow. That's because there are jobs with buoyant prospects that don't need many digital skills at the moment – including teachers and chefs.

Where digital skills are needed, they are noticeably different in jobs likely to grow and jobs likely to decline. What sets 'future-proof' digital skills apart is their use for non-routine tasks, problem solving and creation of digital content.

Humans and Machines

In short, if you are just inputting data it may not be long before a robot can take your place. But if you are creating something with that data, your job is not only less likely to disappear but we predict that it will become more important. Skills in animation, multimedia production and design engineering are also seen in jobs with buoyant job prospects, whilst clerical skills like typing and invoice processing performed less well.

This data means little if it only accessed by an elite. Just as important as these broad recommendations is that students and job seekers understand more about where career opportunities will be greatest – and the kinds of skills, both digital and more 'human', that employers will value.

One way of doing this might be to use a 'skills taxonomy' for the UK. We have designed one at Nesta which helps us to understand – using real job adverts – how skills are linked to one another, which jobs they are needed in, and even how much they might add to your salary. Tools like this should help to hand people back the power to decide what they want their future to look like.