



Northern Ireland
Assembly

Committee for Employment and Learning

**OFFICIAL REPORT
(Hansard)**

Support for Industry: South West College

9 May 2012

NORTHERN IRELAND ASSEMBLY

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Members present for all or part of the proceedings:

Mr Basil McCrea (Chairperson)
Mr Thomas Buchanan (Deputy Chairperson)
Mr Jim Allister
Mr Sammy Douglas
Ms Michelle Gildernew
Mr Barry McElduff
Mr Pat Ramsey

Witnesses:

Mr Liam Curran	South West College
Dr Jill Cush	South West College
Mr Malachy McAleer	South West College
Mr Pdraig McNamee	South West College

The Chairperson: I am more than happy to welcome our hosts. It seems strange for me to say that you are very welcome to our Committee, given that we are in your place.

Mr Malachy McAleer (South West College): It is your space today.

The Chairperson: You are very welcome, Malachy. Perhaps you will introduce your team. The floor is yours.

Mr McAleer: You are all very welcome, ladies and gentlemen. I think that this is the third time that you have visited the South West College. It is your second visit to this campus, and you were also at our skills centre in Enniskillen some time ago. I will introduce our team. Dr Jill Cush is responsible for InnoTech in Cookstown, our specialist support centre for industry, which will be the theme of our talk today. Pdraig McNamee is our head of department for technology. It is typical of the way that the college is developing that, as we speak, our deputy director with responsibility for the curriculum is in Zambia looking at delivering the curriculum virtually there. For support, we have also brought Maria Hackett, our head of training, and Liam Curran, our head of higher education (HE).

As I am sure you are all aware, colleges are all so diverse. We have decided to pick a single theme for today: our support for industry. Two things mentioned when you were discussing the higher education strategy were flexibility and the ability to respond. We have set out on a journey to be a college that is

flexible and ready to respond to industry. All our curriculum and industry support is based on industry support, and that will be brought out in Pádraig's presentation. Although he is presenting on curriculum issues, all our curriculum development is very much about industry support.

Barry mentioned the development of higher education (HE) in rural areas. Barry, you should have pre-empted that remark by saying that there will be no discussion of where the pilot will be. It is about what happens after that.

The Chairperson: If you mention Carrickmore, we will be suspicious. *[Laughter.]*

Mr McElduff: I ask Mr McAleer to speak through the Chair.

Mr Douglas: Or broadband.

Mr McElduff: The row is on, Sammy. *[Laughter.]*

The Chairperson: Malachy, you will probably work out that I am having some difficulty controlling the Committee today.

Mr McAleer: I can see that it is a difficult Committee.

The Chairperson: They are very excited about coming down to talk to you.

Mr McAleer: We will start off with Pádraig's presentation. The theme that will come through is that we have mainly developed our higher education curriculum in the science, technology, engineering and mathematics (STEM) areas, and we have brought in the support of industry. Indeed, we have set up a fund to support our higher education students, and it has been supported and paid into by industry in the area. The whole area of apprenticeships is, I think, exercising your minds at this time. We have already started a Greiner Opportunities for Learning and Development (GOLD) apprenticeship scheme and are running it successfully. It is a nice forerunner to your higher level apprenticeship, so I think you will learn something about that.

In the curriculum presentation, we want to highlight that, although we have been focusing on industry support and higher education, we have not left behind the Steps to Work programme, social inclusion issues and so on. Again, we have been very surprised by the amount of support that we have had from industry through placements for students in that area. When we pass over to Jill, she will focus on pre-incubation for industry and getting industry ready for product development. We are working very hard on our Invest Northern Ireland links, and that should be brought out in the part about innovation vouchers and so on. We have a short window, so I will pass over to Pádraig.

The Chairperson: Michelle and Barry, the presentation is behind you. Are you two happy sitting there?

Ms Gildemew: Eyes in my arse, Basil. *[Laughter.]*

The Chairperson: I am so glad everything is being recorded by Hansard. Maybe Hansard can find a way of interpreting that. That accent was not quite clear. *[Laughter.]*

Ms Gildemew: Maybe do not put that in Hansard. *[Laughter.]*

The Chairperson: Sorry, Pádraig, the floor is yours. It will be very hard to follow that, but do your best.

Mr Pádraig McNamee (South West College): Good morning. I am head of the technology department in South West College. I will continue Malachy's theme of working with industry by talking about the work that we are doing to develop a workforce that is fit for a modern economy. I will illustrate that through examples of the innovative programmes that we have developed in the college and the methodologies that we are using for delivery.

In South West College, our intention is to provide an experience and a preparation for employment that are significantly different from that provided by other providers, be they schools, universities or other training organisations, and which meet the aspirations of the individual and the needs of the economy. We intend to deliver education and training of a type and to a standard that develops a workforce suitable for firms local to Counties Tyrone and Fermanagh and much further afield. To that end, we have developed a coherent suite of full-time and part-time programmes, from level 5 foundation degrees to employability schemes. They are aimed, at one end, at preparing very skilled higher-level technicians and, at the other end, at preparing people to return to employment.

Our strategy is to work very closely with industry through industrial advisory boards to define their needs and then develop courses that are of the content and quality that they want and that are delivered in a way that is accessible to them. We have been particularly successful in developing foundation degrees, which I am sure you are all very familiar with. In almost every survey that is done, one of the main areas that employers note is the need for highly skilled technicians. It is also the area that they list as being very difficult to fill. It is a gap that we have addressed through the development of our wide range of bespoke foundation degrees. We have 20 full-time and part-time foundation degrees on offer. Most of the degrees are in priority skills areas and include some very niche areas, such as wind turbine technology, creative technology and cloud computing. We have developed considerable skill and resources in those areas and have had great success in delivering them. We have also developed an innovative two-year part-time model for delivery, initially in the area of foundation degrees in engineering management and manufacturing engineering. Those have been very well received by industry. They have been very successful, and we are rolling that model out across a range of other areas. As you can see from our results, our success and achievements in all our priority skills areas are higher than the sector average.

Mr Allister: Is that the sector average in Northern Ireland?

Mr McNamee: Yes. It is the statistic that the Department for Employment and Learning (DEL) produced for Northern Ireland.

As a result of our innovative developments and success in delivery, we have had our allocation of HE places increased year on year. We started off from a base of 118 maximum student number (MaSN) places, and, this year, the MaSN places have been increased from 383 to 420. We have also been given an increase of 90 part-time HE places to the point where we are now in a position to offer 1,500 part-time or full-time HE places here in the west, preventing the brain drain out of the west. We would like to thank the Department for that vote of confidence in our college's HE strategy.

Another aspect of workforce development that Malachy mentioned was the need, expressed by industry, to develop a pipeline of people to come through to areas where there is an existing skills shortage. That is a groundbreaking development, and it is in line with the idea behind what is called the Greiner GOLD apprenticeship programme. The programme has been developed hand in hand with industry to develop employees who have both technical and practical skills. Under the GOLD apprenticeship framework, candidates enrol on a level 3 programme at the age of 17. They take a national vocational qualification (NVQ) programme to get the practical skills that employers are looking for and a technical certificate that gives them the vocational theory. That gives them a basis on which to move on, at the age of 19, to a foundation degree, and the slide shows our two-year part-time foundation degree model. While doing that, the students are employed by a number of employers, and we have listed some of them. At the end of the scheme, they progress to full-time employment.

The model has been extremely successful, as evidenced by the satisfaction of the companies involved, and I have testimonials from three of them. They are all very high-end companies that demand excellence from their workforce, and all are extremely happy with the standard of work the students are producing while on the programme.

Traditionally, FE colleges fill up in August and September, after students have received their GCSE results and decided whether to come to an FE college or return to school. Already, large numbers of candidates are applying for the GOLD programme. A few weeks ago, we interviewed a cohort of very highly qualified and motivated students who are keen to get their place on next year's programme. The slide shows a snapshot of some of the applicants to the programme. You can see that some

applicants have achieved nine A or A* grades in their GCSEs. Therefore, the programme is seen as a very valuable alternative to the traditional return to A levels. It is obviously recognised by the community as a very attractive route to employment through learning. As I said, the model has been very successful, and we are replicating it for the computing industry. We are developing a pipeline of people to enter that industry, and we are working with Microsoft to develop an apprenticeship.

To facilitate access to this valuable suite of programmes, we have undertaken a very ambitious programme of virtualisation. Our intention is to make all of our curriculum available online to all of our students. We had a virtual week when the entire college curriculum was delivered online. During that week, 5,655 students spent an entire week doing classes online through vodcasts, podcasts, discussion boards and real-time, synchronous classes. At the peak, 124 students took part in one class with a team of IT lecturers.

We also recognise that there are students who are not in a position to take up the opportunities offered by those programmes, so we have a suite of programmes aimed at helping people back into education and employment, for example, the Step up to Sustainable Employment (SUSE) programme. That is a collaborative partnership that is led by South West College, and it targets young people and adults at risk of social exclusion across the council areas that the South West College covers. It is aimed at the long-term unemployed with few or no qualifications, and it is structured to begin with personal skills and confidence-building, which will then lead them into a vocational or academic area where they can get the qualifications to go into employment. The programme was evaluated after seven months of operation, and we have already reached the first year's targets for delivering qualifications, and we are well on the way to delivering the targets for achieving essential skills and employment.

That is just a couple of examples of the work that we do to deliver courses fit for individuals, the community and the economy. It is not an exhaustive list, but I hope that it gives you a flavour of what we do, what our strategy is and how successful it has been.

My colleague Dr Jill Cush will now talk about the direct support to industry that we provide.

Dr Jill Cush (South West College): Good afternoon. It is very nice to meet you all. I currently look after the innovation centres in South West College, the largest of those being the InnoTech centre based on the Cookstown campus. InnoTech has now been in existence for about three and a half years. It provides technology and innovation support predominantly to small companies in the south-west region, across Northern Ireland and beyond. InnoTech has strong links with industry and is the driver for the STEM centre on the Dungannon campus, a dedicated centre focused on providing interactive awareness-raising activities in the areas of science, technology, engineering and maths. The aim is to provide an ever-increasing pool of younger people in those areas. Currently, the college is developing three new innovation centres in more dedicated areas: renewable technologies, creative industries and, here in Omagh, design. The strategic focus of the development of innovation centres is linked to the college development plan and the wider role that colleges play in economic engagement. Among many others, the World Bank has identified that education and training, combined with innovation centres, are the key pillars for developing the knowledge economy that we operate in and aspire to. It said that we require an educated and skilled population and a network of innovation centres to be able to tap into the global stock of knowledge, adapt it to local needs and, in so doing, create new knowledge that we can then exploit commercially. That is why we are going down this path.

The InnoTech centre in Cookstown currently employs 18 staff — scientists, technologists and engineers — who provide dedicated support to industry. Seed corn funding for InnoTech was provided through the DEL innovation fund. We would like to put on record our gratitude for that support. The unique model we have developed in InnoTech is now being rolled out to all six colleges in the sector through a new strategic programme, the college employer support programme, which was launched by the Minister in February in Dungannon. A key driver of InnoTech has been providing support through the provision of services to small indigenous companies in Northern Ireland to try to improve their growth potential.

I will give you a few examples of the type of work we do; that will maybe make it a bit clearer. One example is Allingham Quadcrate, based in Fermanagh. It is a small engineering company that

manufactures crates that go on quads in farms to transport different types of loads. Its initial product was quite heavy and, in some cases, required two people to attach it to the quad. The company came to InnoTech, where we looked at the design and used 3D computer-aided design (CAD) and a technique called finite element analysis to redesign the quad crate to make it much lighter. That technology is widely used in larger engineering companies, in the likes of Bombardier and F G Wilson, but for a small engineering company, it is not accessible. Through InnoTech, we were able to redesign the crate, which has increased sales in the company.

Another example is TruCorp, a company based in Belfast. It makes medical device prototypes. We used advanced 3D scanning and prototype software to develop a new prototype for the company to do with a model that surgeons would use for medical training in throat surgery. The product is now on sale widely in the US, an export market.

A third example is some work that we have done for Todds Leap in the development of a smartphone app. That work was sponsored under the DEL-funded Connected programme. I know that Todds Leap is making a presentation to the Committee after us, and we will hear a bit more about that later.

Those are just a few examples of the types of projects that go on in InnoTech. To date, we have delivered over 170 R&D projects with small companies. We have also delivered 104 projects under the Invest NI and Enterprise Ireland innovation voucher scheme. That is really the entry-level programme for innovation in small and medium-sized enterprises (SMEs) across Northern Ireland. In the past two years, InnoTech has delivered more vouchers than Queen's University, which shows that small, indigenous local companies are more than comfortable with engaging with their local FE college to offer this type of support. To date, the work of the centre has contributed over £6 million in economic development.

The Chairperson: Jill, before you go on, what is the innovation voucher, how much is it worth and what does it do?

Dr Cush: The innovation voucher is worth £4,000 to a company. A company that has an innovative idea applies to Invest NI. There are usually three to four calls per year for support for an idea. A certain proportion of companies are awarded a voucher that they can then spend in any academic organisation throughout Ireland, which means any college or university. They come to us with the idea, and we then work out a plan to do a redesign, a prototype or some technical market research. There is a very wide variety of different types of projects. We have just produced the second case study brochure, and that is available. It contains 12 examples of the type of work involved.

That is the work of the InnoTech centre, and, from our engagement with employers there and across the college, one of the messages coming through is that they need this type of innovation support work but they also need a pool of skilled people to be able to deliver on it. In that light, we have developed the STEM centre at the Dungannon campus of South West College. To date, we have delivered activities to over 4,000 students from over 60 schools across Northern Ireland. As you heard from Pdraig, the focus on STEM extends right through the curriculum areas, the apprenticeship programmes and into the delivery of these types of activities. We believe that the STEM centre is a key asset in trying to build a pipeline of young people coming through.

Recently, the work of the STEM centre was recognised at national level and was the recipient of the President's Award at the Association of Colleges Beacon Awards in London. These awards attract entries from over 300 colleges across the UK annually. The president of the Association of Colleges charitable trust, Lord Willis, who is a former Chair of the Science and Technology Committee in the House of Commons, visited the centre and commented that what he saw was the best example of the use of a technology that he had ever come across in an FE college.

Currently, we are engaged in discussions with five colleges in England to replicate the STEM centre in Dungannon.

The Chairperson: You glossed over that a wee bit. That is a pretty superlative statement, is it not?

Dr Cush: Yes, Lord Willis was impressed.

Mr McAleer: Jill is being modest. We won three Beacon Awards through the work that is being undertaken by the InnoTech centre. One of them was for the STEM centre. On top of that were the awards given to the STEM centre. As a result of that, as Jill said, we are inundated with requests from across England, Scotland and Wales to come and look at it, to the extent that we cannot handle it.

The Chairperson: Malachy, I was about to add to the list. I do not want to interrupt the flow of your presentation. We are forming questions that we might like to ask, and this is a particular hobby horse of mine. What is it that is so good? Why did he look at this and say that it is the best he has ever seen?

Dr Cush: When groups of schoolchildren or students go to the STEM centre, the first area that they go into is the multimedia theatre. There, there are beanbags and iPads, so the first activity is delivered —

The Chairperson: Hold on a wee tick. Have you been to this?

Ms Gildernew: It is deadly. You want to see it. We should go. It is brilliant.

The Chairperson: I am doing my best to try to wangle an invite. *[Laughter.]*

Dr Cush: The Committee will be most welcome, as will any member at any point.

Right from the get-go, the students are on the beanbags and using the iPads, and the learning that then takes place is almost subliminal. They are in an environment that they are very comfortable and very relaxed with. They then go on to do a series of hands-on, practical activities. One is a crime scene investigation (CSI) activity, where they analyse a crime scene, take fingerprints and do blood-splatter analysis and facial recognition. The programme takes them right through the day. The students who visit are enthused; statistics show that 96% of students who visit would consider a career in science and technology after a visit to the STEM centre. They also come back for repeat visits.

The Chairperson: I will not take too long, because I really want to get through this and come back. I really think that this is the key to what we have to do: inspire and enthuse people. You have to try to tell people that this is worthy and that they are going to get a job. People may say, "Yeah, I'll get a job somewhere", but you can get them to think that the subject is fantastic. I am really quite interested in that.

I will not go on about this, but I went to an exhibition by a guy called Robert Ballard, who is the fellow who found the Titanic. I was not really enthused and thought that I was going because you just have to, but I have to say that it was fantastic. His work is about how you enthuse, in his case, 11- to 14-year-olds, which is an area I have got into, and make them look at what science can do and to get them interested like that. He is doing something with the Black Sea and some virtual stuff that I would like you to have a look at doing in your centre. However, I will not detain you any more until we pick up on that. I think what you are doing is really interesting.

Dr Cush: Thank you. We are engaging with a number of colleges in England to replicate the model of the STEM centre in their colleges. That is further recognition at a national level that the STEM centre is genuinely unique and a valuable asset in further education.

As I mentioned, the college is also looking to expand the range of innovation centres and develop three new specialised centres, one of which is in the area of renewable energy and sustainable technology. That is something that the college has a strong track record in over the past seven or eight years. Recently, we have been successful at stage 1 of an INTERREG funding call. We want the funding for a centre for renewable energies and sustainable technologies in Enniskillen. We have bid for funding of over £3 million in partnership with Sligo and Cavan and with Dumfries and Galloway College in Scotland. That would enable us to develop a centre and pay for staff, equipment and facilities for

testing renewable energy technologies, for sustainable construction, retrofitting, for advances in anaerobic digestion and work around the testing of biofuels.

This project nicely aligns with another European project that we have just started in the college, which involves working in the area of electric vehicles and sustainable transport. We are taking delivery next week in Cookstown of two electric cars. An e-charging point has been installed at the InnoTech centre, and the project is to develop pilot journeys to see how electric cars can practically be used in a public sector environment. We are also developing a new curriculum around electric vehicles, which will involve training and servicing. Other centres in Omagh are planning a design and prototyping centre for local industry, and a creative media centre is planned for the Fermanagh campus of the South West College.

I have tried to give you a flavour of the innovation support work, which we believe is very dynamic, that is going on for industry within South West College. However, the type of support that we offer is very practical in nature. We go out to companies and offer practical solutions to problems, whether prototypes or designs, and it is very much on the development side of R&D as opposed to the research side. It is all about product commercialisation and getting new ideas to the market.

The college has been successful and gained recognition at the Beacon Awards for its STEM centre and also for InnoTech because of its engagement with industry. The work of the centre and the wider college around sustainable technologies has also been recognised at an international level through the International Green Awards, where we received an award alongside companies such as Unilever and Samsung Electronics.

In the development of the innovation centres, we aspire to deliver the very highest levels of support to industry, and that can sit at an international level. We have seen very tangible benefits through economic returns, but also in raising the aspiration levels of the 18,000 students who come through the doors of South West College.

That is an overview of the work of the innovation centres. I would welcome visits from the group or individuals to InnoTech or the STEM centre to see a bit more of what goes on.

The Chairperson: Brilliant. We talked about enthusing, and I am sure that others will want to pick up on that. To go back the IT set up: when people say Microsoft to me, I get nervous because there is a danger that we are teaching people how to use software packages such as Word or Excel. I see Padraig shaking his head, but what we are really after are software engineers — people who can code.

Mr McAleer: We are all very aware and conscious of that. Even A level classes can go astray with regard to straightforward information and communication technology (ICT). It is not about teaching people how to play with keyboards but about going beyond that. That will be reflected in our foundation degrees, which is a big area. We are suffering to some degree. We could expand in some areas if we got the software engineers, and we are looking for them as a college. Everybody is looking for them.

The Chairperson: Everybody is looking for them.

Mr McAleer: Everybody is looking for them, but our curriculum certainly reflects that. We do not go for that type of qualification.

Mr McNamee: We do not have a foundation degree in ICT even though it is a popular area and a lot of students would go for it. Ours is in computing, coding and networking.

The Chairperson: What language are they coding in? Is it just a variety?

Mr McNamee: They use C Sharp, JavaScript and C++. That is mostly what they do.

The Chairperson: So, they are actually into the hardcore stuff with C++ and C Sharp.

Mr McNamee: Yes.

The Chairperson: I think the work you are doing is fantastic but how do we get to parents? They are the people who will have a significant impact on the career choices of young people. How do we get the parents enthused? That is not necessarily an ICT question.

Mr McAleer: We have had that discussion going back a number of years. For example, the STEM centre was one of our major attempts. We realised we were not getting the flow-through and were going back to DEL and looking for more places for science, technology, engineering and maths. We are very conscious that we may not have the supply line here. Of the foundation degrees that we are developing, more than 70% are in the STEM area. So, we set ourselves our own challenge. We carry out serious campaigns and have open nights, and so on. However, the STEM centre is our biggest promotion of the last number of years.

The Chairperson: I get the enthusiasm with the beanbags and iPads, but there is also an issue about getting younger people than would normally come to a college in. The key age is around 11 to 14, and we need to inspire and enthuse people of that age so that they make the right choices and can go down that route when the time comes. So, I am interested in what you do there. I am also interested in how we get the parents of young people to realise that doing engineering or science is not wacky but the core of a good career. How do you deal with that?

Dr Cush: We are aware of a very successful programme that Queen's University ran in its engineering department to try to increase the number of students there. They held high-profile guest lectures for parents and had, I think, a chap over from Formula 1. They found that successful in increasing numbers.

In the STEM centre, we are planning to have a parents' evening towards the end of the year, dedicated to the parents themselves who can bring the young people in to look at that. In the research for the development of the STEM centre, we recognised that the issues were about the decision-making factors and why young people choose to go one way as opposed to another. Parents were recognised as being the primary influence over young people.

The Chairperson: I would be interested in that research. I have seen it from other people, the Engineering Council and whatever it looked at, but I do think it is a lesson that we need to embrace and take on board about how we not only get our young people enthused but get their parents to be supportive of it. If that is available, perhaps you could let the Committee know or we could ask for that.

Mr McAleer: Just before you leave that point, one of the senior staff has passed me a small note here. Two senior members of our staff are involved in an organisation called the Children's University. I do not know if you are aware of it. It has just come into Northern Ireland. Again, it is through our contacts through STEM that we were approached to become engaged in the Children's University. I do not have much detail about it, but you may want Liam to come forward to explain it to you. Liam is one of the directors. It is a company limited by guarantee that is driving it, but Liam could maybe explain it.

Mr Liam Curran (South West College): The UK Children's University is a charitable organisation. It is actually funded in the UK by the Department for Education. We were approached and asked if we would be interested in establishing a children's university in Northern Ireland. We were quite excited by the prospect, because it is for the age group from five right up to 14, 15 or 16. We saw where it would be best placed, because we are particularly focused on our STEM agenda. The Children's University accredits learning that is outside the classroom. For example, colleges and other organisations, which are identified as learning organisations, become learning destinations. Our college has now become a learning destination where the STEM centre, for example, and all the different technology centres, become learning destinations. The kids get a passport, it is stamped and they build up credits and graduate. It is really about widening aspirations, widening access and participation.

The Chairperson: We are a wee bit constrained for time, but I would like to know more about it, so, with the Committee's approval, we will arrange a proper presentation from you and you can come to talk to us in detail about it.

Mr Curran: I would be delighted to.

The Chairperson: I would also like, with the Committee's approval, for us to write to the Committee for Education and ask what it knows about that initiative. Would that be acceptable? I am not cutting you off —

Mr Curran: That is fine.

The Chairperson: If it is OK with Malachy, I will organise a proper presentation on that particular issue, and there are some other contacts that I have that I think might be useful for you. We will take that on board.

Ms Gildernew: You are very welcome to our Committee, but we are delighted to be here. I would like to put on record our congratulations for the Beacon Awards. You had a fabulous year. I was down in February when the Minister was at the college when the awards were presented, and it was very exciting for Dungannon and the college, so I congratulate you formally on that.

I am dying to take my weans to the STEM centre, but I have not got around to it yet. I know that you have had 60-odd schools through. I think that they do need to be enthused earlier on, even before they are 11. They need to be thinking that way at primary school, and you do have primary school visits. As part of that CSI project that Jill talked about, there is a Titanic element, and there are different elements to that experience. Malachy, Jill and Pdraig are being very modest. The pictures that we see do not do the STEM centre justice; you need to see it. I suggest that we get the presentation on the Children's University there, because it will make far more sense to all of us when we see the quality.

I know that the college has invested heavily in the campuses. It is interesting that the approach about the Children's University was to the college. It shows the way that higher and further education is going, in my opinion, that the approach was made to you and not to Queen's or the University of Ulster. You have to be congratulated on that as well.

You showed a slide of 20 icons representing the foundation degrees. You have a mixture there of traditional degrees, and we know that engineering is very much a key to manufacturing and jobs in the mid-Ulster area. However, the blue sky stuff is very exciting as well, including the renewable energy, and the fact that you can help families be more sustainable and have a more affordable way of living in this particular climate is very important. You are training people to go in and develop new technologies. I think it is absolutely fantastic.

What concerns me is the fact that we have this fabulous facility on our doorstep, but there is a question about whether we have enough numbers. There are 37 additional full-time places and 90 additional part-time places. It seems that, in the current climate, sending a young adult to this college to do a foundation degree course or whatever is a lot more affordable than them going up to Belfast. Then, if they have to go to Belfast, they are more mature and better able to handle it. As a parent, this is the kind of educational facility that I want for my children. They can stay at home a wee while longer, where I can keep a better eye on them. They can get a quality education, and it is more affordable for anyone sending four or five youngsters through third level education. This is a much better way of doing it, in my opinion.

Do we have enough numbers? I think we could do an awful lot more. Please talk about that and about the Centre for Renewable Energies and Sustainable Technology (CREST). Let us know about the INTERREG funding too, because it ticks all the boxes. We have said a number of times in Committee that our Departments are not aggressive enough when it comes to EU funding. We could be tapping in to it so much more and bringing funding in to help us punch above our weight and continue to produce high achievers.

The Chairperson: So, we have two points there in particular.

Mr McAleer: They are closely linked. The first point is that we do not have enough places, full stop. We do not have enough. As Pdraig said earlier, we have built up over the last four years from 118 full-time higher education places to 420. I do not think that there should be a cap on STEM areas. We turned away quite a number of people from this area last year who applied for STEM subjects, and they had to go elsewhere.

The Chairperson: Will you write to the Committee outlining the number of STEM students that you had to turn away?

Ms Gildemew: That is a good point, Basil. The Department keeps telling us it is STEM, STEM, STEM — but if it caps it, it does not make sense.

The Chairperson: I agree: there should not be a cap on STEM. Just write to us with that example so that we can write to the Department to explain. That would be handy. I am sorry — every time you open your mouth, I give you more work to do.

Mr McAleer: Not at all. That is a good start.

We are trying to build a serious university presence. I do not want to be arrogant and suggest that we are a university. We are not; we are a further education college. However, we have the ability to deliver those foundation degrees. We have aligned ourselves closely with the two universities: Queen's and the University of Ulster at Jordanstown. Our curriculum is around foundation degrees, so the opportunity is there for our students to progress into the final years of Queen's or Jordanstown. It is a more expensive option and is not like Higher National Diplomas (HNDs) or Higher National Certificates (HNCs). It is expensive in our quality arrangements with Queen's and the University of Ulster, but we are prepared to pay because it makes a big difference. There is no comparison in the quality of outputs.

The Chairperson: Can I just ask about a point Michelle raised? It seems attractive in one sense for young people to spend a year or two here before they go on. I understand the point. How do the young people feel about it? Some of them might want to spread their wings a wee bit and do not want their mum looking at them or whatever. Is there any counter-narrative?

Mr McAleer: I suppose that there will always be that tension. We have had a number of surveys carried out, and some students at 18 or 19 like to get away and to get to Belfast. What their motives are could be something else. *[Laughter.]*

The Chairperson: We will not go there. *[Laughter.]*

Mr McAleer: Employers will tell you that the maturing that takes place from 18 to 20 is unbelievable. The fact is that we link our foundation degrees through to employers. I have talked to universities, and I hear that the quality of people starts to come through as they have been matured by experience in industry and so on. They can achieve a lot more than when they go to university. So, it is a good thing for the parents who do not have to pay as much, for the students in terms of their maturity and even for the universities at the end, as they get a far better student who has been matured through their experience of foundation degrees, which is tied closely to industry. It is a no-brainer.

You mentioned INTERREG funding. We bid continually for European funds through our InnoTech centre and so on. A big one that we are involved in at the minute is the CREST in Enniskillen. We feel that it can be a centre of international standing. The Building Research Establishment in London is going to work with us to manage our research.

The Chairperson: Why are you going to London?

Mr McAleer: From a building research point of view, the Building Research Establishment —

The Chairperson: So, this is all about insulation and different types of boilers and all of that?

Mr McAleer: Yes, it is also about control of building regulations. We are also working with the QUESTOR centre at Queen's, and we are in the latter stages of a formal agreement with it. We have to recognise that we are not a full university. We are big into the small "r" side of R&D. Queen's can help us by being small on the "d" and big on the "r". So, there is an ideal mix there. We have a formal agreement between both parties, which has been forwarded to DEL, and, hopefully, in the future, we will have a formal agreement with QUESTOR.

Dr Cush: The point about securing European funding is that it is fiercely competitive out there. For the INTERREG application in this round, there were over 90 applications, totalling something like £220 million for £30 million of funding in the first phase. We have made it through the first phase, but there is another assessment and economic appraisal to go through, so any support that we can get from the Committee would be very welcome because it is fiercely competitive out there. In respect of the justification of the projects, it is very difficult.

Mr Douglas: First, thanks very much for your presentation and your hospitality. I was very impressed by the presentation. I went through it last night, and it is excellent. Malachy talked about the small "r" as regards working with universities, but in respect of cross-fertilisation and sharing ideas, we went to see the Northern Ireland Science Park not so long ago, and we were very impressed with it. Also, I met senior management from Harland and Wolff, which is still very much about ship repair, and they have been involved at the cutting edge of alternative energies, particularly with Fred Olsen from Fred.Olsen Energy. Do you have any links with those types of organisations?

Dr Cush: We do. You mentioned Harland and Wolff. We had a seminar in the college about six months ago to do with opportunities for supply chain in renewable energy. We had a speaker from Harland and Wolff, and he talked to small companies in the region about how they could get into the supply chain. As a result of that seminar, one local company won a contract with Harland and Wolff. So, the work in InnoTech and the CREST is all about bringing the bigger players to the region to say how small companies can get involved, what type of products are going to be needed and how to move forward.

Malachy talked about the links with QUESTOR. There is a recognition that the focus of universities is on high-end, three- or four-star research, and one of their challenges is getting that to the marketplace and commercialising it. There may be a recognition that some of the work that colleges do through InnoTech is all about commercialisation. If we can link up better to feed that back in so that the research will flow through the development and be commercialised by small companies, the CREST will enable us to do that in the renewable energy discipline.

The Chairperson: I will put a more challenging statement to you. I have been very impressed by what you have been saying about the Beacon Awards, but, when it comes to renewable energy, I started to look at it through the colleges and was directed towards the South Eastern Regional College's campus in Newtownards as being the lead. I was a little — "disappointed" is the wrong word. It was lacking in ambition. They have a very good campus and all the rest. However, I am not sure that we have really got to grips with the potential for renewables.

Mr McAleer: We can answer that question directly. This college has been working on renewable energy for something like 10 years. We were winning prizes 10 years ago, and we have won an international prize this year. We started out at a time when there was no curriculum, virtually no industry and no demonstrators. So, we decided that we would create our own industry-standard demonstrators. Take this campus you are sitting in at the minute: 70% of our heat is produced by willow. If you go to the other site in Enniskillen, where you received a presentation, you will find that, I would say, 90% of its heat is produced by biomass. We have, within 5 miles of here —

The Chairperson: I want to ask you some questions on biomass. The problem when you use willow or wood is that, for high-efficiency burning, there needs to be constant throughput. Willow or wood is not the answer for heating in a residential area.

Mr McAleer: This is the problem. In many cases, people jumped on renewable energy because they saw it as something for the future and, therefore, wanted to be expert in it. However, that was not very well-managed in many cases. For example, in England, grants were given for the installation of solar

panels. However, suddenly every Tom Cobley was an expert and was putting in panels, which created a very bad image for renewable energy.

We will be presenting you with a book at the end of today. To give you an example, our staff decided that information on renewable energy just was not there, so they collated this —

The Chairperson: The Committee Clerk has told me that I have lost all control of time on this, so I will have to try to move on. You have indicated the areas in which you have won the most impressive awards. However, you need to be able to tell us not exactly about the "R" in R&D but about what that research is really leading to. I will give you two areas where I, as an engineer, am still not convinced by the research. Wind turbine technology is hugely inefficient. It is economically viable only because of grants. I need someone to assure me that that is likely to improve or get better. We seem to be just following. We are using wind technology because everybody says, "renewable", and wind turbines look like the most obvious renewable energy source. So, I need somebody somewhere to tell me that we are not just jumping on the bandwagon.

I want you to come back in on another point. Leaping ahead, if you are taking an all-British Isles attitude to wind farms, you have to accept that most of it will end up being in marine stuff, because that is where you have unencumbered air flow. So, what you are looking for is high-voltage DC technology, because AC has too much power loss. I want to see whether we are starting to hook in to the Norwegian or Icelandic thermals to make up the load when the wind does not blow. I, as a legislator, would like to know whether we are investing in the right areas, and I want somebody with a bit of brains to tell me that.

Mr McAleer: Basil, I was going to start off by saying that we need to get you on to one of our foundation degrees. *[Laughter.]*

The Chairperson: That might be a bit ambitious actually.

Mr McAleer: I am not quite sure whether you should lecture or listen.

Ms Gildernew: The wind would blow all the time. *[Laughter.]*

Mr McElduff: The Committee is being dissolved so he needs a new role. *[Laughter.]*

The Chairperson: I would sooner go for a job if that is the case.

Mr McAleer: I am not quite sure whether I would charge him the £1,200 fee for the course —

Ms Gildernew: Twice.

Mr McAleer: — or pay him £28 as a part-time lecturer.

The Chairperson: I am looking for a bit of —

Mr McAleer: Guidance?

The Chairperson: Leadership.

Mr McAleer: You are absolutely right. Everything you said there is real common sense. That level of research and development needs to be undertaken. The college has foundation degrees built on industry-standard demonstrators. That was the point I was making. We have two farms close by, for which we are supplying energy. We have this college. We are collating data, and the CREST in Enniskillen is all about the collation of data and the provision of real, independent data. It is not education without that. We would welcome an opportunity to give you a presentation on what the college does in that area.

The Chairperson: I will pick it up. The Deputy Chairperson would like to have a word, and I am happy for him to do that. I am not curtailing you, Tom, but I have waffled on; I am sorry.

Mr Buchanan: I will be brief. I remain to be convinced that wind energy is the way forward in renewables. I have my own concerns about that, but I will leave that for today. I want to commend the college on its focus, drive, innovation and success rates. It is outstanding, and I am glad that the Committee is here to get a presentation and see exactly how the South West College has been moving forward. As it continues to move forward, what are the main hurdles or stumbling blocks that stand in the college's way?

Mr McAleer: The colleges have started to function very well in the current DEL set-up and in a scenario in which they have a certain degree of independence. As part of all the investment that we are undertaking at the minute, we have been able to spend probably a couple of million every year on investing in the curriculum through capital investment and so on. We have had the freedom to do that. I hope that that will be taken into consideration under the reclassification. We need to be careful that we do not stop that, or the sort of innovation that you have seen here by people like Jill. I fear that that may happen. I am not fully briefed yet, nor do I fully understand it. I do not know whether the Committee will be dissolved, but, if that is to be the case, I think that it should, in its latter days, make sure that that freedom and ability to be innovative are maintained.

We also need to be careful about the management of the transition from DEL. We could end up throwing the baby out with the bath-water. The management team and I, speaking personally, would like to be aligned closely with DETI. That does not mean that we do not have to co-operate as well with DE. It is important that we have school links. We have 1,500 school links people here. In the mayhem that might occur in the mixture of a reclassification, the dissolution of DEL, if that is going to happen, and alignment with a new Department, it will be a very tricky period, and all the good work that is being done at the moment could become more difficult. You need to protect that, because we have the freedom to do it at the moment; we definitely do.

The Chairperson: OK. The point is taken. Your points have been noted and will appear in the Hansard report. I can assure you that some people will take up the points that you have made. However, I do not want a general debate on the issue, because we have other things to deal with.

Mr McElduff: I wonder how much support a college like this would get from the bureau in Brussels in trying to draw down the European money to which Jill referred. There was to have been a DEL desk officer based in Brussels, and I wonder whether the work of that official is relevant to the work that this college is doing in developing its remit.

The Chairperson: I am interested in the INTERREG stuff. When I was involved in INTERREG, it was pretty disappointing when you got to the end of the seven-year period, because you discovered that the only thing that you were able to do was tourism. That was easy, because all you had to do was print a map and do whatever, whereas you needed longer running times for the other things. We will take the general point, Barry.

You have raised a number of issues about funding and MaSN numbers, and we would like to look at that. I am going to try to get to the middle ground, which means that I am going to step on everyone's toes. The cross-border work that you are doing is really interesting. I also think that it is really interesting that you are working with London as well. That is the right way to go. We should be looking for expertise from wherever, but with the college at the centre. That is a good thing and it is to be encouraged, because the regional identity that you are looking after is based around Omagh, Dungannon and Cookstown.

Mr McElduff: In light of what you said, it would be nice if every second Committee meeting could be held in this area. *[Laughter.]*

The Chairperson: If only Michelle would turn up on time. *[Laughter.]* I have to try to maintain a quorum, Barry. Do you realise that we are here because of you?

Mr McElduff: Yes, I understand that. Thanks very much.

The Chairperson: If only we could find Carrickmore, we would be laughing.

Ms Gildernew: You could not find Parkanaur. *[Laughter.]*

The Chairperson: You put all sorts of obstacles in my way.

I would like to finish by saying thank you very much. We have let the meeting run on a little, but that is testament to the quality of the information that was presented. You have all given us food for thought. There are areas that I would like to pick up on, and I will do so.

I think that it would be useful for you to know about the recently formed all-party Assembly group on science and technology, with which all the royal societies and the two universities are involved. They are all really excited to finally get the chance to talk to MLAs and explain science to them. This is not a Committee thing; I just happen to chair the group. I think that its next meeting is in the next three weeks, but I will drop you a note and you may find time to come along. The universities are coming, and I think that you should be there, too. The particular issue is about enthusing young people and parents about science and technology, and you have a great contribution to make to that.

We will take up your offer to go and see the centre and talk more about the issues. It would be useful if you could send me the information that was requested. You may want to know that the debate on the transfer of DEL functions will be next Tuesday, 15 May. Any information that you get to us before then may well be used by these good members in their speeches. Thank you all very much indeed.

Mr McAleer: Thank you very much.