EUROPEAN AND EXTERNAL RELATIONS COMMITTEE

Tuesday 7 November 2006

Session 2

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EUROPEAN AND EXTERNAL RELATIONS COMMITTEE
15th Meeting 2006, Session 2

CONVENER

*Linda Fabiani (Central Scotland) (SNP)

DEPUTY CONVENER

*Irene Oldfather (Cunninghame South) (Lab)

COMMITTEE MEMBERS

*Dennis Canavan (Falkirk West) (Ind)
*Bruce Crawford (Mid Scotland and Fife) (SNP)
*Phil Gallie (South of Scotland) (Con)
*Mr Charlie Gordon (Glasgow Cathcart) (Lab)
*John Home Robertson (East Lothian) (Lab)
*Gordon Jackson (Glasgow Govan) (Lab)
*Mr Jim Wallace (Orkney) (LD)

COMMITTEE SUBSTITUTES

Ms Wendy Alexander (Paisley North) (Lab)
Derek Brownlee (South of Scotland) (Con)
Richard Lochhead (Moray) (SNP)
Nora Radcliffe (Gordon) (LD)

*attended

THE FOLLOWING GAVE EVIDENCE:

Christina Allon (Careers Scotland)
Professor Geoffrey Boulton (Scottish Science Advisory Committee)
David Caldwell (Universities Scotland)
Professor Peter Grant (Scottish Science Advisory Committee)
Richard Halkett (National Endowment for Science, Technology and the Arts)
Dr David Hall (learndirect Scotland)
Gordon MacDougall (Careers Scotland)
John Mulgrew (Learning and Teaching Scotland)
Stuart Ritchie (Learning and Teaching Scotland)
Sir Muir Russell (Universities Scotland)
Damien Yates (learndirect Scotland)

CLERK TO THE COMMITTEE

Jim Johnston

ASSISTANT CLERKS

Emma Berry
Gerry McInally

LOCATION

Committee Room 2

Scottish Parliament

European and External Relations Committee

Tuesday 7 November 2006

[THE CONVENER *opened the meeting at 14:02*]

The Convener (Linda Fabiani): Good afternoon, everyone, and welcome to the 15th meeting this year of the European and External Relations Committee. I have received no apologies. Dennis Canavan has given me advance warning that he will have to leave the meeting to attend a meeting of the Enterprise and Culture Committee, which is considering his St Andrew's Day Bank Holiday (Scotland) Bill. Therefore, with the committee's indulgence, I will let him ask his questions first.

Members should be aware that our assistant clerk, Gerry McInally, will leave us at the end of next week. I am sure that the terrible turnover of clerks has something to do with the committee. It makes us wonder. Things are so bad that Gerry is moving to Australia. He has not been with the committee for long, but he has helped with the organisation of the maritime policy conference, which will take place on 4 December. I want to record my thanks for that help. I am sure that we all wish him the best of luck in beginning a new life on the other side of the world. I ask him to let us know how he gets on, although he should not feel obliged to do so.

European Commission Growth and Jobs Strategy Inquiry

14:03

The Convener: Item 1 is our third evidence session as part of our inquiry into the European Commission's strategy for growth and jobs. I apologise to members for missing the previous two meetings and thank the deputy convener, Irene Oldfather, for dealing with the first two evidence-taking sessions.

Today's evidence session will be split into three parts. The first panel will give evidence on targets relating to innovation, and the second and third panels will give evidence on education and skills.

I welcome our first panel. Professor Geoffrey Boulton is vice-principal for international relations and public understanding of science at the University of Edinburgh; Professor Peter Grant is head of the University of Edinburgh's school of engineering and electronics and a member of the Scottish Science Advisory Committee; Richard Halkett is director of policy at the National Endowment for Science, Technology and the Arts; and Lucy Powell is head of media and public affairs at NESTA. Currently, NESTA is working closely with the Parliament's futures forum on highlighting the creative industries' positive contribution to Scotland's economy.

We have around 40 minutes for each panel. As there are four people on the first panel, I want to move straight to questions. Panel members should let me know who wants to respond to a question; I will then ensure that everyone gets in.

Dennis Canavan (Falkirk West) (Ind): The submission from Universities Scotland states:

"The Lisbon strategy is based on ensuring that Europe has a pool of highly skilled creative employees".

It also says that

"graduates are an essential attribute of the knowledge economy"

and that the employment rate for graduates in Scotland is 89 per cent.

Recently, some people have questioned the proportion of people who go to university in Scotland. Some have even gone as far as saying that too many people go on to university, that we have too many graduates and that some of them should perhaps consider more vocational courses, bearing in mind that there is a shortage of engineers, technicians, electricians, plumbers and joiners. Also, despite the high graduate employment rate to which the submission refers, the fact is that significant numbers of graduates find it difficult, if not impossible, to get jobs. Critics

might point out that better employment prospects and possibly better wages would be available to some graduates if they did vocational courses at colleges of technology. Would any of the witnesses like to comment on that?

The Convener: I am sure that they all would like to comment on that. Who would like to comment first?

Professor Geoffrey Boulton (Scottish Science Advisory Committee): I will. I am sure that someone from Universities Scotland will want to comment on it at a later point in any case.

The economic statistics are extremely clear. If we examine the multiplier that higher education provides in almost all the countries of western Europe and developed economies elsewhere, the argument that the economy would somehow be better served if a larger proportion of people were to do other things and not go on to university or some form of higher education fails completely. It does not stand up for a moment.

One might ask whether our higher education system is diverse enough to match the needs of individual young students of 18 or 19 years old. I am a little sceptical about whether it is diverse enough and think that we may have lost some diversity through time. The rubric that most of our universities use to describe their recruitment criteria is that they recruit the students who they believe have the capacity to benefit. If there were a greater diversity of higher educational opportunity, it would be more likely that individuals' needs would be matched.

If your question is whether fewer people ought to go on to further or higher education at the age of 18, I would say that they should. However, we also need greater diversity in the system to better match the needs of students of that age.

Dennis Canavan: What about the shortage of plumbers and joiners? Are you suggesting that some people of graduate level should become plumbers and joiners?

Professor Boulton: I see no reason why graduate students should not become plumbers. It is a simple economic argument. Are you suggesting that there is somehow a market failure? If there is a shortage, the price of a plumber ought to be higher, and my wife tells me that plumbers are darned expensive. That ought to lead to a driving up of prices, which ought to draw more people into plumbing, so I question whether there really is a shortage of plumbers or whether it is simply an easy phrase.

The Convener: I can see a whole new debate opening up.

Professor Peter Grant (Scottish Science Advisory Committee): The universities educate a spectrum of people—not only Scots but people from south of the border and from overseas—so you have to consider our output. The percentages change when we move from undergraduates to taught masters students and then to full research students who are doing PhDs. In some instances, we recruit heavily from outside Scotland to fill those positions.

Richard Halkett (National Endowment for Science, Technology and the Arts): The important question is how future proof the jobs are. The importance of higher education does not necessarily reside in the skills that students learn directly while they are in it but in the ability to adapt and to gain transferable skills that allow them to change their careers. I do not deny that people who have degrees can become joiners or plumbers. There is no reason why they cannot, and market forces will mean that that begins to happen. The important point is that the skills that people learn in higher education are less about the immediate subject that they study and more to do with the skills of problem solving and complex analysis that people need if they are to adapt to the future economy.

The Convener: Bruce, is your question on that point?

Bruce Crawford (Mid Scotland and Fife) (SNP): Yes. There are other points that I would like to develop later, convener.

The Convener: I will come back to you on those. For the moment, we will concentrate on Dennis Canavan's point.

Bruce Crawford: Universities Scotland's submission states:

"Higher education is the only sector that can make the Lisbon strategy a reality."

You might believe that no one else can contribute, but I am sceptical about that. Perhaps you can enlighten me on your thoughts on the matter, which relates to Dennis Canavan's question.

Your submission also states:

"Worryingly, where Scotland once used to be leading the EU, we are now falling behind."

You state that we are falling behind not only the Netherlands and Denmark, which are parts of the European Union, but America, Canada and Norway. That is worrying. Why are we falling behind? What do we need to do to reverse that and get to the front again?

The Convener: I ask the panel to concentrate on Bruce Crawford's first comment, which is relevant to Dennis Canavan's point, and we will come back to the other point. Jim Wallace has some questions on the same lines.

Professor Boulton: We should consider the discussions among economists—not academic economists, I stress—and business leaders in Europe. In an influential paper that was produced about a year ago, the Belgian economist Michael Sapir argued that, in order to enhance our economies in a new world that is based no longer on capital, land and labour but on information and knowledge, we need to liberalise markets, to ensure that business can draw on the knowledge base efficiently and effectively, and to ensure that there are high skill levels. The universities, certainly in Scotland and Britain, are the major locations of much of the national research base and they play a fundamental role in education. If we accept Sapir's diagnosis, the statement from Universities Scotland is borne out.

Bruce Crawford: I do not think that accepting that doctrine means that only the higher education sector can deliver. That is what Universities Scotland's submission suggests. It cannot be that only the higher education sector is involved. We need an holistic process to get to where we want to be.

Professor Boulton: I think that it is a necessary but not a sufficient condition.

Richard Halkett: The problem lies with the Lisbon strategy, which almost defines the answer to the question as being closely related to higher education. In a survey of major United Kingdom businesses, only 2 per cent cited universities as the primary producer of knowledge innovation that is relevant to their business. An awful lot of innovation and new thinking comes from other sectors. A research and development-intensive business usually produces about the same amount of knowledge output as a medium-sized university, so we have to look to other sectors. We must be careful not to focus too much on universities.

We also have to think of universities as producers of talent and not just producers of technology. Their production of skilled people is perhaps more important than their production of new knowledge.

The Convener: We will come back to Bruce Crawford's point about Scotland falling behind.

Mr Jim Wallace (Orkney) (LD): My question is on a slightly different issue, although it might follow on from what Richard Halkett said.

NESTA's submission suggests that the Lisbon target on the percentage of gross domestic product that is spent on R and D is chasing the wrong thing, or at least that the figures do not reflect everything that is done. It cites, for example, development activities in petroleum exploration and the service sector. The Scottish Science Advisory Committee commented in its submission that business-funded R and D by outside contractors such as universities is not necessarily factored in. That is interesting, because it may be one of the explanations for why we apparently fall so far below the target. Perhaps Professor Grant and Mr Halkett will elaborate on that.

14:15

Professor Grant: The Scottish Science Advisory Committee has commissioned a study from SQW on business R and D. One matter that is covered in the study is the financial services industry. The problem is that a lot of R and D is done in that industry, but it does not satisfy the Frascati guidelines and so does not get counted in the business expenditure on research and development—BERD—reports. That work is not classified as R and D, although people are developing many different techniques in information technology for future banking and financial services. We are particularly concerned about that, because we believe that that work genuinely is R and D but is not captured because of the way in which our statistics are collected.

Richard Halkett: We recently published a report called "The Innovation Gap: Why policy needs to reflect the reality of innovation in the UK", which talks about the issue. The report is not about the traditional gap, or the fact that the UK lags behind other countries; it is about the gap between the way in which we measure innovation and the reality of innovation in the UK. The report talks about financial services and non-commercial sectors. The problem with the 3 per cent target on R and D—or the 2.5 per cent target, as it has become in the UK—is that it is more to do with the shape of our economy than with the innovative potential of our economy. Certain sectors, particularly the high-tech sectors, spend an enormous amount on R and D so, if a larger proportion of an economy is high tech, more will be spent on R and D. In Sweden, high-tech sectors make up 5.6 per cent of the economy, whereas the figure for the UK is about 2 per cent. Therefore, more will be spent on R and D in Sweden than is spent here. The amount that is spent is reflective or descriptive—it is an input, not an output or an outcome. The same issue applies to patents.

We have reanalysed the traditional BERD and business R and D intensity indicators according to the sectoral composition of the UK economy. The gap with traditional competitors, such as Germany and France, closes by between 73 per cent and 80 per cent when we take into account the different sectoral compositions. A fundamental problem arises with the way in which we set targets. I am not saying that the targets are unimportant; they

are necessary, but they are not sufficient. We must think more broadly about what the terms "innovation" and "knowledge economy" really mean in the UK, rather than try to fit our economy into a template that was developed for other economies.

Professor Boulton: One of the issues with which we have not come to terms is the speed with which the UK economy has shifted towards being predominantly a service economy. One consequence of that is that the traditional research base in the UK is focused—not exclusively, but almost so—on traditional manufacturing sectors and has not really applied itself to the new service sector. Although that sector draws in enormous numbers of highly qualified scientists, the direct link between the research base, say in mathematics, and the service sector is almost zero. That is partially because the people involved do not talk about research—if one uses the word "research", their eyes glaze over. Those people regard themselves as working in the knowledge industry. Equally, other sectors, such as tourism, are not knowledge intensive, but many of us argue that they ought to be. The potential benefit from utilising the knowledge base more efficiently in those crucial service sectors is great, so we ought to focus on it.

Mr Wallace: The issue is interesting. In your work, have you found any willingness to change, in the Scottish Executive, at a UK level or at the European level, or are people pretty fixed in their approach? A more fundamental question is whether we are measuring the wrong thing in considering our future economic growth potential. Are we on the wrong lines, or are we on the right lines but not measuring correctly?

Richard Halkett: That final part of your question is hard to answer, because we have not looked throughout the economy in enough detail. It is too easy to focus on the relatively straightforward indicators, such as R and D spend, patent production and scientific citations, rather than spend time auditing other sectors of our economy to find out how well we are performing in innovation. However, I do not want to underestimate the present processes. Anyone who has seen the Frascati manual will know that it is 255 pages long and that it defines R and D in specific ways. Let us not kid ourselves that the present narrow definition of R and D is an easy one.

The issue of receptiveness was raised. The rhetoric of the Department of Trade and Industry and other political authorities around the UK and the EU has changed quite a lot; what has not changed is the reality. That is related partly to institutional inertia. Traditionally, innovation has grown out of science and technology policy. It takes a while for institutions to catch up, but that does not mean that we should not start now.

John Home Robertson (East Lothian) (Lab): Jim Wallace has spoken about innovation. I want to move on to the application of innovation—making things happen and the transfer of academic ideas to practical applications and, hopefully, commercial opportunities. We seem to be doing quite well in some areas. Representing a constituency in this part of Scotland, I know about all the bioscience facilities that are located around Edinburgh. On my patch, there is a set of nursery workshops at the Elvingston science park, which is supposed to create opportunities for people coming out of universities to apply their ideas and to take them to market. Are we doing enough in that area, or are we still losing too many good ideas and too many bright, potentially enterprising people to America, mainland Europe and England?

Professor Grant: We are doing more in the area. We now have Roberts money in universities for what are called trans-skills programmes. That means that our PhD students do not just do a piece of research but are forced to look at commercialisation and all the elements of forming a company. That has changed the thought processes of a number of our PhD students. Coupled with the fact that Scottish Enterprise and the Royal Society of Edinburgh offer enterprise fellowships, it has meant that many students have thought about starting up their own company rather than joining a large existing company.

In the university sector, we still have spin-out activities, which involve a staff member taking a project forward. Usually, the university concerned owns some equity in such activities. We also have a lot of start-up activity that is delivered by students, especially PhD students. Institutions are very supportive of that. Although they do not have an equity stake, they provide the infrastructure to help such companies get started. We are doing a lot. Scottish Enterprise is also providing proof of concept funding to help us to move ideas forward so that we come closer to forming companies. There are also knowledge transfer partnerships—the old teaching company schemes—which allow us to go out to companies to help them to move projects forward in a particular direction, so that they can develop new products. We use university expertise to tell them which directions they should follow and which are blind alleys. A lot is happening in the landscape to help knowledge transfer and commercialisation.

John Home Robertson: So PhD students should have the motivation to start up companies—that is part of their training and mindset—and universities and other institutions are doing their bit. It also sounds as if Scottish

Enterprise is doing its bit. What about our old friends the banks, the financial sector and the venture capitalists? Are they doing enough? Is the structure in place to ensure that money is available to support good projects here in Scotland?

Professor Boulton: I will answer the question directly. The banks would claim—with some justification—that there is no shortage of investment funds when there is a good idea in which to invest. However, one has to be wary. It is always possible to exhort someone to spend their money, but the central issue is that we must make it worth their while to do so.

John Home Robertson: I am sorry to butt in, but the financial sector has a reputation for wanting to bank only on certainties. Are the banks prepared to take risks?

Professor Boulton: The banks have that reputation. However, let me address that point. In Scotland, the UK and Europe more generally, we tend to be obsessed with improving the quality of supply. We have a lot of mechanisms for enhancing the quality of research that is done and so on, which is good and important. We have mechanisms to improve interactions with industry, to persuade young people to take secondments and to train them in entrepreneurialism and the like. However, the real problem is simple—throughout Europe, demand is weak.

There is a good model in the United States, where the US small business investment research fund requires the federal Government to spend at least 2.5 per cent of federal procurement on procuring from small and medium-sized enterprises. World Trade Organization rules permit that to happen for pre-competitive funding only if it is to be contained within national boundaries. The only obvious pre-competitive funding is R and D. Although the US procurement for R and D is to a large degree military, there are still large sums that are non-military. The US Government offers contracts for procurement of technology for its own needs. It does not give grants; it offers contracts. Early start-up companies find that they now have a contract to produce, which permits them to address markets and to diversify in relation to the market. That has been an enormously powerful mechanism, which has maintained the buoyancy of the US economy for the past 15 to 20 years, when the European economy, in relative terms, has been flatlining.

There is every reason why Scotland, the UK and Europe should go for something similar. We really ought to stress the enormous power of public procurement to drive early-stage growth of SMEs. As I mentioned, there is not really an investment problem. The problem is getting the SMEs a job to do in the first place—getting them contracts. Something should be done. In Scotland, for example, we do not have a large armaments industry. You might say, "Well, let's have another Trident on the Clyde," but that would not go down very well. What we do have is a massive national health service, which has enormous procurement potential. Let us consider scanning devices, for example, which were effectively invented here in Scotland. Why did the national health service not buy them? It was because the NHS buys yesterday's technologies, not tomorrow's. It buys the cheapest in the short term, rather than making the best long-term investment. We could use NHS procurement in an extremely positive way, which could have a behaviour-changing impact, whereas the other things that we are doing on the supply side, important though they are, are likely to be second order.

The Convener: That subject is obviously dear to your heart.

Irene Oldfather (Cunninghame South) (Lab): That is very interesting. You have partly answered my question. I was going to bring you back to your submission, in which you say that the American economy

"is founded on the principles of innovation".

Is that because there are better entrepreneurial courses, skills or attitudes there? Your point is important, but it reminded me that the European Commission is analysing that issue. I do not know whether panel members know anything about that—Richard Halkett looks as if he might. The Commission is particularly considering NHS pre-commercialisation and procurement. It recognises the benefits to the American economy of the US approach, with which we in Europe have been unable to compete. Moreover, matters in the European Union have been complicated by state aid rules and competition rules. The Commission believes that it has found a way round that and a paper is in production. In fact, I think that it held a seminar on that over the summer. The committee could perhaps consider that further.

Is there anything that the panel would like to add in relation to why the American system is so good? I am married to an American and I lived in the States for a while, so I know that there seems to be an entrepreneurial culture there. People are more likely to consider starting their own business, and banks and so on seem to be more willing to support such endeavours. Can we do more of that in this country?

Professor Boulton: You must not expect me, as a simple scientist, to answer questions about culture. What I would say is that when my American colleagues come over here or I go over there, it is not clear that there is any cultural difference. There is a difference in habit because

of the environment within which we exist. The entrepreneurial spirit is not lacking among students—we have students who will go to the Okavango delta to organise a project to support local communities.

In a sense, what is lacking is opportunity. One of the most striking facts about the patterns of American business is that, per head of population, the employment rate by companies of PhD students in the US is twice that of Europe. That is because companies feel that it is to their benefit to employ PhD students. That means, of course, that companies have a natural link with the underlying research base and they can draw on that research base much better. However, if I were asked why that higher rate of employment of PhD students exists, I would say that it is because processes such as that which I have described are extremely effective in persuading companies that it is in their financial self-interest to get involved in those areas. I believe that we could deploy similar mechanisms; I am suspicious of using words such as "culture" to explain away those differences. I think that the reason is probably a little bit more utilitarian than that.

14:30

The Convener: Before I allow Richard Halkett to respond as well—poor Richard is being put off again—I want to mention that, having attended the business in the Parliament conference last Friday, I find it interesting that Professor Boulton should mention public procurement, because I understand that the big issue at last year's conference, which I was unable to attend, was public procurement for SMEs.

From the workshops that I attended at this year's conference, it seemed to me that the big issue is whether we in this country engender a culture of entrepreneurship. I got from most of the businesspeople I spoke to the feeling that we do not. The examples of more entrepreneurial culture that were mentioned included America and Denmark, where I understand legislation has been passed to encourage entrepreneurship and innovation through tax breaks and so on.

Does Richard Halkett believe that we can really compete and move towards targets without that kind of positive action?

Richard Halkett: I think that we need to work across the whole area. At NESTA, we focus on the human side through our work on educational programmes such as innovation education and enterprise education as well as provide venture capital funds. We try to work on both those aspects rather than focus on just one of them. It is important to work across the piece.

It is hard to pinpoint cultural problems but, also, let us not kid ourselves that we suddenly want a pro-risk culture. We hear a lot of negative talk about risk aversion, but risk aversion is good. If something is risky, one should be averse to it. The point is that we do not accurately appraise and manage risk. We perceive risk as a binary thing that is either one or zero. We think of things as either risky or not risky, but that is not correct; risk is always somewhere in between.

We should promote a better understanding of risk and a better ability at managing it rather than just encourage risk taking. That is a problem with the public procurement agenda. Initiatives under way such as the DTI's small business research initiative—which is similar to the small business innovation research programme in the US—sets targets for people to invest in small and medium-sized enterprises, especially for R and D. The problem with that is that risk is inherent to investing in innovative early-stage businesses. How much risk are we prepared to accept with our public procurement? It is all well and good to talk about the big numbers that are involved in public procurement, but what would happen if we lost that money?

Bruce Crawford: I will change the subject slightly but, before I do that, I want to ask whether Professor Boulton can point us in the direction of any useful literature on the American model of procurement. Like Professor Boulton, I do not think that the Scots are innately any less innovative or enlightened than people in any other part of the world; they just need the right framework to be able to produce. How do we feed the beast? If Professor Boulton can point us in the direction of some literature, that would be useful.

My other question is for NESTA. Richard Halkett's submission mentions the need for

"An integrated Scottish national mission around innovation"

that includes all the sectors. Can he talk us through how that might be delivered, where we are just now and how far away we are from reaching that goal? Perhaps the other witnesses will comment on that as well.

Richard Halkett: I think that we are a reasonable distance from it. The rhetoric on innovation is way out in front of the reality. To reach the goal, we could start by changing the rhetoric and begin to look at innovation in other sectors of the economy rather than just in science and technology. That would be a big step. We need to begin to try to understand, for example, how we can innovate in financial services and what impact that has on the remainder of the economy.

The phrase that I like to use is that the UK should be focused on innovation rather than on innovations. At the moment, we see in the world

two contradictory trends: the global flow of knowledge and information and the increasing importance of clusters of similar businesses. Those trends seem contradictory. With the global spread of knowledge, we should see businesses popping up anywhere but, instead, they cluster. The reason is that tacit knowledge, or sticky knowledge, and the interaction that happens between businesses is increasingly important in creating innovation and allowing it to flourish. We need to look at how we generate a capacity to innovate in the future.

If we focus purely on generating innovations, we will only be as good as our last innovation. Instead, we should plan for the next innovation, the one after that and the one after that again. That means that we need to invest in skills and consider what innovation means throughout the economy. For example, as well as concentrating on biotechnology, we need to make sure that the financial services and creative industries stay ahead of the curve as well. In that way, we can begin to focus on innovation. We need to take an holistic approach and think about people as well as access to finance. What is important is not just access to finance but the availability, in the right place at the right time, of different types of finance for different types of business, including loans, various stages of venture capital, and private equity at the higher levels.

We are a long way from having a culture of innovation throughout the UK. We are pinpointing the easy, obvious elements—specifically scientific and technological invention—rather than considering broader innovation throughout the economy. I am not saying that that is wrong—it is necessary—but it is not sufficient.

Bruce Crawford: I would be interested to hear other people's views.

Professor Grant: Clusters are important because research always works better if there is a cluster of people. An example is Livingston, where the Alba Centre was set up and there is a growing number of SMEs. The difficulty with the Alba Centre is that a number of the companies are headquartered outside Scotland and the centre has not grown as much as it might due to changes in the market.

Professor Boulton: We have to be careful about assuming that science, technology and manufacturing are the same thing. I agree that the important thing is innovation and not innovations. Where does the wherewithal of much of the creative industries come from? I do not know whether you saw the wonderful stuff that Glasgow School of Art displayed during the summer, but the software came from clever mathematicians. It is important that we do not make arbitrary distinctions, because we need much broader interaction. Sadly, and to the detriment of society, universities tend to operate in a series of silos. We should not do that because it is unintellectual and unhelpful. We should regard information as the key element and not just as some gismo.

Mr Charlie Gordon (Glasgow Cathcart) (Lab): I apologise for my brief absence. Please interrupt me if I start to go over old ground.

As an aside, I was struck by Mr Halkett's response to Jim Wallace's question, which gave us food for thought on definitions for baseline purposes. Professor Boulton gave an interesting practical example about procurement from SMEs in the US and a further point on the practical implications of what we are discussing was made by Professor Grant, who mentioned the Alba Centre.

Recently, the committee took evidence from two of the intermediary technology institutes. We established that they do a very good job—and for the purposes of my question I accept that you all do a very good job too, so we can get that out of the way. With the witnesses from the ITIs, we started to grapple with the following issue. When I was growing up in late 20th century Glasgow, the city was full of factories that employed thousands of people to make obsolescent widgets. I have been wondering for some time why there are few factories in Glasgow—or anywhere else in this country—that employ thousands of people to make widgets that people actually want in the 21st century.

At the end of the session, when it became really interesting, the witnesses from the ITIs owned up to the fact that we probably do not have enough critical mass in Scotland. They were talking specifically about the life sciences, but some of the evidence that we heard today hinted at the fact that, in the public sector and in the private sector, we are probably not putting in enough to get the critical mass to compete effectively, even if we can establish what the true comparators ought to be. Do you have any comments on critical mass?

Professor Boulton: I have one or two thoughts on that. First, the fact that a country's society is highly innovative and draws strongly on the research base does not necessarily mean that new ideas that are used come from that country. That is why we need people across a wide range of capabilities, who can recognise bright new ideas, whatever their source. A reason for having a research base in physics, for example, is so that our physicists can tell us when a physicist in Taiwan has come up with a clever idea that our industry can use. Knowledge is global and new approaches do not have to be invented here.

I have always been a little sceptical about the idea of critical mass; critical diversity is more

important in the modern world. In other words, how we create new energy systems for the current century is a question not just for economists or chemists but for everybody. We must have the capacity to work together. Our universities have been remiss in not reorganising themselves better so that people can work across a university. Universities are unique in that within their walls is a remarkable diversity of human knowledge and understanding, which we need to be able to utilise much more effectively.

I am sceptical about the importance of critical mass; we need diversity so that people can always find someone to talk to about an area that they do not understand but which might be relevant to an important public problem. Of course, that poses great problems for Scotland, because we must also ensure that we have good people. Good people are in demand throughout the world, so we must pay them internationally competitive salaries, and that makes great demands on the university system. The pooling enterprise that has been undertaken during the past two years is extremely interesting. No one has done it before and it might just be a brilliant idea—but it might not be. However, it represents an attempt to stretch for the right sort of things.

Professor Grant: We are not going to have many factories that contain thousands of people making widgets—

Mr Gordon: Someone has such factories.

Professor Grant: Unfortunately they are in the far east, where people can make things far more cheaply than we can. For example, Wolfson Microelectronics employs about 300 people in Edinburgh who are at the high-intellect, design end of operations, but it contracts out fabrication to people in China and Korea, because the cost of building semiconductor plants is exceptionally expensive and the work can be done more cheaply in the far east. The company can still build a significant business by using its intellect, which keeps it ahead of the curve so that it can design the next product. Members of the committee must accept that we cannot manufacture as cheaply in Scotland as can other parts of the world. Manufacturing costs elsewhere might increase as quality of life improves, so the situation might change, but I doubt whether that will happen.

Richard Halkett: I agree with everything the other witnesses have said. The classic work that considers critical mass from an interdisciplinary perspective is Richard Florida's "The Rise of the Creative Class: and how it's transforming work, leisure, community and everyday life". There are problems with his work. Some of the data are questionable and he proves correlation rather than causation, but his model is interesting. He describes a model in which certain groups live together—what he calls the "supercreative core" of artists and a peripheral core of people who are creative in other industries—but he does not explain how one group leads to another.

In NESTA, we try to work in an interdisciplinary space that includes science, technology and the arts, which is extremely interesting. As Professor Boulton said, the solutions to many of the problems that we face in innovation lie in such interdisciplinary space, but such work is a struggle because it is counter to centuries of tradition.

Professor Boulton: The question is, what do we do next? We often tell ourselves that the flight of industry to relatively low-wage economies gives us an opportunity, which we must exploit, to produce high-value products that are based on high levels of skill and knowledge. I know China quite well. We must not presume that the Chinese are not thinking in exactly those terms and increasingly using highly skilled people to produce high-value, low-cost products. We should not presume that we have a particular advantage that we can exploit—it is not as easy as that.

14:45

Mr Gordon: The next time I watch a football match, I will admire not the team work but the critical diversity.

The Convener: I do not think that you will find much of it.

Phil Gallie (South of Scotland) (Con): In his introductory remarks, Professor Grant said that the universities need to fill places and spoke about recruiting from locations outside Scotland to do so. What advantages under the Lisbon strategy does recruiting externally give Scotland?

Professor Grant: That is a difficult question to answer in a positive way. Partly, it is about business. If we can teach students skills for which there is a market, some of those students will stay on in Scotland and some will go back to the countries from which they came.

Phil Gallie: Is education a business—selling our knowledge to others?

Professor Grant: It probably is.

Richard Halkett: The question of immigration into the economy is interesting, as there are completely different models. This is where case studies let us down completely. Finland has almost no immigration, but it is an extremely innovative economy. Silicon valley thrived on a lot of immigration from the far east. It is very difficult to decide whether immigration will be good or bad for an economy. In silicon valley and in Scotland, one of the attractions is that people can come to study and stay for life, because they really like the

place. Creating an attractive place to stay and increasing graduate retention is good. If people come and simply leave with your knowledge, that is a problem. If they come, bring their skills, are extremely good and choose to remain, that can be an extreme benefit.

The Convener: Would Geoffrey Boulton like to comment?

Professor Boulton: The point that I wanted to make has been covered.

The Convener: That is the kind of witness we like.

Phil Gallie: Richard Halkett's response was very good. I wonder whether anyone has measured our overall level of success in retaining graduates.

Richard Halkett: I am sure that such work has been done, although I am not sure whether it is internationally comparative. Normally it relates to issues that are quite difficult to quantify, such as the attraction of the Edinburgh festival compared with the San Francisco bay area. It is difficult to compare such things, but they are probably important. Often, graduates stay not just for a job but for a series of jobs. The depth of a labour market, as well as the immediate opportunities that are available, is important.

Phil Gallie: I have one more question, on a different topic. In its submission, Universities Scotland states:

"Scotland is leading the rest of Europe in creating and developing a credit and qualifications framework."

Can you tell us about the framework and how the fact that we have a lead in that area will benefit Scotland?

Professor Boulton: The witnesses from Universities Scotland are on the next panel.

Phil Gallie: I apologise for jumping the gun.

The Convener: I am sure that the members of this panel are very knowledgeable on the subject but do not want to steal Universities Scotland's thunder.

Mr Wallace: My question should also be directed at Universities Scotland but, given the distinguished panel that is before us, I will ask it anyway. The convener mentioned the business in the Parliament conference last week. Regarding the commercialisation of knowledge and ideas, she will recall that one of the keynote speakers in the plenary session and in the break-out session that we both attended made the bold statement that the universities hang on to their intellectual property for too long. Discuss.

The Convener: Discuss very quickly.

Professor Boulton: I will be politically incorrect and say that the statement is absolutely right—we do. The value to universities worldwide of their IP has been proven time and again to be very slight. From time to time there is a lightning strike, which is wonderful. We had one some years ago, and it produced a substantial income, but we cannot depend on or plan for such events.

Several years ago, the Scottish Higher Education Funding Council argued for a knowledge transfer grant. I chaired the committee that introduced it. The function of the grant was primarily to incentivise universities to be as effective as they could be at stimulating real commercial activity. They were paid for that.

It can be argued that if the universities had been really clever, they would have got their IP to flow out of the system as quickly as possible so that lots of bees from industry could come in and exploit it, because if they could find ways of relating that exploitation to the university's activity in a way that could be monitored, they could have claimed lots of money from the funding council.

Time and again, when you are in conversation with businesspeople who know the US, Europe and the UK, you hear a great sigh of misery whenever they realise that the IP that they want is in Britain or Europe. Many of them prefer to do things themselves and go round the IP or go to the US. In my view, we are much too restrictive about our IP. I suspect that Universities Scotland will have a rather different view.

Richard Halkett: The crucial thing for universities is to focus on what they are good at. Specifically, most universities should focus on licensing rather than spin-outs. It is probably better for universities to own the intellectual property and to allow it to be used by other people.

A study that was produced earlier this summer—I cannot remember the exact citation—carried an interesting headline suggesting that $1 invested in technology transfer led to $5 in output. The footnotes, which no one read, demonstrated that the entire data set was skewed by six American universities that had made an enormous amount of money. None of the other universities made any money at all and just about covered their costs with technology transfer.

That said, technology transfer is an extremely long-term proposition. Given that American universities have a 20-year head start on us, we should not just write off technology transfer.

Professor Boulton: May I respond briefly too?

The Convener: Very briefly.

Professor Boulton: I just want to say that the direct route that we think of between, for example, an invention in the universities and its exploitation

externally is probably the least important part of the interaction that takes place between the research base and business. We ought to look at patterns of business transformation to see how such transfers happen and how the knowledge base and research base of the universities can be involved in that. The issue is much broader.

The Convener: Given that Peter Grant is a head of school, does he want to comment on that?

Professor Grant: No, that is fine.

The Convener: I thank the panel very much for an interesting session. I thank people particularly for their honesty. Perhaps Jim Wallace can put his question to our next panel of witnesses. I will—I was about to say "abandon", but that is not the word—suspend the meeting for two minutes to allow the witness panels to swap over.

14:52

Meeting suspended.

14:55

On resuming—

The Convener: I welcome our second panel, who will give evidence for the education and skills section of our inquiry. Representing Universities Scotland are its director, David Caldwell, and Sir Muir Russell, who is principal of the University of Glasgow. Also on the panel are John Mulgrew, who is chair of Learning and Teaching Scotland, and Stuart Ritchie, who is its director of curriculum.

Jim Wallace will ask the first question, which was also the final question to the previous panel.

Mr Wallace: At the business in the Parliament conference, it was asserted that the universities hang on to their IP for too long. Do David Caldwell and Sir Muir Russell want to take the opportunity to reply to that?

Sir Muir Russell (Universities Scotland): I will have a go. It is a common criticism, but it is right. I arrived in the sector fairly recently and I think that people have sometimes been very optimistic about what they might get out of IP. Geoffrey Boulton said that that optimism is often disappointed, but one does not know what the disappointment will be until later on.

We in Glasgow—I guess that this is true of most universities in Scotland—are trying to make licensing a quick and easy route and to make the creation of spin-outs much more straightforward. It will never be automatic, but we can make it easier by creating a routine formula and allowing people to get on with it. In that way, we will not get in the way of people using and exploiting IP when opportunities pop up. We are conscious of the criticism—and the sometimes exaggerated expectations—and we are trying to do something about it.

I guess that David Caldwell will say that other universities are in roughly the same position.

David Caldwell (Universities Scotland): Yes—there is a general trend. We must remember the context. Historically, the two traditional missions of universities were, first, learning and teaching and, secondly, research. Commercialisation was not a part of the package, but it has become important as the commercial value of the knowledge that universities uncover has become steadily greater.

The difficulty is that the two main funding streams for universities continue to reflect the two original missions. There is a knowledge transfer funding stream, but it appeared on the scene only recently and, relative to the others, it is very small. The knowledge transfer stream that is provided by the funding council represents well under 1 per cent of the universities' income, so it is a small element. We need a step change in the funding of that aspect of universities' work, which is increasingly important.

We are talking about more than knowledge transfer. A term that I came across relatively recently and which effectively captures what needs to be done is "knowledge translation". If we simply hand somebody a lump of knowledge for commercialisation, that does not help—a translation process is also necessary. We need to ensure that our universities are properly resourced with a meaningful income stream to support the effort of knowledge translation. That would reinforce the existing trend of universities thinking more shrewdly about how they handle their intellectual property.

15:00

Mr Wallace: How does that tally with what Professor Boulton said about the ideas that have been discussed in the funding council's working group? What about the existing funding streams? We talked about a pipeline of support, in which projects are seen through from the lab to commercialisation, but increasingly it strikes me that it is not a linear pipeline. A different dynamic is required. The various forms of support—proof-of-concept funds, the small firms merit award for research and technology and so on—clearly have a purpose, but has the time come to reconsider them?

David Caldwell: We need to keep those forms of support under review. I would single out proof-of-concept funding as an outstanding success. A recent review confirmed that it has produced an extraordinarily good return, so it is one scheme

that we ought to retain for the foreseeable future. I should give Mr Wallace credit for the fact that although I referred to the knowledge transfer stream of funding as being relatively small, it grew significantly during the period in which he was the responsible minister. The problem is that it started from a very low base and therefore remains not a huge amount of money. It is the relationship between that and the other sources of university funding that is difficult.

To come to the other part of Mr Wallace's question, what I was saying about the step change in the funding of the income stream bears a close relation to discussions in the working groups under the auspices of the funding council, to which Professor Boulton referred earlier.

The Convener: How very Scottish it was to give credit with one hand then to quickly take some away with the other.

Phil Gallie: I shall repeat a question that I asked the previous panel. Will you say a little about the Scottish credit and qualifications framework and what benefits Scotland's lead could bring to Scotland under the Lisbon strategy objectives?

Sir Muir Russell: The SCQF is a scheme that Andrew Cubie was, I think, involved in steering, and which has attempted to assign values to different qualifications to make it possible to read across from one segment of educational experience to the next and to understand how people can articulate from further to higher education and so on. The great advantage in European terms is that it puts us on the right foot for dealing with the Bologna process, which is about how long it takes to get different qualifications in different countries: for example, how to measure how long it takes to get a master's in Germany compared with England or Scotland. The SCQF has put us fairly far ahead.

In the Universities Scotland paper, we were talking about how we should handle the various opportunities that people have for lifelong learning to develop their qualifications and to move from one sort of qualification to the next. If we understand the value of what they have achieved, it makes the process easier to handle. Therefore it is about facilitating and enabling, and ensuring that there are not silly artificial obstacles to what we want people to do.

Phil Gallie: Would that be an internal benefit to Scotland or does it have benefit that graduates and others could carry to the wider Europe?

Sir Muir Russell: If the Bologna process was carried out properly, it would work throughout Europe. As is so often the case, however, there is the "not invented here" syndrome that means that people try to create different models. We think that the Scottish model is a good one for a lot of the work that the Bologna process needs to do.

John Mulgrew (Learning and Teaching Scotland): The word "qualification" was used. Learning and Teaching Scotland's principal interest is in learning and teaching in the school setting from the early years onwards, but questions are being asked nationally about whether we offer the right qualifications in secondary schools. Standard grades were introduced in the early 1980s, so either we accept that people in the 1980s had 20:20 vision and ensured that the qualifications would be as relevant in 2006 as they were then, or we have to ask questions about that. Learning and Teaching Scotland considers it a priority for the minister to consider qualifications in secondary education—that dovetails neatly with the Scottish credit and qualifications framework.

David Caldwell: A great virtue of the SCQF is that it frees us from the tyranny of specific qualifications. The existence of a framework in which we can slot any qualification at an appropriate level and indicate the learning routes that are possible when that qualification has been achieved will probably make it easier to reform qualifications and introduce new ones. The approach is critical in the context of the Lisbon strategy, because it is about realising learners' maximum potential and enabling them to progress as far as they can, by making the routes through the learning process as transparent as possible.

The SCQF's significance extends outwith Scotland and beyond Europe. The people who did the detailed work on the framework have been invited to international conferences as far afield as New Zealand to talk about how they developed it. Scotland is leading the world in its development of a qualifications framework that covers everything from school qualifications to doctoral level qualifications in higher education. No other system is as comprehensive as that, as far as I am aware.

Scotland has an opportunity to play a leading role in the development of the European qualifications framework. If we were not in the lead, other people would be developing the European framework and—I will be candid—the result might be less suited to Scottish needs. However, because we are in the lead we are in a strong position to influence the way in which the European framework emerges.

The Convener: Does Stuart Ritchie agree that the SCQF is good? Is it being targeted effectively?

Stuart Ritchie (Learning and Teaching Scotland): Mr Gallie asked about the value of the SCQF in Scotland. The framework is helpful in the work that we are doing on the curriculum for excellence and the curriculum review. For example, SCQF level 4 is a useful marker as we consider expectations for achievement by about the end of secondary 3.

Irene Oldfather: It was interesting to hear about the SCQF, but are we doing enough in Scotland to ensure that our young people are employable in a bigger European and increasingly global marketplace? I read the comments in the witnesses' submissions about science, mathematics and technology. Mr Mulgrew probably knows that I am going to ask about language training, not just in universities and secondary schools but in primary schools.

Our European competitors in France, Germany and elsewhere are providing language training to young people in primary schools, not just for half an hour or an hour a week but through classes in English and other European languages. We are increasingly interested in markets in the far east, too. Language training is starting in the primary sector, but we might have to ask the university sector to help us to target the more difficult aspects of the market.

John Mulgrew: Exciting innovations are taking place in schools. The national strategy document for enterprise in education, "Determined to Succeed", emphasised the need for a more balanced curriculum for young people.

The debate about plumbers and universities is being taken on board significantly—but not exclusively—by the secondary sector. The message has got through that we could do much more to prepare young people for employment. Members will be as familiar as I am with a series of initiatives, such as the curriculum review, curriculum for excellence, determined to succeed and schools of ambition. We are endeavouring to develop what is delivered in schools, frequently and increasingly in partnership with further education. Until recently, I was a director of education in Ayrshire, where significant local demand for plumbers and joiners led me to establish partnerships between schools and further education in order to enable young people to develop the skills that were in demand.

I heard what the earlier witnesses said about entrepreneurial activity: members who have popped into their local schools will know that approaches to enterprise in education have developed significantly in recent years. Enterprise in education is important and there has been significant investment in the initiative. The focus is on making young people more confident, so that they can be better ambassadors for their communities.

Technology has a significant role in that context. I considered language education on behalf of the Parliament a few years ago and recommendations were made in 2000 or 2001. The impact of work that followed is being evaluated by Her Majesty's Inspectorate of Education. There is innovative use of technology in language teaching and we must invest more in technology for—but not exclusively for—language training.

The Convener: If no one wants to disagree with John Mulgrew, I will move on. I am aware that we do not have much time.

Bruce Crawford: You heard our first panel of witnesses discuss research and development. In its submission to the committee, Universities Scotland said:

"we must be serious about investing in research and development",

and that

"Scotland has historically had a low rate of business investment in research and development … It is crucial that we do more to turn around the historic low rate of investment".

Have we not been serious about investing in R and D? If not, how will we get serious in the interests of the Scottish economy? How important is the loss of headquarters in Scotland in that regard?

The convener will forgive me for going off at a tangent. Climate change might present an opportunity or a threat, but it must present a massive opportunity to engage in R and D. The universities were described earlier as working in silos. If that is how you work, can you break out of your silos and try to give Scotland an edge in R and D, to help emerging countries such as China and India—and perhaps African countries, further down the line—to deal with the technological challenges that they face?

15:15

Sir Muir Russell: Thanks for that. The numbers that were given were designed to bear out and support the argument that if we are going to see a substantial increase in the total share of gross domestic product that is going to research, there has to be a shift in the amount that industry is putting into it. We listened to the earlier discussion in which people asked how we calculate the appropriate marker depending on the structure of the economy—and the structure that we want it to have—and how we define research that is not being done in universities. There is a serious debate to be had about that.

Those who wrote the paper feel that 9 per cent looks kind of low, given the overall research aspiration of national Government policy that industry should begin to bear the weight as we progress through the 10-year strategy. How will we get there? There is a long discussion to be had about incentives to business and whether the ways research can be set against tax are sufficiently powerful. The committee might want to make some judgments about that.

I turn to the questions whether we are doing enough and whether we work in silos. One of the things that Universities Scotland will want to bring to everyone's attention is the extent to which research is a big business for universities in Scotland. Scotland has 9 per cent of the population, gets 12 per cent of the research council money and produces about 15 per cent of the outputs in terms of citations. We are doing well and obtaining good value for the money. The numbers demonstrate that we receive large amounts of money from research councils and charities, which is conducive to the proposition that we are good at it and do it well. Part of our central proposition is not that we are bad at something, but that we are good at something and want to be supported to do more of it. Research does not always have to be done in universities, but we think that they are good places for business to come. We hope that Government policy that encourages business to play its part will produce something that would maximise the results for the university sector in Scotland.

I do not know whether I am getting close to answering the question that you asked.

Bruce Crawford: Grants to industry or universities or tax breaks would help. Can you tell the committee about any other practical levers that would help?

Sir Muir Russell: You might have heard from colleagues in Scottish Enterprise about the Wyeth collaboration, whereby we have put together the resources of four universities' medical schools and bioscience research capacity to enable them to do translational work with the patient community. That is a different kind of critical mass from the one that we discussed earlier. The universities and the health service are putting together a critical mass of provision in order to attract people to work in Scotland. That is an example of where we can be imaginative and help build the international business that can bring to Scotland, if not headquarters, at least serious hubs of leading thinking and activity.

If there were more initiatives like Wyeth, more of the real, leading thinking would be done in Scotland, which is part of the answer to Charlie Gordon's question about where the big lumps of business are. We might be talking about that sort of thing, rather than widget making. We are trying to put together our research capacities in a range of areas—bioscience being the most obvious—to see whether we can do that kind of work. That is one thought about how we can attract business and build on it.

David Caldwell: I will echo—I hope accurately—what Professor Boulton said earlier: something needs to be done to stimulate the demand side and we need to encourage more investment in business R and D. I accept that that is not entirely straightforward and that we have difficulties defining what R and D means; I, for one, hope that I never have to become familiar with a Frascati manual.

There is reason to suppose that the real figure in Scotland is a little lower than is comfortable, so something needs to be done to stimulate it. One measure of that is the proportion of graduates in our workforce. In Scotland's case, the proportion runs at just over 20 per cent, which compares with a percentage in the higher 20s for the UK as a whole, and with generally higher figures for all the countries with the most successful knowledge-based economies. If we want a successful knowledge-based economy, we must have stronger research and development in the business sector and we must have a business sector that is capable of absorbing a higher proportion of graduates into its workforce. The success of the knowledge economy will depend on that.

John Mulgrew: We have a long way to go on the research base for local government. Local authorities are attempting to set up their own little research units, but we have to get better at forming partnerships with universities and business to create a more fundamental approach to what we are doing based on research. In the United States, there is quite a lot of research and the partnership between the education districts and the universities is strong.

Bruce Crawford: I have a specific question on climate change. What contribution, if any, were your organisations asked to make to the UK or Scottish Government's climate change strategies? The answer to that will be enlightening in respect of how serious we are getting on the issue.

Stuart Ritchie: I cannot identify any specific request that was made of Learning and Teaching Scotland. However, consideration of global issues such as climate change is encouraged almost as a specific element of science education within the main focus of our work on the curriculum for excellence and our commitment to developing elements of science and the understanding among pupils of science that is relevant to the world around them and their awareness of it. That is only one part but, to pick up on your interest, it is a good example of how we can ensure that the pupils who come through the curriculum and head for university are stimulated in areas that are relevant to them, and that they are able to pursue those areas.

David Caldwell: Like Stuart Ritchie, I am not aware of any specific requests that Universities Scotland has received. However, the universities have done an enormous amount of work on climate change that they are anxious should be

shared as widely as possible, especially research and development, and which includes basic scientific investigation into the issues and consideration of solutions. An enormous amount of work has been done on renewables within Scottish universities.

Sir Muir Russell: One of the pooling initiatives that was referred to earlier is the geological and earth sciences initiative, which will bring together some climate-relevant work. That is at least part of a resource that is being injected. A lot of money comes through the Natural Environment Research Council funding stream, to which we have access.

The University of Glasgow and the University of Edinburgh are part of the Universitas 21 collaboration. One of its research projects concerns water in the third world, which is a huge horseman-of-the-apocalypse issue. We are putting money into supporting some of our professors to contribute to that network.

Some things are happening with our money and funding council money that are conducive to tackling climate change, but there has been no great single call with anyone giving us a pot of money to use on environmental matters.

Mr Gordon: The Lisbon strategy talks about "Genuine access to lifelong learning". It strikes me that for some people who did not enjoy or do particularly well at school—my former teacher, Mr Mulgrew, should draw no negative inferences at this point—"access to lifelong learning" must sound like a threat.

Are we getting only to self-motivated, self-selecting people while allowing other people to fall through the cracks? Could we see more of the chronic problems and the other social implications that are associated with an underclass? Are we finding a way to draw on everyone's interests and potential talents, even those of people for whom school was not a happy experience?

The Convener: Who will answer that? Both John Mulgrew and Stuart Ritchie are nodding sagely.

John Mulgrew: Even with additional funding, it is difficult to get into some communities and to persuade people who have literacy problems to come forward. They do not want to admit that they have literacy problems and we do not want to embarrass them.

It would therefore be wrong to give the impression that all is well in lifelong learning. There are some major challenges, not least in deprived areas. I remember being in Drumchapel a number of years back and meeting some people who were finding their way back to developing their own education. It was a pretty painful experience because they were remembering their painful experiences in school. To be deadly realistic about it, we are moving forward, but we have a lot to do.

In the context of the Lisbon strategy, I will touch briefly on the work on which we are now embarking to deal with the group of people who are classified as not in education, employment or training. That work is a major challenge and the First Minister has made it absolutely clear that it is a priority. Although they are not exactly synonymous with the lowest performing 20 per cent, the overlap is fairly significant. We have identified a problem with meeting targets and inspiring young people about learning and lifelong learning—we are now setting about tackling it.

Young people should not get lost in the system. We have to intervene earlier, and we have to consider more imaginative ways of delivering education. We must not always assume that being within the four walls of a comprehensive school is going to suit everyone. Although they must be based in the school, we are now realising that it is necessary to take a more flexible approach to curriculum planning and delivery.

The Convener: As Stuart Ritchie is a director of curriculum, I am sure that he will want to add to that.

15:30

Stuart Ritchie: Absolutely. We are beginning to think about curriculum architecture—I use the word "architecture" rather than "design". In the past, we always talked about the design of the curriculum, which has been associated with a fairly rigid set of expectations, such as "Thou shalt spend so many hours on a specific subject across the curriculum."

We are now looking at a much more flexible structure within which there will, across authorities and within schools, be a wider range of options that address the needs of, for example, the groups of pupils to which John Mulgrew referred. We want particularly to make sure that the curriculum is tailored to their needs and expectations. That might mean a variety of experiences in and out of school.

Experiments—actually, they are more than experiments—are taking place in North Lanarkshire, for example, where there are very good partnerships between schools and colleges. Interestingly—and quite successfully—North Lanarkshire FE college lecturers are coming to the schools, while in other authorities, directors and head teachers seem to be saying that the group about which we are concerned is motivated by going out into the colleges. A lot of things are happening at the moment. We have to build a curriculum that will address the needs of the group

that we are talking about as well as those of the most able people in our country.

The Convener: Thank you. Do any of you want to say a final word?

Sir Muir Russell: I will pick up on Stuart Ritchie's final point from the university perspective. The most able people are fine, but the people we want to inspire to be ambitious to come to university are in the next slice, if you like. All the universities in Scotland, particularly those that are working together in Glasgow, are very much involved in that participation agenda. It involves the same kind of outreach as the programme in which we are involved, which is called GOALS—I can never remember what the acronym stands for. The programme, of which we are proud, is about going to schools, attracting people, getting them into the universities, showing them it can work, running summer schools and things like that. The retention rates for people who go through our summer school are better than those for people who do not, so even if they are slightly less promising when they start, something about taking an interest in and interacting with them really works rather well.

We need to be flexible throughout life. There is a paragraph in our paper about providing opportunities for people to do continuous professional development or to work part time, for example. Members might have noticed that Universities Scotland launched a report about the support that is available for part timers, which is a remarkably flexible way of people getting up the qualifications ladder. We are for that, and there is a range of things that need to be done so that we work that little bit better and are resourced that little bit better to achieve the objectives that we all want to achieve.

The Convener: Your evidence is much appreciated. Thank you for coming along. I suspend the meeting for two minutes.

15:32

Meeting suspended.

15:37

On resuming—

The Convener: The final panel of witnesses, who will give evidence on education and skills, are: Damien Yates, chief executive, and Dr David Hall, director of operations, from learndirect Scotland; and Christina Allon, director, and Gordon MacDougall, senior manager, from Careers Scotland, which is part of Scottish Enterprise. Welcome and thank you for coming.

Who has the first question?

Mr Wallace: I shall try to break the ice. The Lisbon agenda recognises the importance to the economy of maths, science, technology and engineering, and we are constantly hearing that there is a shortage of pupils who go on to study those subjects, although I think that Learning and Teaching Scotland indicated that some of the Scottish Qualifications Authority figures show that the number of pupils taking advanced highers in those subjects is increasing. Can any of the witnesses, particularly those from Careers Scotland, say whether those anecdotal reports are borne out? What are they doing to engage young people and to encourage them to see the merit and value in careers in maths, science, technology and engineering?

Christina Allon (Careers Scotland): As we speak, Careers Scotland is one of two finalists for the objective 3 European social fund awards, for its project on science, technology, engineering and maths. We recognise that those subjects are critical to Scotland's economy. We also recognise that, if people are to flow through into employment in those areas, we need to have the graduate supply line; if we are to have the graduate supply line, we need to have young people at school studying those subjects right the way through. We recognise that, if people study those subjects, they open up a huge range of career opportunities for themselves.

Working with the Scottish Science Advisory Committee, from which the committee took evidence earlier this afternoon, the Royal Society of Edinburgh, the university sector and key partners in industry—including the US National Aeronautics and Space Administration and the European Space Agency—we are taking active steps to put together a package of products and services that are designed to encourage and motivate young people to study those subjects. Those activities include not only teacher training but the production of materials that can be used in the teaching of science, technology, engineering and maths to make it alive, relevant and interesting for young people.

Our key products include the Careers Scotland space school. As members may have heard, the space school's link-up with NASA means that a group of NASA scientists, engineers, technologists and astronauts come over to Scotland every year to spend time visiting primary and secondary schools with a view to inspiring and motivating pupils. In addition, each year two groups of young people from all our schools go across to spend 10 days to work on projects with NASA. We also have a teacher development programme linked to the space school.

That is the glossy end of what we do, but underneath that we are involved in a host of

activities to make science and technology relevant in the classroom. If the committee is interested, I can provide sheaves of materials on that.

Mr Wallace: I think that we might be interested in that. Regarding the Scottish space school, I had the great privilege of meeting one of those groups when I went across to Houston.

Mr Gordon: Was that Houston, Renfrewshire?

Mr Wallace: No, it was Houston, Texas.

One could not have found finer young ambassadors for Scotland than those young people. However, when I got talking to them, I found that the number of them who were going on to university to study law or accountancy seemed disproportionately high. Quite honestly, one could not have had a better—literally hands-on—experience of science than they got. Is there a cultural problem? I hasten to add that there is nothing wrong with being a lawyer.

Christina Allon: That is an interesting question. The first stage is to get people interested, motivated and wanting to engage. The second is to expose them to learning experiences and contexts in which they can see real-life scientists, engineers and technologists practising and using their science. The third stage is to convert that into the choices on the part of the young people to follow that route.

We are starting to track those young people who participated in the first few space schools to see what happened to them. Evidence from colleagues in the university sector suggests that more and more young people who apply for science and technology degree courses at university are quoting that experience as part of what motivated them and saying that it influenced their choice.

At the space school dinner that we held earlier this year for recent graduates from each of the past five years, we heard from one young man who had visited Houston. He said that, prior to that visit, he had thought that he would study law but the experience in Houston had changed his mind. His notion had been that physicists and other scientists simply locked themselves into a room and had no human contact, but he discovered in Houston that they worked in project teams in which they created things with their science. Due to that social context and work context, he changed his mind and went on to study physics. We have won over one person.

Mr Wallace: That is the glossy end. What happens at the less glossy end?

Christina Allon: The less glossy end involves the production of materials that teachers can use in the classroom to inspire young people and capture their interest in the practical study of science.

The research to which I referred in my submission shows that, for young people at school, there is a positive link between having clear career goals and attainment. That applies across all socioeconomic groups and all levels of academic ability. When we dug underneath that, we found that a key element is that young people need something to strive for and that, alongside that, they need to see the relevance of what is taught to possible applications outside. We are using that technique in science, technology, engineering and maths by giving schools projects, challenges and resource materials that they can use that allow them to teach the subjects by putting them into a work-related context. If people see the relevance of what they are being taught, they are more likely to engage.

15:45

Mr Gordon: Work experience can have a similar effect. I am not clear about the formal links—if there are any—between Careers Scotland and work experience placements for schoolchildren. However, I have a cautionary tale to tell. A few weeks ago an MSP colleague told me that a young man had arrived in the Parliament for a week's work experience. Her first question to him was, "Did you ask for the placement?" He replied, "No." She asked, "Do you want to be here?" He said, "Not particularly." I have come across similar examples of square pegs being hammered into round holes so that the work-experience box could be ticked. However, we can potentially achieve a great deal by extracting a young person from the school environment and putting them into the world of work for a week. Do you have a view on that?

The Convener: Before Christina Allon responds, Irene Oldfather wants to make a related point.

Irene Oldfather: Like Jim Wallace, I applaud the NASA programme, in which a school in my area has participated. The programme makes science relevant and ties in with what Christina Allon said about how pupils who understand the relevance of a subject might be encouraged to follow a certain career path. Charlie Gordon asked about work placements and Christina Allon talked about science, mathematics, engineering and technology, which are specific fields. What about wider areas, such as language and other skills and the can-do approach that is described in the submission from Careers Scotland?

Christina Allon: Members have raised two issues about work experience. First, what is the purpose of a placement whereby, traditionally, a pupil spends a week in a workplace? Is it intended to give the pupil an understanding of working life and the discipline of being in a workplace? Is the

purpose to test out a career area? Is it to find out how a subject that the pupil is studying is applied? There seems to be a lack of clarity about the objectives of placements, and views vary among schools throughout the country.

My view is that the one-week placement is an outdated model. People like it because it is convenient to take a pupil out of school for a week, but I would much rather that there were more focus on giving young people experiences in the workplace that are linked to the subjects that they study, for the reasons that I set out. Experience of the world of work is crucial, but a single week that all pupils take at the same time is not the right approach. The model was designed 20 or 30 years ago and it is time to review and refresh it.

Some local authorities in Scotland contract with Careers Scotland to manage work experience placements for them; others do it themselves.

Damien Yates (learndirect Scotland): Charlie Gordon talked about the people who are left behind, who tend to be the people with whom learndirect Scotland becomes involved. We were set up in 1999 on the basis that current systems were not working, or were operating in a way that led to people being left behind.

We are involved in initiatives that try to pick up those people, whether they are still at school or outwith the school environment, and to connect them with meaningful opportunities to work or enter vocational training. More progressive local authorities are making the connection between vocational jobs and school-based learning and are starting to offer the first year of a modern apprenticeship to pupils in S4 or S5. That approach enables pupils to connect with work in a meaningful way, before they leave school, by studying industry-led material about the job that they will take up. Enterprises are increasingly connecting with schools by offering job placements in connection with apprenticeships—we need lots more of that.

The world of science and maths is remote for a lot of the people to whom we try to reach out. We should consider the connectivity between that and people's economic and social circumstances. If we aspire to engage many more people in science and maths we must acknowledge that there is a huge dislocation in that regard. In Scotland today, 800,000 people experience numeracy and literacy problems. We have a major agenda in addressing the basics. The question to which we always return is, "For what purpose?" People do not learn and progress by learning in isolation. Often they learn for a purpose, so we have to make learning opportunities relevant to their ambitions.

I urge the committee to consider the learning opportunities relative to people's ambitions, taking account of their social and economic circumstances. We must consider the people, the learning opportunities and the world of work and how we can accelerate progress and make things more meaningful. There are lots of ways of doing that. We are continually trying to look at the channels between the bricks. We support a national network of 500 branded, community-based learning centres, which, typically, are at the grass roots and deal with the very people whom we are talking about, who tend to get left behind. Those centres represent positive, non-threatening environments. People in the south-west of Glasgow will be familiar with the sort of initiatives that we are talking about. It is about building capacity in those organisations to fill the cracks between school, college and university so that there is a portfolio of opportunities, which means that no matter how somebody is dislocated, there is an easy step for them to take to connect back into the world of work and learning.

Bruce Crawford: One of the key principles of the Lisbon strategy was employment, but we are talking about those who are left behind. If what we heard about graduates becoming the plumbers and electricians of the future is true, I guess that there is an even greater threat for those who might be left behind, because those are the skill areas into which they might have seen their way in the past.

In the media, we hear cries from the construction industry and others that there are not enough skills in Scotland. When I go about my business in my constituency, I see young people who are talented and looking for opportunities but who cannot get on to the ladder. Are CITB-ConstructionSkills and organisations such as learndirect Scotland and Careers Scotland well enough focused and attuned to the situation? Do they understand the dynamics of the industry that they are trying to supply and can they get their tentacles into the part of the community in which they would be most effective? From what I have seen—I accept that this is anecdotal—the process is pretty dislocated and is not enabling folk who have been left behind, or the 16 to 19-year-olds who are reasonably well educated, to get that chance. I might be wrong, but the process seems cumbersome and slow.

Damien Yates: I think you are right to challenge the status quo. Lots of people will quote positive statistics about progression and support, but we have to do an awful lot more. We have broadly positive economic growth indicators, especially in metro regions such as Glasgow, and a once-in-a-lifetime opportunity to connect economic growth to the people whom you are talking about.

There is a hustle factor—it is about who cares most about accelerating the connection between

the people in need and the jobs that are out there. A lot of agencies are working at breakneck speed, but we need to challenge the status quo even more and ask ourselves what is our highest and best offer.

We need to foreshorten the skills cycle. We do not need three and four-year apprenticeship opportunities. We need to consider how to accelerate the way in which people can get into the workplace and continue learning thereafter.

In Glasgow, on the south bank of the Clyde, there is a potential £2 billion investment. How much of that investment will go into the back pocket of the people who live in the area? We have to challenge the agencies to do even better than they are doing now.

Bruce Crawford: I accept that everybody is working hard, but I think that there is a structural problem. I would like to hear what the other witnesses have to say about that.

The Convener: I will bring in Irene Oldfather to ask a supplementary question, so that all the points can be addressed.

Irene Oldfather: My question is on the barriers that young people face, particularly those in deprived areas, and the need that we might have in the future for electricians, plumbers and so on. It occurs to me that young people, particularly in deprived areas, could benefit from driving lessons in school. The cost of driving lessons is prohibitive. When I taught in the United States 25 years ago, a person could learn to drive in school and did not have to pay for private lessons. Is anyone considering such barriers? It is obvious that a driving licence is an advantage for an electrician or a plumber.

Damien Yates: I get the impression that many positive small projects are tackling some of the barriers that you mention. However, work is not happening on a large enough scale to make an impact. We need to scale up best practice.

Christina Allon: Members will be familiar with the recently published Executive document, "More Choices, More Chances: A Strategy to Reduce the Proportion of Young People not in Education, Employment or Training in Scotland"—the NEET strategy—which sets out ways of encouraging young people aged between 16 and 19 into work or learning that will improve their chances of sustaining work. Like Damien Yates, I think that we are presented with a good opportunity to do that, because employment is relatively high, there is the political will to tackle the issue and agencies across the board want to work together to make a difference to young people who have fallen through the net for some reason. Sector skills councils are in place and can consider the labour market and try to draw in more intelligence about the skills needs of different sectors—that important element was not previously in place.

Damien Yates talked about the need to respond flexibly. In Pollok, for example, an attempt has been made to get leverage out of planning applications, by requiring developers who want to build new retail outlets to employ local people. The approach was tied into skills development for local unemployed people, so that they could take up the new jobs. We need to pull together our knowledge of regeneration opportunities and the unemployed people in the area who might be suited to taking advantage of those opportunities. Then, we must provide skills development programmes that will enable people to acquire the required skills and we must use leverage in the planning process to impose conditions on developers.

Another, recent example relates to what Charlie Gordon said about older people who slip through the net. Employers in the Dumbarton area were saying that they could not recruit people into the catering industry, which is important for hospitality and tourism in that patch. People of various ages were interested in working in catering but had no skills or track record in the area, so the local enterprise company funded pre-apprenticeship training, through college, to provide people with the basic skills that would make them attractive to employers. People were then placed with employers, who subsequently used the modern apprenticeship system to get the employees fully skilled. Mechanisms are in place if we have the will to use them and if we can make connections across agencies between labour market opportunities and individuals who need jobs.

When we work with young people who are in the NEET group, we can use access to their parents to draw in older people who are not engaged in work and offer them more positive opportunities.

The Convener: I am the convener, so I will indulge myself by picking up on a couple of points before I bring in Phil Gallie.

If I remember rightly, planning gain has been used for employment purposes for many years. For example, when housing associations were building houses in Glasgow there were many innovative schemes that involved people.

I am concerned that we measure outputs rather than outcomes—Scottish Enterprise has been guilty of that in the past and I hope that you will say that you do things differently. We can say, "It's brilliant that all those people are employed", but two years down the line we might not know what has happened to them. Are they still gainfully employed and have they acquired skills, or do the statistics always refer to the same people?

The other matter that I would like you to address is Dennis Canavan's first question to our three

panels, which is relevant to plumbers. Is it the case, as was said on the radio this morning, that all youngsters are now encouraged to go to university where possible? Is that elitism created by some of our university people who suggest that everybody should be a graduate? Perhaps some people do not want to go to university, so we should not assume that they all do. Do we have concerns about how young people are being directed and does that marginalise those who do not aspire to university? I invite Gordon MacDougall to answer first because his hand shot up.

16:00

Gordon MacDougall (Careers Scotland): The two questions are linked. Our job is to be objective and to treat each person with whom we deal individually, whatever their age, their needs or what they want to do with their lives. Our advice to them is to push themselves, to be aspirational, to find out how far they can go and to ask what we, along with other agencies, can do to help. That is right and proper. A lot of heavy marketing is aimed at them as well, but a number of options are open to them and the individual has to consider their needs at that point.

The example of going into the construction industry is one that we could talk about forever. We have to look beyond our parents' aspirations. We often think, "Oh well, there's construction," without considering other options such as the creative industries and a host of other things that young people could do. Those young people might or might not be from deprived areas, but they are still thinking about industries in the same way as their parents did, which is wrong.

We talked about skill levels a minute ago. The skill levels of a modern-day plumber are quite phenomenal when you look at the systems that they have to use—their knowledge of electronics and so on. We would be fooling ourselves if we thought that we there was some quick fix whereby we could cure the skills shortage with poorly trained people. Developing those skills requires time on and off the job, and a lot of theoretical knowledge is needed to underpin the skills. It is true that construction offers a wealth of fantastic opportunities, but we have to lift the eyes of young people, their parents and their peers and let them realise what else is out there.

Dr David Hall (learndirect Scotland): In thinking about the way in which jobs and careers are presented, there has been historical cachet in pushing for higher education, which has meant that the traditional jobs, such as construction or plumbing, have been seen as fall-back options. We and partner agencies have been working closely with sector skills councils to recognise that courses in such industries are a preferred rather than a fall-back choice. The people with whom we work have a broad range of skills issues and most of them, as Damien Yates said, are based on an acute need to develop customer-facing, problem-solving and communication skills. We are working on specific categories with the sector skills councils to help people get into the health and beauty sector, for example, which is a big push at the moment.

As you would expect, people are interested in construction industry jobs. Plumbing is a massive interest. Most of the queries about such jobs come not just from people leaving school because they are disillusioned, disaffected or disappeared, but from people who are going through transition. We recognise changing demographics and the employability lifecycle. We hear from people who might be leaving school and looking for a job and from people who want to change jobs and look for a new career. Circumstances differ—we might hear from a woman who wants to return to work later in life and is looking for a new career.

We need to tap into those circumstances and provide relevant to-order advice and opportunities. Irene Oldfather spoke about driving lessons being provided in schools. People phone us up and say, "Actually, I can't drive just now so I need something relevant; I need local provision; I need child-care provision; I need funding support and this is where I want to go." They have a clearer idea of what they want than they did before. Although there is no magic-wand solution, we are working closely with partner agencies and making progress. It is an issue of scale that will take time to solve.

Christina Allon: On your question about outputs, our interest is in sustainability rather than immediate impact. We have been working on the tracking of individuals. We have done a good deal around building up the database of young people and following through what happens to them at the point of leaving school. We are working with the Executive in developing a database of 14 to 19-year-olds, which will give us all a much better handle on the different routes and pathways that people have taken, what kind of interventions have been most effective and how we can use them to reduce the number of those who drop out from work, learning and training. There is work that is focused on the results that we are achieving for individuals and how sustainable they are, which is important.

I reinforce the point that Gordon MacDougall made: we are very much about raising aspirations and broadening horizons. We spoke earlier about science, technology, engineering and maths. The message from us is that for everybody, no matter where they live and what kind of jobs they see in

their locality, there might be opportunities to move beyond that. Whether that stems from an interest in the music industry, which attracts a lot of people, or the creative arts, it is relevant to all young people, regardless of their background. It is important that we educate young people, parents and older people about the changing nature of the labour market in Scotland, so that they are not making decisions that are based on their understanding of what it was like 20 years ago.

The Convener: I will bring in Damien Yates. What about the young people who cannot even begin to have aspirations, because life has been kicking them since they were born? I am sure that we have all met, and I know that you chaps deal with, some of them.

Damien Yates: I heard it said recently that FE college and vocational education is where civil servants want other people's kids to go, but not their own. There is an element of that.

I do not sense that opportunities in plumbing or carpentry and so on are beyond the reach of the people you are talking about. There are big issues about teaching methods and the aspirations that we have for people. Where else at the ring of a bell do 300 people move and 10 stay still? It happens in education every day—teachers sit and 300 pupils move. That is standard in our current teaching methods. We still have pretty archaic approaches to delivering some of the required skills.

There are projects in the south-west of Glasgow, such as plumbing for the internet, which is about networking skills, that can deliver a curriculum that is industry certified within six months to people who have four to six years' unemployment, who then move into jobs earning £21,000, which is a starting point for technician opportunities. There are new methods of teaching, new types of curriculum and construction industry opportunities. It is about making them fit in a much more aggressive and pacey way.

You are right. We are still recycling people. I worked previously in economic development and I do not sense that the hustle factor is there in making the connection between people on the ground and the economic growth that we have. I do not sense that the continuity of opportunity is being managed.

In metro regions such as Glasgow, we have 10 years' worth of construction on our books. In the past, contractors would say, "The programme is two years long. We can't afford to sign people up for apprenticeships because there's no continuity." We now have that continuity, but we are still not seeing the stickiness of that economic growth connecting to the people we are talking about.

I turn to an issue that we have not touched on. Current Scottish Enterprise policy is leaving a gap. The first point is the stickiness of economic growth and the degree to which we are translating that into job gains for people on the street, especially the people who have been left behind.

We have 300,000 small to medium-sized businesses, of which 98 per cent employ 50 people or fewer and 93 per cent employ 10 people or fewer. Fewer than one in five small to medium-sized businesses invest in training or any type of workforce development. That is a major indictment of the economy, and yet it is a space that seems to be totally left behind because Scottish Enterprise's policy seems to be to go to the high end of the market, such as the high-growth companies and the six key industry sectors. That might be the right move in respect of allocating scarce resources, but if you are a low-skilled employee of one of those SMEs, what chance do you have of improving your skills and increasing your opportunities for adapting to the future knowledge economy in maths and science and everything else that we have talked about? In some respects, those chances seem to be so remote, but there is a total policy vacuum in that area.

The Convener: This debate could go on for a long time and I am aware that everyone is itching to speak, but we are running short of time. I will go back to Phil Gallie, although I do not mean that he has to cut himself short.

Phil Gallie: I would like to pick up on Damien Yates' arguments. Earlier, he referred to 800,000 people in Scotland being short on literacy and numeracy skills. That is almost 18 per cent of our population.

Damien Yates: One in five.

Phil Gallie: Those individuals have been in our education system for at least 11 years, being educated by every one of us round this table and all the other taxpayers, and yet the system has let them down. There is no way that those individuals can become plumbers, electricians or even dustmen these days with the health and safety regulations as they stand. They have to have that basic knowledge. Where are we falling down? How is the system falling down?

Damien Yates: The honest answer is that I do not know. We would probably find that a percentage of people are falling through at myriad different points of contact.

However, I do not have the desperate outlook that you might have about people's capabilities. If you look at—

Phil Gallie: It is a question of the law and the requirements that—

Damien Yates: I agree that if we accept the

status quo, the situation will always be like that. But when they have a purpose, people can pick up numeracy and literacy skills at a phenomenal pace. The issue is how we can turn on the light of purpose. Why would people want to address numeracy and literacy issues if they do not have a connectedness? That is the trick.

We talked earlier about people's implicit motivation. As much as we might want something, that will never be as powerful as someone having an implicit motivation of their own. What opportunities can we open up that will trigger the need to address numeracy and literacy and then accelerate progress?

Phil Gallie: I want to stick with that point because I recognise precisely what you are saying. I talked about individuals having 11 years of schooling, but some of them give up after eight or nine years and do not make any progress. Is that the time to try to make the link that you are talking about—to turn on the light—or do we force them to go on through the education system?

Damien Yates: It is a good question. There is a good example of partnership working between joint agencies. We have been working with Communities Scotland on the big plus campaign, the television adverts for which show that we are trying to identify different times in people's lives when numeracy and literacy issues arise. For example, a parent who is unable to help their kid to do maths homework is at a crucial point at which they might be motivated to get in there and do something. When someone has an opportunity for progression, for example from stacking shelves to a supervisory position that will mean them dealing with budgets, that might provide them with the motivation.

There is a point to looking at the critical times in people's lives when their implicit motivation might be triggered and then seeing how easy we can make it for them to reach out and get the support that they need to respond to that motivation.

Gordon MacDougall: I totally agree with that; it is about the spark. The phrase that is sometimes used is that everyone has a field of fascination, and it is about connecting to that spark. It is not easy; it is about interest, hope, time and partnership. We need to spend a lot of time with the people we are talking about, and we need to find ways of engaging them and sparking their interest.

For example, Careers Scotland does not just employ careers advisers, as some people think. We employ a range of enterprise in education advisers, employment advisers and key workers, who can intervene early and get involved with younger people, so that there is more time to work in partnership with a range of colleagues. As Christina Allon said, we must sustain involvement and remain close to the young people. We cannot expect the light bulb to come on and change everything tomorrow. There is hope and the light will come on eventually, but we must find that spark. All our organisations have tools and techniques for doing that.

16:15

The Convener: Do Christina Allon or David Hall have a quick comment before we conclude the evidence session?

Christina Allon: I want to make a brief comment. It is important that we do two things. First, we must intervene while young people are still at the early stages of primary school, to motivate and engage them, so that we can build on that motivation. That is our investment in the future. At the same time, we must acknowledge that some people have fallen through the net or are not realising their potential, perhaps as a result of their personal circumstances, and we need to engage with them.

Such engagement is particularly necessary in light of the aging workforce. The proportion of people of working age who are more than 45 is increasing in Scotland and—at least in the short term—our companies will need to look to that age group for the skills that they need if they are to diversify, to compete globally and to introduce new technologies, products and services. We need both approaches: there must be long-term investment at an early stage; and we must deal with people who are ready to engage with us.

The Convener: The people on either side of David Hall do not seem to know the meaning of "quick comment", but I invite David to make one.

Dr Hall: I reiterate that everyone has potential and a role. We have a collective responsibility to help people to realise their potential. We often meet retired people who say things like, "I would have dearly loved to have been an engineer, but I was told at school that I was no good at maths." That is sad. We must give people opportunities and the faith and confidence in themselves to enable them to realise their potential.

The Convener: That was a great final comment. I thank all the panel members for their input, which is much appreciated. We will continue our inquiry at our next meeting, when we will take evidence from organisations on employment and the labour market and on targets. That follows on logically from today's discussions.

European Commission Work Programme 2007

16:17

The Convener: Can you believe that it is after 4.15 pm and we are only on item 2? This item should not take long, because the clerks have done a good job—[*Interruption.*] Charlie and Bruce, could you please be quiet?

Mr Gordon: I thought that you had suspended the meeting again.

The Convener: No, I did not.

Before I was so rudely interrupted, I was about to say that the European and External Relations Committee considers and agrees its work programme every year after the publication of the European Commission's legislative and work programme. The programme for 2007 was published nearly two weeks ago—members have a copy of it at annex A of the paper from the clerks. The paper represents the first stage in our deliberations and recommends that we agree to consult on the proposals in the programme, to inform further discussions after Christmas.

Phil Gallie: Agreed. Let us move on to item 3.

The Convener: Do members want to comment on the paper, or shall we agree to proceed as recommended?

Irene Oldfather: I will not comment if Mr Gallie does not.

Phil Gallie: I have already said that I agree with the recommendation and that we should move on to item 3.

Irene Oldfather: I had a few things to say, but as Phil Gallie wants to move on I will keep them for another time.

The Convener: It is good to see such co-operation between committee members.

European Commission Work Programme 2006

16:19

The Convener: Item 3 is consideration of the paper in which we track items in the European Commission's current legislative and work programme that the committee has identified as being potentially important to Scotland. I am sure that members want to comment on the paper.

Bruce Crawford: In the chamber last week, we debated European structural funds. One fund that we signalled as being potentially important for Scotland was the European globalisation adjustment fund. It would be useful to hear what the Executive's take on that is—unless you are about to tell me something, convener.

The Convener: I am about to tell you something. Could you tell by my face?

Bruce Crawford: Never.

The Convener: Irene Oldfather will make a short presentation to us on the globalisation adjustment fund, as was agreed at a previous meeting.

Bruce Crawford: I was not at that meeting.

The Convener: Perhaps any discussion on the fund can take place after she has given her presentation.

Bruce Crawford: Okay. I will put myself back in my box.

The Convener: Does anybody want to mention anything else?

Bruce Crawford: On the internal market for postal services, we have had full competition in postal services since the beginning of the year. There has obviously been a fair old reaction to the European Commission's liberalisation proposals. I would like to know a bit more about how the Spanish, Belgians, Greeks and Poles managed to oppose liberalisation in the way that they have done. I would find that useful, but perhaps I should do it individually.

The Convener: No, I think that Iain McIver will be more than happy to do some digging around on that, if that is acceptable to the clerk.

Is there anything else before we move on to Irene Oldfather's contribution?

Bruce Crawford: Is that the presentation that you mentioned?

The Convener: It is. At our meeting on 12 September, Irene promised to update us on the globalisation adjustment fund.

Irene Oldfather: To call it a presentation might be slightly misleading. It is not up to me to pick up Bruce Crawford's point on the Executive's position, but I will give the committee a general update on European regions' access to the globalisation adjustment fund.

The fund was originally set up to assist redundant workers back into employment and thereby assist in dealing with asymmetric shocks to regional economies. For years, there was talk of making such a fund available, but nothing was done about it. However, the European Commission has now made a proposal. All member states are eligible for the fund and its proposed budget is €500 million. The Commission suggested that the fund would not apply where structural funds are in place.

It was also suggested that the threshold would be 1,000 redundant workers and that normal European Union budgeting procedures would apply, which means that the European Parliament is the budgetary authority and that it, in partnership with the European Council, would be responsible for signing off any applications to the fund. If members know anything about Europe, they will know that that is a cumbersome procedure. I made a report on that and, working with colleagues in Europe, tabled a number of amendments that have now been agreed. I will circulate the revised report to committee members when it is available.

We proposed that the moneys would be fast tracked. The idea of the fund was that people would not have to wait for months for agreement between the European Parliament and the European Council while matters went back and forth between bodies. We proposed that applications would be made to the European Commission so that people would not have to go through the normal budgetary process. That is a little bit contentious, but there is a precedent for it in the European solidarity fund, which operates in that manner for the same reason—that it is important to fast track procedures in the applicable circumstances.

That is the proposal, but we do not yet know how the member states or the Commission will respond to it. We also suggested a doubling of the funds from €500 million to €1 billion on the basis of research on past redundancies that has been done within the Committee of the Regions, which reflects the fact that €500 million is not really enough. The good side of that is that the fund is to be funded from underspend in European budgets. It is not coming out of some other budget but is a useful way of using up underspends quickly. That is one other reason why we felt that we could double the fund. We managed to get the Germans to agree to that.

We believe strongly that the fund should be complementary to structural funds, which is what the committee said in its report on structural funds. The globalisation adjustment fund should work in partnership with other funds in regions that are affected by large-scale redundancy. We also believe that the threshold of redundant workers should be lowered so that funding is triggered when there are 500 redundancies.

We should increase local and regional authorities' involvement in triggering funding because those tiers of government are closest to the people. Local or regional authorities usually have some responsibility for taking action when there are major redundancies. There should be a mechanism in member states to trigger funding quickly, and local and regional authorities should have a role to play in the process. The Committee of the Regions almost unanimously agreed to that position and so will adopt it, and I think that that will be reflected across the political parties in the European Parliament. We still have to find out the Commission's response to the proposal and member states' views on it, but I know that the European Parliament is incredibly sympathetic to many such initiatives and will probably replicate some of them in its report, which has not yet been produced—our report is the first out. I think that the European Parliament will support a considerable number of the recommendations that have been made, particularly in relation to the threshold, and that it will possibly support doubling the budget, but we can report back on that in January.

The Convener: Thank you, Irene. I ask Bruce Crawford what he wants the committee to ask the Executive.

Bruce Crawford: Irene Oldfather's remarks are useful, and she picked up on the final paragraph on the fund in the tracking paper, which deals with the "single unemployment event" threshold, which I was concerned about. We now know that the suggested redundancy threshold is 1,000, but that seems to suit the eastern European economy much better than the Scottish economy, given that redundancies tend to be on a smaller scale here. It would be useful to find out what the Scottish Executive is doing to influence matters in that respect and what it has to say about the broader issues that Irene Oldfather mentioned.

The recent redundancies in Fife, which is part of my constituency, have mostly been in the electronics industry and in lower-key jobs. Some 500 or 600 people at a time have been made redundant, so the 1,000 threshold has not been reached, but those people need to be reskilled in order to face up to future challenges. I would like to know what the Executive is doing about that.

Gordon Jackson (Glasgow Govan) (Lab): If there are redundancies and an application is submitted for funds, to whom will the money go? How will it go there? What will it be for? Perhaps I am showing my total ignorance.

Irene Oldfather: An application must be submitted by a member state, but the money will go to individual workers.

Gordon Jackson: So it will go to the people who have been made redundant.

Irene Oldfather: Yes. It is meant to help them to upskill and retrain.

Gordon Jackson: So the money will go through the state right to the—

Irene Oldfather: The funds are meant to provide training packages for people; I do not think that people will receive the euros in their hands. We have asked for years for such money to be made available, so the proposals are a huge step forward.

Bruce Crawford was right. We were supported by member states such as Ireland simply because people recognised that much of the money could go east. It is important that the money goes to where the redundancies are, but we should remember that existing member states have been hugely affected by the globalisation process. We have lost funding as a result of the enlargement process, but there is now an opportunity for us to benefit from funds.

The Convener: Irene Oldfather is an expert on the matter. Her photograph has appeared in a magazine that has reported her making the points that she has just made to the committee, and she is not blowing her own trumpet hard enough. Obviously, she is central to the debate.

The Parliament's European officer, Ian Duncan, will track the issue for us. He will also track the postal services directive, which I should have mentioned.

In the recent parliamentary debate on European funding, the minister said that he would respond to all the points that members raised. Rather than the committee sending him a formal letter, perhaps we could ensure that the issue is responded to as part of the response to that debate.

Bruce Crawford: We touched on the globalisation adjustment fund in that debate, but the threshold of workers was not a live issue in it.

Irene Oldfather: The intelligence is that the UK may be looking at a threshold of 2,000 redundancies.

Bruce Crawford: We should get into the debate now and try to influence it.

The Convener: Shall we write to ministers to ask what input the Executive is making to the UK position? Does that seem fair to members?

Bruce Crawford: We should also ask whether the Executive is arguing for a lower threshold and what it is doing to affect the debate.

The Convener: We will write to the Executive.

I thank Irene Oldfather for her input, which was enlightening.

Pre and Post-council Scrutiny

16:30

The Convener: Agenda item 4 is our regular scrutiny of agendas and reports of meetings of the Council of the European Union. Do members have any comments? My only comment is that we seem to be back to the late papers scenario. As members will recall, we wrote to ministers some months ago to ask that good reason be given for papers being late. I suggest that we drop them a line to ask what happened this time.

Bruce Crawford: I do not want to turn into Phil Gallie—sorry, Phil—but I have a couple of comments to make.

The Convener: To which page do they relate?

Bruce Crawford: I refer to page 5, which gives the pre-council agenda for the transport, telecommunications and energy council. Am I right in assuming that the comments in italics are from the Executive?

The Convener: They are the Executive's view.

Bruce Crawford: On sustainability of energy production, the Executive states:

"Issue is reserved … No significant Scottish issues as there is no separate Scottish Market for office equipment."

Instead, the Executive should have addressed the level of manufacturing activity of office equipment in Scotland and how that might be affected by the new regulations.

On the promotion of renewable energy, the Executive states that it

"undertook to write a short brief on policy priorities and an annex of current activities".

It might be useful for the committee to be given that paper, which we could then pass on to the appropriate committee. As far I am aware, we have never seen the Executive's policy priorities for renewable energy. From that perspective, I think that we need to raise the issue.

The Convener: The clerks will follow up those points. Do members have any other comments?

Irene Oldfather: On page 7, the post-council agenda for the economic and financial affairs council includes a section on reducing the administrative burden on businesses. It states:

"The Commission intends to report on progress in November and in the Annual Progress Report (on the Lisbon strategy) in December."

Both those reports will be significant for the committee both for Jim Wallace's inquiry and for our inquiry on the Lisbon strategy. It is important that we be given sight of those reports.

The Convener: We will ensure that we get them.

Mr Wallace: When I and the clerk visited Brussels a fortnight ago, we met someone in the relevant directorate-general who I think said that the report is due on 14 November. From the trailers that we were given, the report could be quite interesting.

The Convener: Good.

Sift

16:33

The Convener: Agenda item 5 is the sift of EC/EU documents and draft legislation. Do members have any comments?

Are members happy to refer the papers to the committees indicated?

Members *indicated agreement*.

The Convener: As that was the last item on the agenda, I thank members for attending. Our next meeting is in committee room 1 at 2 o'clock on Tuesday 21 November, which is the same day—I have lost the paper on which I wrote this down—on which we will receive a presentation from the Executive on its international image.

I can see the enthusiasm for that shining through members' faces.

Mr Wallace: Will the presentation be on Scotland's international image or the Executive's international image?

The Convener: The presentation will be on Scotland's international image and it will take place at—I look to Emma Berry to remind me if I am wrong—half past 12, prior to our meeting. I believe that we will be fed and watered during the presentation.

Bruce Crawford: Will we receive an e-mail to remind us of those details?

The Convener: Yes. Instructions will be sent. I thank everyone very much.

Meeting closed at 16:34.

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