



**Cynulliad Cenedlaethol Cymru
The National Assembly for Wales**

**Y Pwyllgor Menter a Dysgu
The Enterprise and Learning Committee**

**Dydd Mercher, 6 Chwefror 2008
Wednesday, 6 February 2008**

Cynnwys
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Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynddi yn y pwyllgor. Yn ogystal,
cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee.
In addition, an English translation of Welsh speeches is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Lorraine Barrett	Llafur (yn dirprwyo ar ran Huw Lewis) Labour (substitute for Huw Lewis)
Alun Cairns	Ceidwadwyr Cymreig Welsh Conservatives
Christine Chapman	Llafur Labour
Jeff Cuthbert	Llafur Labour
Gareth Jones	Plaid Cymru (Cadeirydd y Pwyllgor) The Party of Wales (Committee Chair)
David Melding	Ceidwadwyr Cymreig Welsh Conservatives
Sandy Mewies	Llafur Labour
Janet Ryder	Plaid Cymru The Party of Wales
Kirsty Williams	Democratiaid Rhyddfrydol Cymru Welsh Liberal Democrats

Eraill yn bresennol
Others in attendance

David Craddock	Cyfarwyddwr Gwasanaethau Masnacheiddio ac Ymgynghori Director of Commercialisation and Consultancy Services
Yr Athro/Professor Noel G. Lloyd	Is-ganghellor, Prifysgol Aberystwyth Vice-chancellor, Aberystwyth University
Yr Athro/Professor Lyn Pykett	Dirprwy Is-ganghellor, Prifysgol Aberystwyth Deputy Vice-chancellor, Aberystwyth University
Gary Reed	Rheolwr Datblygu Busnes, Partneriaeth Ymchwil a Menter, Prifysgol Aberystwyth a Phrifysgol Bangor Business Development Manager, Research and Enterprise Partnership, Aberystwyth University and Bangor University

Swyddogion Gwasanaeth Seneddol y Cynulliad yn bresennol
Assembly Parliamentary Service officials in attendance

Dan Collier	Dirprwy Glerc Deputy Clerk
Dr Kathryn Jenkins	Clerc Clerk
Alys Thomas	Gwasanaeth Ymchwil yr Aelodau Members' Research Service

Dechreuodd y cyfarfod am 9.00 a.m.
The meeting began at 9.00 a.m.

Cyflwyniad, Ymddiheuriadau, Dirprwyon a Datgan Buddiannau **Introduction, Apologies, Substitutions and Declarations of Interest**

[1] **Gareth Jones:** Bore da, bawb. Estynnaf groeso cynnes i bawb ohonoch i'r cyfarfod hwn o'r Pwyllgor Menter a Dysgu. Mae un neu ddau o gyhoeddiadau i'w gwneud ar y cychwyn. Atgoffaf bawb i ddiffodd unrhyw ffôn symudol neu ddyfais electronig arall. Nid oes angen i chi gyffwrdd â'r meicroffonau o gwbl. Nid ydym yn disgwyl ymarfer tân felly os bydd rhyw fath o larwm yn seinio, rhaid i ni symud o'r adeilad o dan gyfarwyddiadau'r tywysyddion, a hynny yn ddiymdroi. Mae'r cyfarfod yn ddwyieithog, felly mae rhyddid i chi siarad yn y Gymraeg neu'r Saesneg. Mae clustffonau ar gael i glywed y gwasanaeth cyfieithu ar y pryd. Maent hefyd yn ddefnyddiol o bryd i'w gilydd i chwyddleisio'r sain. Bydd Cofnod ar gael o'r cyfan a ddywedir yn gyhoeddus.

[2] Daeth un ymddiheuriad i law. Yr ydym bellach ar ddeall fod Huw Lewis wedi colli ei dad. Yr ydym yn cydymdeimlo'n ddwys â Huw a'i deulu yn y brofedigaeth lem hon sydd wedi dod i'w rhan. Digwyddodd hynny ryw ychydig ddyddiau yn ôl. Yr wyf yn gwybod eich bod chi wedi cysylltu yn unigol â Huw a'r teulu, ond a ydych yn dymuno i mi ysgrifennu ar ran y pwyllgor i ddatgan ein cydymdeimlad? Yr wyf yn siŵr y caniatewch i mi wneud hynny. Felly, er yr amgylchiadau trist, mae un dirprwy gennym heddiw ac yr wyf yn falch o groesawu Lorraine Barrett i'n plith. Cofiaf adegau yn y Cynulliad cyntaf pan oeddem o amgylch yr un bwrdd pwyllgor, Lorraine. Yr wyf yn falch o'ch croesawu ac edrychaf ymlaen at eich cyfraniad.

[3] Yn ei habsenoldeb, er y bydd hi yma yn hwyrach, diolchaf i Janet Ryder am gadeirio yn fy absenoldeb wythnos diwethaf. Deallaf fod sesiwn effeithiol iawn wedi ei chynnal o dan ei chadeiryddiaeth. Diolch i Janet am hynny. Nid oes ymddiheuriad arall hyd yma.

Gareth Jones: Good morning, everyone. I extend a warm welcome to you all to this meeting of the Enterprise and Learning Committee. There are one or two announcements to be made. I remind you all to switch off any mobile phones or other electronic gadget you may have. There is no need to touch the microphones at all. We are not expecting a fire drill and so, if an alarm should sound, we must leave the building under the instructions of the ushers, and do so without delay. The meeting is bilingual, so you are free to speak in either English or Welsh. Headphones are available to hear the simultaneous translation service. They are also useful from time to time to amplify the sound. A Record will be available of all that is said in public.

We have received one apology. We are now given to understand that Huw Lewis's father has passed away. We sympathise greatly with Huw and his family for the terrible loss that they have suffered. This happened a few days ago. I know that you have contacted Huw and the family individually, but do you want me to write on behalf of the committee to express our condolences? I am sure that you will permit me to do that. Therefore, we have one substitute today and, despite the sad circumstances, I am pleased to welcome Lorraine Barrett to our midst. I remember occasions in the first Assembly when we sat around the same committee table, Lorraine. I am pleased to welcome you, and I look forward to your contribution.

In her absence, although she will arrive later, I thank Janet Ryder for taking the Chair in my absence last week. I understand that a very effective session was conducted under her chairing. I thank Janet for that. There are no further apologies so far.

9.02 a.m.

Tystiolaeth i Ymchwiliad y Pwyllgor i Gyfraniad Economaidd Addysg Uwch
Evidence to the Committee Inquiry into the Economic Contribution of Higher Education

[4] **Gareth Jones:** Symudwn ymlaen yn awr at y brif eitem, sef y sesiwn graffu, i gael tystiolaeth am gyfraniad economaidd addysg uwch. Cyfeillion o Brifysgol Aberystwyth yr ydym yn eu croesawu y bore yma, sydd eisoes wedi paratoi papur ar ein cyfer, ac yr ydym, yn Aelodau, wedi paratoi ar gyfer y cyfarfod drwy ddarllen cynnwys y papur hwnnw yn ofalus. Estynnaf groeso i'r cynrychiolwyr sydd yma o Brifysgol Aberystwyth, sef yr Athro Noel G. Lloyd, yr is-ganghellor, yr Athro Lyn Pykett, dirprwy is-ganghellor ymchwil a menter y brifysgol, David Craddock, cyfarwyddwr gwasanaethau masnacheiddio ac ymgynghori, a hefyd Gary Reed, rheolwr datblygu busnes y bartneriaeth ymchwil a menter. Croeso cynnes i chi i gyd. Yr ydym yn falch iawn eich bod yma gyda ni ac edrychwn ymlaen at y drafodaeth.

Gareth Jones: We will now move on to the main item, namely the scrutiny session, to hear evidence on the economic contribution of higher education. We welcome friends from Aberystwyth University this morning, who have already prepared a paper for us, and, as Members, we have prepared for the meeting by carefully reading the contents of that paper. I extend a warm welcome to the representatives who are here from Aberystwyth University, namely Professor Noel G. Lloyd, the vice-chancellor, Professor Lyn Pykett, pro vice-chancellor of research and enterprise, David Craddock, the director of commercialisation and consultancy services, and Gary Reed, business development manager of the research and enterprise partnership. I extend a warm welcome to you all. We are glad that you are here with us, and we look forward to the discussion.

[5] Yn unol â'r drefn, a fyddai rhywun—ac yr wyf yn edrych arnoch chi, yr Athro Noel Lloyd—yn fodlon cyflwyno'r hyn sydd gennych i'w ddweud, am ryw bum i 10 munud os oes modd, a'n hatgoffa o'r prif bwyntiau yr ydych yn dymuno i ni wybod amdanynt, a sicrhau y gallwn drin a thrafod y materion hynny gyda chi? Wedyn, bydd gan yr Aelodau gwestiynau i'w gofyn, ac edrychaf ymlaen at hynny. Gobeithiaf y cawn drafodaeth a fydd yn symud pethau ymlaen, fel y cawn adroddiad llwyddiannus ac effeithiol ar ddiwedd y daith am y mater hollbwysig hwn.

Following our usual procedure, would someone—and I am looking at you, Professor Noel Lloyd—be willing to present what you have to say, for about five to 10 minutes, if possible, and remind us of the salient points that you would like us to be aware of, to ensure that we can discuss those matters with you? Then, Members will have some questions to ask you, and I am looking forward to that. I hope that we can have a discussion that will move things along so that, at the end of the day, we will have a successful and effective report on this all-important matter.

[6] Nid oes gwasanaeth cyfieithu yn oriel y cyhoedd ar hyn o bryd, felly mae cais i chi siarad yn Saesneg.

The translation service is currently not working in the public gallery, so there is a request for you to speak in English.

[7] **Yr Athro Lloyd:** Yn gyntaf, diolch yn fawr am y gwahoddiad i roi tystiolaeth. Yr ydym yn edrych ymlaen at y drafodaeth.

Professor Lloyd: Thank you for the invitation to give evidence, first of all. We are looking forward to the discussion.

[8] My introductory remarks will be made under the three headings in the paper: the impact of higher education in general—and Aberystwyth University in our case—as an employer, training and education, and direct knowledge transfer and involvement with

business and enterprise. Those are not independent of each other, but it is convenient to delineate the impact of any institution of our kind in that way.

[9] Universities operate on several platforms: local, regional, national and international. It is the interplay of those four strands that make life interesting in universities, and that is characteristic of the contribution that we can make to the economy of Wales and more locally. We are very much aware of our role in the local economy. Taking mid Wales or Ceredigion as an example, we are one of the largest, if not the largest, employer in that area. We have some 1,600 employees, and a turnover of about £90 million. Our impact on the local economy is estimated to be getting on for £200 million, and so we make up a large proportion of the local economy. That places a great responsibility on us, as well as presenting an opportunity. We are very conscious of that responsibility. I am pleased to say that we have a good relationship with the local community; that is characteristic of Aberystwyth.

[10] In economic terms alone, we have a significant impact on inward investment, which is valuable in itself. Higher education generally is a major export earner; its contribution to the national gross domestic product is significant, and we play our part in that. As I said, the impact that we have locally brings responsibilities, and we take pride in responding to those responsibilities. We draw considerable income into Wales through research work and contracts, student expenditure and a range of other income streams.

[11] The second heading was training and education, and perhaps the most important thing that all universities do is produce people who have the right skills, the flexible skills needed for employment, and awareness of the need to embrace change and the importance of team working. We try to create a culture in which these are paramount characteristics. Aberystwyth University has an excellent record on student satisfaction in the UK dimension. Students are well integrated into the local community, and the skills that we try to help our students to acquire are what are required. You have probably seen these surveys of student satisfaction, in which we have done extremely well—we are always near or at the top of the various league tables. I note those in some of the evidence. That says something for the university itself and for the area. We have also pioneered the annual skills competition, which we have noted in our evidence.

[12] It is important to attract students from a wide range of backgrounds. We aim to draw students from Wales and elsewhere, and we are delighted that the number of students coming to us from Wales is increasing. We have initiatives, such as the summer university and Expanding Horizons, to widen participation. Such initiatives are very important to our identity. Professor Pykett may say more about that later, as she had a great deal to do with that at an earlier stage.

9.10 a.m.

[13] We find that our students appreciate being in the town, and they do not want to leave if they can help it. It is a matter for us to try to prepare economic opportunities for them. Collectively, if universities and Government can prepare opportunities for people to stay, research shows that students will want to stay in the region of their university education. It is a challenge to harness that enthusiasm as an avenue for their development and for the development of the neighbourhood and the region. I want to note the commitment of alumni to Aberystwyth University, which is a notable feature—and I am looking at Kathryn, the clerk. We have a very committed alumni base, and their contribution, through continuing involvement with the university on governance, advice and other aspects of our work, is valuable to us.

[14] The third heading was on knowledge transfer and direct involvement with the economic, cultural and social life of the region. All universities have a significant impact in

this way and are drivers of intellectual and economic change. We have done pretty well in the creation of spin-out companies, for example, and David Craddock will say more about that later. The spin-out companies that we have formed from the university have a remarkably high level of survival. In other areas, I would point out our social and the cultural contribution through the Aberystwyth Arts Centre, which is part of the university and a major arts centre in Wales. We have a range of initiatives for engagement with small and medium-sized enterprises, and also with large companies, and, given the nature of the economy in Wales, the impact and the efforts that we make to engage with SMEs is important. Over the past five years or so, I have seen a significant cultural change in the university, and maybe that reflects what is happening in universities generally, around involvement with business and a more entrepreneurial approach to life. I am pleased to report a significant change, for the better, I think, within higher education generally, which is evidenced in Aberystwyth University.

[15] I want to illustrate those three areas and our contribution to them with two particular examples of major initiatives at Aberystwyth University. As I said earlier, we play on a national scale, and it is important for us to be internationally competitive. That is the way for us to be able to contribute to Wales as well. It is important for us to be internationally known so that we can play a more formative role in Wales.

[16] The first of the two examples is our research and enterprise partnership with Bangor University. That was established because we need to be bigger, and one way to become larger is through joint ventures of this kind. I am delighted to report that the research and enterprise partnership is progressing well, and perhaps Gary will provide us with some information on that later. The motivation was to develop what I call an 'effective mass' of competitiveness, not so much with regard to size but to the range of expertise. The major changes and initiatives are taking place in interdisciplinary areas, and, for that to be effective, one has to have a range of expertise to call on. Modern research is very much problem driven, and many of the targets that were to be met for 2011 are very much under way. One target in particular, on research income, is already three quarters of the way to being met, and it is pleasing to report that. We are working closely with Bangor University on a range of areas, and doubtless the committee will wish to discuss that later. I would also say that this is research and enterprise, and the presence of the word 'enterprise' is significant in that context. It is there deliberately, because it is very much a part of what we are trying to do.

[17] The second example is the proposed merger of the Institute of Grassland and Environmental Research into the university. It is a huge opportunity to establish in Wales a unit of international class and dimension, in terms of size and expertise. There are new developments within the university, and, if all goes well and IGER comes into the university, it will form one large department with our current Institute for Biological, Environmental and Rural Sciences. Again, the work will be problem driven, for example, in relation to climate change, sustainable land use, food security and a range of other very important issues. So, it gives Wales an opportunity to have the range of expertise to address really significant, current problems.

[18] I hope that we can take advantage of this unique opportunity. It is a large-scale investment by the research councils that has to be matched by investment from Wales. The university is committed to a significant investment, and we are in discussion with the Welsh Assembly Government about investments that it can make. It is a major commitment and change and it is very exciting for the university. I hope that it will be successful. We are in the closing stages of the negotiations. A successful outcome will deliver in a major way on the three areas that I have discussed. We are a larger employer and, together, we will be an even larger force in the mid Wales economy. The £200 million input that I mentioned earlier becomes nearer £300 million. It provides a huge opportunity in terms of training and engagement with the skills requirements of our students and direct knowledge transfer.

[19] Throughout the discussions, I have emphasised that what we are talking about is an impact, not in pure research terms, but across the whole of the spectrum—I call it a spectrum, but others call it a pipeline—from pure research to applied and strategic research; in other words, problem-driven research, to enterprise and innovation. All those areas are equally important and one is derived from the other. So, we look forward to that happening in the relatively near future.

[20] I am pleased to say that there is a considerable amount of buoyancy in Aberystwyth. We are looking towards the future with confidence, because we are convinced that we have a major role to play in Wales in the whole range of education and enterprise.

[21] Yr wyf wedi parhau yn y Saesneg, ond yr wyf yn deall bod yr offer cyfieithu yn gweithio yn awr. Croesawaf y ffaith ein bod yn gallu bod yn ddwyieithog. Yr wyf yn falch o allu rhoi crynodeb byr o'r dystiolaeth ysgrifenedig. Yr wyf yn hapus i ateb cwestiynau ac yn edrych ymlaen at y drafodaeth. I have continued in English, but I understand that the translation equipment is now working. I welcome the fact that we can be bilingual. I am pleased to have given a brief summary of the written evidence. I am happy to answer questions and I look forward to the discussion.

[22] **Gareth Jones:** Diolch yn fawr, is-ganghellor. Nid oeddwn am darfu arnoch ond mae'r cyfieithiad bellach ar gael yn yr oriel gyhoeddus. Diolch am y cyflwyniad effeithiol hwnnw ac am ei gadw mor gryno. Daw'r cwestiwn cyntaf gan David Melding. **Gareth Jones:** Thank you, vice chancellor. I did not want to interrupt you, but the interpretation is now available in the public gallery. Thank you for that effective presentation and for keeping it brief. David Melding has the first question.

[23] **David Melding:** With your indulgence, Chair, I have two questions to ask on different subjects. I would like to tease out some more information on business spin-offs and enterprise that usually come from students and post-graduate students, in particular. There are signs that you have been quite vigorous in this area. This is not specifically about Aberystwyth but about higher education in general in Wales. There is a question of volume, presumably, because many people will have ideas in the same area and only one or two will win in the market—the way personal computers were developed is an obvious example of that—and they are not always the best ideas either. So, you need quite a few people to emerge with these ideas to try to take to market, and then one or two could become super successful, with great benefit to the economy. The others do not lose the experience and usually end up working somewhere in a high capacity.

[24] People like Bill Gates were not motivated, when they were 21, by the desire to become a multimillionaire; they had an idea that excited them. In your experience, is there an indication that we are moving in the direction in the HE sector in Wales where we are encouraging ideas, encouraging people to have a go, providing the nursery environment for businesses that is often needed and linking up with businesses that can take the ideas on?

9.20 a.m.

[25] We heard evidence last week that, in that respect, we need to remember that large companies are more likely to engage and to be able to take ideas and products forward, whereas some of us thought that small and medium-sized enterprises were the initial vehicle. That is less likely. The SME link is of a different type to the one that we initially envisaged. Bearing that in mind, you referred to the Aberystwyth technium, but did not mention the Aberystwyth science park. Could you explain why that has been omitted? Are the links less developed? We have heard evidence that, where science parks work—Warwick and York have been mentioned as examples—they have a significant effect on the economy. I hope that

that is a coherent first question—I know that I have covered a fair bit there.

[26] Secondly, a few years ago at the Newport eisteddfod, Professor Richard Wyn Jones broadly criticised HE in Wales for its lack of social and economic research, rather than scientific research, and encouraging products to go to market. He said that the HE sector's response to devolution had been pretty dull, that nothing new was happening and that not much research was conducted on socio-economic issues, which are now pretty much devolved. Would you like to reflect on that? Do you think that the analysis three or four years ago was fair and has there been any movement in the right direction since?

[27] **Professor Lloyd:** On your first question on engagement with business, I will ask David to say something presently, because that is very much his area. I mentioned the cultural change, which I have observed over the last five or six years, and which I hope that we have helped to move forward. Individuals and small groups have good ideas, they need to be nurtured and they need to know that there are opportunities for them to take those forward, knowing that some will succeed and that others will not. That is the most important aspect—that we fully realise that there are risks and that not all these small businesses will succeed. It is important for HE generally not to be risk-averse in everything that we do—it is about managing the risk and not being averse to it.

[28] On giving students and members of staff the opportunity to launch these things, we have a number of small companies that continue to be successful. It is important to establish that these small companies have to be run, not by the scientists necessarily, but by those who are engaged in running the company—you cannot be both. So, I think that professionalism is essential.

[29] On engagement with SMEs as opposed to large companies, it is not an either/or situation—it has to include both. David will say more about this, but certainly in terms of large science, you would expect greater engagement with large companies; that is going to happen. However, linkages with SMEs are important in both directions. Higher education has to make access relatively straightforward, because we are able to help, but we need to ensure that SMEs are aware of what is possible and what is available. Perhaps David can say more on this.

[30] **Gareth Jones:** Before you come in, I know that Alun, Sandy and Lorraine want to raise questions on this issue, so it might be worth their asking those now.

[31] **Alun Cairns:** My question ties in, I hope, with the original question and the response that you have just provided on the interaction with SMEs or large companies in order to generate wealth in conjunction with the universities. Is it the original thinking that makes the wealth or is it the fast second that really creates the wealth thereafter? Can you not have the fast second without the original thinking? Are universities geared up for that?

[32] **Professor Lloyd:** You have to have both, because the ideas have to start somewhere. It is often the 'fast second', as you describe it, that takes off. Therefore, it is a case not of either/or, but of creating an environment in which people with ideas feel that they can be taken forward, and others may wish to take other people's ideas forward. We should be careful not to be too precious about that, although there are intellectual property issues that will have to be addressed.

[33] **Sandy Mewies:** My question is along the same lines. We have been told that universities need the large companies, and that the large companies need the universities. However, Wales needs its SMEs—that is what we have. I was interested to see that you work with large and small companies, and that you are part of the collaborative research and development project with Bangor and Swansea universities. There are barriers for the

SMEs—we have heard that they may not have the resource to recruit PhD students. What barriers have you identified, and how can we help to overcome those barriers?

[34] **Professor Lloyd:** May I ask David to come in on that?

[35] **Gareth Jones:** Yes. There will then be follow-up questions from Lorraine and Christine, and we will then have David Melding's second question. I think that we are keeping track of everything. *[Laughter.]*

[36] **Mr Craddock:** I wish to respond to the question about postgraduates working with SMEs. Aberystwyth, Swansea and Bangor were successful a few years ago with the European Union Objective 1 bid, which provided funding for, I believe, 80 PhD students to work with 80 SMEs in Wales, in the Objective 1 area. That has been a particularly successful programme, in that the companies are interested in the research that the students are doing, and the students get to work in the company for at least three months over the three-year training period. At the end of the programme, companies have access to extremely useful intellectual property and research development that they consider to be of help and use to their businesses. It has been a particularly successful programme, and one that we are looking to repeat, possibly with more of the universities in Wales, in the EU convergence programme, using European social fund money.

[37] **Sandy Mewies:** What happens to the PhD students? Do they go into these companies? What happens to them after the programme has finished?

[38] **Mr Craddock:** We have not come to the end of the programme, so we do not know.

[39] **Sandy Mewies:** What do you hope will happen to them?

[40] **Mr Craddock:** I come from business, and I have worked in large and small businesses. I know from experience that, typically, if a student does a secondment in a company, or is working with a company, there is a good chance that the company will offer that student a job at the end of the day. That is more than likely to happen in this case. It is certainly a good opportunity.

[41] **Lorraine Barrett:** My question follows on from a few of the points that David Melding raised about entrepreneurial education, and Professor Dylan Jones-Evans's comments. How much emphasis is given to social enterprises and co-operatives when you talk about SMEs or big businesses? Do co-operatives and social enterprises fit into your thinking and the students' education?

[42] **Mr Craddock:** Yes. When we broadly talk about our engagement with SMEs, I have noticed that a feature of our engagement in Aberystwyth, for example, is that half of the SMEs tend to be in either public sector organisations or co-operative organisations, and the other half tend to be more conventional, profit-orientated businesses. So, we work with a variety of organisations and operations.

[43] **Lorraine Barrett:** I wish to make the point that co-operatives can be profit-making as well. It is just that the profits are used for more social issues.

9.30 a.m.

[44] **Christine Chapman:** In your paper, you talk about SMEs engaging in shorter-term, rather than longer-term, collaborations. What are the barriers to that? Is it a question of changing the culture, because it has reached a certain point but much more needs to be done, or do you think that it will always be short-term collaborations?

[45] **Professor Lloyd:** I will answer that question, but David may also want to come in. It may well be that that is what the need is and that the requirement would be of a more short-term nature, which is not necessarily a bad thing. That would be my reaction.

[46] **Mr Craddock:** I think that it reflects the business culture and the businesses that we are working with primarily, and the investment that they can or are prepared to make in research activity, which is obviously limited in comparison with larger businesses. One of the things that I will say, though, is that I think that a lot of what has happened in the last four or five years has led to an improvement in the relationship between the universities' academic researchers and business-facing people and companies in general. I have noticed that we now have an ongoing relationship with a number of SMEs. Although the projects perhaps tend to be small, they come back for more, typically. So, we have an ongoing relationship with SMEs, and they are not just one-off, short-term projects. However, they tend to be small-scale projects, which I think is typical throughout the UK.

[47] **Christine Chapman:** Do they stay with you, or do they go off?

[48] **Mr Craddock:** Assuming that they are successful businesses and they survive, typically they tend to come back and we do ongoing work for them over a number of years.

[49] **Professor Lloyd:** Short-term projects can be extremely useful for SMEs.

[50] **Gareth Jones:** Yr oedd yr ail gwestiwn gan David Melding yn ymwneud â datganoli, os cofiaf yn iawn, a'r datblygiadau o ran yr elfen gymdeithasol economaidd. Pwy sydd am ymateb i'r cwestiwn hwnnw?

Gareth Jones: The second question from David Melding related to devolution, if I remember rightly, and the developments in terms of the socio-economic element. Who is going to answer that question?

[51] **Yr Athro Lloyd:** Atebaf y cwestiwn yn gyntaf, ac yno efallai y gall yr Athro Pykett ymateb. Credaf ein bod ni yn Aberystwyth—yr wyf yn siarad ar ran fy mhrifysgol i yn unig—yn gwneud tipyn drwy ein hadran gwleidyddiaeth ryngwladol. Mae'r Athro Richard Wyn Jones a'i gydweithwyr yn gweithio'n ddygn yn Sefydliad Gwleidyddiaeth Cymru o fewn yr adran honno.

Professor Lloyd: I will answer it first, and then perhaps Professor Pykett can respond. I believe that we in Aberystwyth—I am speaking on behalf of my university only—do a great deal through our international politics department. Professor Richard Wyn Jones and his colleagues work hard at the Institute of Welsh Politics within that department.

[52] There is significant engagement on policy issues in Wales. I feel that that is an example of a department, which is a leading department of its kind internationally, that is able to contribute very significantly to policy issues in Wales. Whenever I have the opportunity, which is often in terms of that department because of its visiting speakers and so on, I am pleased to be able to emphasise that it is not just an academic discipline but an engagement with policy. That is important for universities. We must take that particular area seriously, and that is what we are doing in Aberystwyth. So, I think that things have moved on. That may be a comment on the sector as a whole—I do not think that it is in any sense a comment about Aberystwyth. Also, the human geographers in the university are engaged with the Wales Rural Observatory, for example. Lyn may wish to add to that.

[53] **Professor Pykett:** That is the point that I would have wanted to make. It is not simply a question of studying devolution; it is about how you do social science in a devolved Wales. The Wales Rural Observatory in our Institute of Geography and Earth Sciences is a very good example. It is also a collaboration with Cardiff University, which indicates that

research is taking place across Wales on rural communities in Wales that is designed to inform policy. The vice-chancellor spoke earlier about the projected merger of IGER with the university. I have been chairing the science strategy and delivery group, which is one of the bodies seeking to move towards merger. I have been working hard with my colleagues to devise ways in which the science research being done in what we are calling IBERS, the Institute for Biological, Environmental and Rural Sciences, will work alongside social science research to inform policy on agriculture and the sustainable environment. So, the sector in Wales is conscious in a broad way of the need to engage in research of a social scientific nature that can inform policy in Wales in a beneficial way.

[54] **Gareth Jones:** Before David comes in on that point, I will ask the following, as we may be asking the same question. I accept that high-level effective research into communities and social issues is ongoing, and it is one thing to undertake research and to evaluate and have outcomes, but are you satisfied that, in a devolved Wales, we provide you with an opportunity for take-up within the system? Is there a challenge there, or is it something that we need to be aware of or focus upon? If we are to make progress it is one thing to have research, but it is the continuity and the take-up of valuable research that is ultimately important, and not research for its own sake.

[55] **Professor Pykett:** That is an important point, and we all need to look carefully at how universities in Wales can interact with the infrastructure of the Assembly Government.

[56] **Yr Athro Lloyd:** Mae hynny yn rhywbeth sydd yn digwydd ar y ddwy ochr; mae'n bwysig ein bod yn deall beth yw anghenion y Cynulliad ac anghenion y cyhoedd, ond ar yr un pryd yr ydym yn gobeithio eich bod chi yn y Cynulliad yn gwybod am yr hyn sydd ar gael.

Professor Lloyd: That is something that works both ways; it is important that we understand what the needs of the Assembly and the public are, but at the same time we hope that you in the Assembly are aware of what is available.

[57] **Gareth Jones:** I am sorry to intervene, David; it is over to you.

[58] **David Melding:** Thank you, Chair.

[59] The remarks were made about the higher education sector in Wales, and were not specific to Aberystwyth University. I would like to have an idea of how much of a challenge you think that we have remaining. Devolution has changed so much of Welsh politics and how public policy is formed, and is a fairly new system, so I am not being critical if I suggest that we still have quite a long way to go. For example, there was the Aberystwyth report on community councils and the direction in which they could develop. That was commissioned by the Welsh Assembly Government, and so I would be interested to know where the money came from for the research that Professor Pykett mentioned. It does sound like interesting research, and goes some way towards refuting what I suggested. I would like to know what the funding source is for that.

[60] Turning to the general point made by the likes of Professor Richard Wyn Jones, it was that if we look at the very different model that we now have for health service delivery, I do not know of much fundamental research on the effectiveness of it, because it is difficult to get a research grant to do it. It is not valued in the research exercise as much as wider research, or international or national collaboration. That was the type of argument that was being made. Similarly, what fundamental research is being undertaken on the transport network, where there could be real interventions of worth? It may be out there and I just do not know about it, but I think that that was the point that was being made.

[61] **Professor Lloyd:** I think that what you are suggesting is that there is a need for a

mechanism to exchange an understanding of the requirements. On where the funding comes from, some studies are commissioned, as you say. I was talking to someone in our criminology department last week about the need to address issues that are important in Wales. It is a two-way engagement, and funding for studies of that type, in the main, would probably have to come from sources within Wales—it is probably not something that the research councils would fund.

9.40 a.m.

[62] However, that engagement is very important. I talked earlier, in a slightly different context, about the range of research—from pure research to knowledge transfer and innovation. That is an important spectrum in social science and other areas, not just in science, and we are developing and are becoming much more aware of that. It is something on which we can and should work together to identify what is needed. There is a huge amount of expertise in Wales that can address the requirements that you have described.

[63] **David Melding:** Professor Pykett, was the project that you referred to commissioned by the Welsh Assembly Government, or was it the idea of academics who wanted to research the hypothesis or phenomenon?

[64] **Professor Pykett:** It was the Wales Rural Observatory. As I understand it, the idea came from academics and has found funding support. Some of the support has come from the Welsh Assembly Government rural policy division. However, its sustainability depends on attracting contract income, so it tenders for research contracts.

[65] **Christine Chapman:** My question follows on from that, and refers to a point that you made in your report about the changing needs of employers. Do you look at the needs of employers locally, globally, or nationally? Is this a priority? It follows on from what we have just discussed with regards to research and the needs of Wales as opposed to the needs of the world, or the local community. Where do you see yourself sitting within that?

[66] **Professor Lloyd:** One has to think about the needs of employers in two ways. First, there is the need for people with the right skills. That is what one might call the skills agenda, and all universities are addressing that. The second is the need of employers for pieces of research, which is a more direct knowledge transfer. So, we come back to the three points that I made at the beginning. David may want to comment on that immediate relationship with business.

[67] **Mr Craddock:** We were funded by the funding council to undertake a scoping study of our engagement with the sector skills councils, which are trying to develop guidance for the sector on the skills that are required in their different areas. As an extension of the Aberystwyth-Bangor partnership, we are looking to develop an Aberystwyth-Bangor skills centre linking the commercial office and career development sections. We are looking to build on influencing curricular development in the university and, at the same time, respond to the needs of individual businesses.

[68] **Christine Chapman:** Is that on a local rather than national basis?

[69] **Mr Craddock:** I think that we are trying to do both.

[70] **Professor Pykett:** In terms of responding to the needs of specific businesses, it is often better to do that through continuing professional development. In undergraduate education, one needs to seek to develop flexible skills, such as creativity, team working, enterprise, initiative, critical thinking, and so on, which are adaptable to a range of employment situations. However, if you are working with local employers to address their

needs, it is often best done through seeking to upskill their employees.

[71] **Janet Ryder:** I apologise first of all for being late, I was held up in another meeting. I would like to take you back to funding for research and some of the issues that have been raised about research arising from specific needs in Wales. You have talked about some of the money coming from the research council and some coming from the Welsh Assembly Government, and, in other cases, a research unit having to commission work. Do we need to look again at how we fund research in Wales, given the ever-devolving situation? If we do, what do we need to look at and what would need to happen?

[72] **Professor Lloyd:** I think that one should always be looking at these as a mechanism, of course, but let me go back to my spectrum of pure research through strategic research. On pure research, we are part of a UK-wide assessment process, as you know, and the funding is derived from the dual-support system, partly from the funding councils and partly from the research councils. The areas that we have been discussing are more to do with strategic research: it is the kind of research that units do that is directly of value to, and fulfils the requirements of, customers. A large customer would be the Welsh Assembly Government.

[73] In my introduction I talked about problem-based research and, with the way that things are going, the reason that one needs a larger range of expertise is to identify the problem—perhaps we need a mechanism for the Assembly and us to identify the problems of importance—and, once that is done, we have to assess what we can do to address that issue on a wide basis. These are, very often, multidisciplinary teams. We have embarked on a kind of foresight exercise, with which Professor Pykett was involved, to try to identify what the real problems of importance are and to see what we can do to match those. We have the capacity and we have the skills—although we cannot do everything, obviously—but it is that linkage that I think is important for us. I would certainly welcome a way of formalising what the perceived needs of Wales are.

[74] **Jeff Cuthbert:** Thank you very much for the paper that you have provided. It was brief and to the point, which is not always the sort of material that we get, and it was greatly appreciated.

[75] I want to ask questions that are linked to the issue of providers of skilled people. It follows on particularly from the points raised by Christine on the changing needs of employers. I have asked similar questions of staff from Cardiff University and Swansea University, so I would be grateful for your thoughts on this subject. You mentioned specifically your work with sector skills councils and, as far as I can recall, you were the only ones to do so in your written submission. You also mentioned the scoping study. This is a matter of particular interest to us because we are looking to the sector skills councils to be the leaders for their occupational areas in terms of identifying current and future training needs, as far as possible, and to ensure that provision is made for them. Could you say a little more or perhaps send us material—I do not really mind which—on how your engagement is working? I note that it leads you to the student skills competition, which is very interesting. Are you engaging equally—I am sure that the answer is ‘no’—with all sector skills councils? Are some more proactive than others, in your experience, and sector skills councils for what types of occupations are those? That is important for us to know so that we can see which ones are doing the business and which ones need to be pushed on a bit. There might be a resource issue, but it will be very important to us because their role could be critical in helping to drive the Welsh economy, and the link with higher education is very important.

[76] That flows in to the issue of European structural funds because, as you know, under the Lisbon agenda, which is meant to drive structural funds to a large degree, the skills agenda is a key issue and we really need to address that in Wales. I would be very grateful for your thoughts on that. You have mentioned the Objective 1 support that you have received

and what you have done with it, and convergence funding was also mentioned, but in terms of your general engagement with the Assembly and how this current round of convergence and competitiveness funding is to be used, how do you feel that the higher education sector in general, and Aberystwyth University, in particular, is placed to be part of the strategic thinking in terms of the skills agenda?

[77] Finally—this will be it, Chair—part of our criteria for this study is the link between higher education and further education, particularly with regard to driving the skills agenda. I would be grateful to know what type of engagement you have with the further education sector.

9.50 a.m.

[78] **Professor Lloyd:** I will separate that into three areas: first, skills and engagement with the sector skills councils; secondly, European funding; and thirdly, the further education dimension. David, can you deal with the question on the sector skills councils, please?

[79] **Mr Craddock:** This is interesting because when we carried out the scoping study, we found a reluctance in some sectors to visit Aberystwyth. I do not know whether that was because of the location and the difficulty travelling there. I think that there are 24 sector skills councils in the UK, and at the time that we did the scoping study, I think that there were about nine or 10 in Wales that had agreements in place. We found that academics, through their own entrepreneurial activity, had engaged with about five or six of those. I cannot remember all of the sectors that they had engaged with, but Lantra and the legal sector skills council stick in my mind as being engaged with the university.

[80] However, generally, it is fair to say that the scoping study indicated two things. First, that the sector skills councils themselves had not quite got their act together with regard to what they wanted to be asking of the sector; some were more advanced than others. Secondly, from the university side, perhaps we did not have the resources or the mechanisms to engage with them in a professional way. Over the past two years, on the whole, the sector skills councils that we have engaged with have moved up a level and become more communicative about what they are looking for. Via the Aberystwyth-Bangor partnership, we are hoping to fund a venture that will give the two universities resources to engage with them in a more professional way.

[81] **Jeff Cuthbert:** I can understand why Lantra would be involved, but I am concerned about the names that you did not mention—the well organised ones such as that for construction skills, and Semta, which is the sector skills council for science, engineering and manufacturing. You did not mention those, so does that mean that they are not engaging with you?

[82] **Mr Craddock:** No. It just means that we are engaging with the sectors that match the research and expertise in the university.

[83] **Professor Lloyd:** [*Inaudible.*]

[84] **Mr Craddock:** Yes, so I am not surprised that we are perhaps not engaging with the ones that you mention, because they would not necessarily match our academic expertise.

[85] **Professor Lloyd:** European funding is very important, and David or Lyn may wish to add something on this. There are various strands to this. In the past few days, we have been looking at the opportunities afforded through convergence funding. I see that David has the matrix in front of him, so he might respond on this.

[86] **Mr Craddock:** Is it correct to say that you are particularly interested in the European structural funds area, which includes the skills agenda?

[87] **Jeff Cuthbert:** Yes.

[88] **Mr Craddock:** One thing that it has been pleasing to see in the sector, certainly in the ESF area, is that there is a Wales-wide, co-ordinated approach to EU convergence bids with regard to the high-level skills ESF strategic framework. The universities are working closely together to deliver in several areas, and the sort of projects that are being looked at at the moment include work-based learning, which involves going out to companies and training employees on-site, rather than expecting them to come to the university. Welsh language training for adults is another project that is being worked on across the sector as is, interestingly, managing director/chief executive officer training for heads of SMEs. That is a scheme that a chap from Swansea took from Lancaster University, where it was very successful. It provides one-to-one coaching and mentoring for managing directors of small businesses, who notoriously find it difficult to progress and evolve, because it is a lonely job in a small organisation. That is a scheme that we are looking to develop. The University of Glamorgan is taking the lead on foundation degrees and there is also an advanced professional training project. It is pleasing to see that there is a pan-Wales, co-ordinated approach to this area.

[89] **Jeff Cuthbert:** Thank you.

[90] **Professor Lloyd:** The third dimension is further education. It is an important area that is developing. Again, speaking on behalf of Aberystwyth University, we have a good relationship with Coleg Ceredigion, which is the local further education college, and we are working on ways in which we can work together. Another area where we have had good experiences of working with a range of FE colleges is through the Reaching Wider partnership. I mentioned the summer school earlier on, and there is a partnership involving ourselves and the University of Wales, Lampeter on the higher education side and four FE colleges, namely Coleg Ceredigion—

[91] **Professor Pykett:** Coleg Sir Gâr.

[92] **Professor Lloyd:** Yes, they are Coleg Ceredigion, Coleg Sir Gâr, Pembrokeshire College and Coleg Powys. That has been effective in a range of activities. Some of it is funded through the European social fund. Professor Pykett might want to say more about that.

[93] **Professor Pykett:** Through the widening access programme, we have the mid and west Wales widening access partnership, which, as the vice-chancellor has explained, involves two higher education providers, namely us and Lampeter, plus four further education colleges. This partnership has, for a number of years now, taken the lead on developing a sort of pipeline through to higher education, working with very young children at one end of the spectrum, through to after-school clubs. At one time, we had a wide range of after-school clubs, certainly in Ceredigion, which were very successful, particularly with regard to mathematics, science and literacy issues. Unfortunately, because of changes in the funding model, we have had to discontinue much of that. However, we are continuing. Largely because of the entrepreneurial efforts of the education providers in our widening access centre, which have European funding and, in one case, private sponsorship from a large utilities company, we are running extremely successful programmes, such as Expanding Horizons, which the vice-chancellor referred to in his presentation. At its height, that took almost 400 participants in their GCSE year, in tranches, over the Easter holiday. The programme takes students who are predicted as being unlikely to achieve the requisite C grades in their GCSEs because of social disadvantage or problems in their homes. They have to meet certain access criteria to get onto the programme. It is an enormously successful

programme and has been seen to have a demonstrable effect on the achievement of these young people and has a kind of ripple effect in the school—they go back really enthusiastic after their four days in Aberystwyth, Lampeter or, on one occasion, Brecon. Many of the students who graduate from that programme then go on, in their year 12, to attend the summer university, which we pioneered in Wales.

10.00 a.m.

[94] We now take more than 100 students a year on a six-week intensive residential programme on two campuses: Aberystwyth and Lampeter. The largest and most varied programme is on the Aberystwyth campus, for obvious reasons. It has a terrific success rate, and students who complete the course—which is a proper academic course though there is an element of social skills involved—and make the grade have guaranteed progression into Aberystwyth or Lampeter, provided that they pass their A-levels at the minimum level. That has been a very successful route for these young people who would not otherwise have gone to university. They are all people who come from families that have no tradition of progression to higher education.

[95] Most of them stay in Wales, although some have gone on to Oxford and Cambridge. We now have in Aberystwyth a cohort of students who have come in by following the Expanding Horizons programme and graduating from the summer university, who have stayed in Aberystwyth, and are now contributing to the scheme by volunteering to become student helpers for the Expanding Horizons programme and the summer university. They act as role models and they sometimes go out to schools to spread the message. The summer university is very successful, as you can imagine, if we are taking on 100 students a year. I have been involved since 2002, so a lot of students have gone through the system. A couple of years ago, we worked very closely with our colleagues in Swansea to develop the summer university on that campus, and I understand that it also has a successful summer university there.

[96] **Gareth Jones:** Yr wyf yn falch o **Gareth Jones:** I am glad to hear that. On that glywed hynny. Ar y nodyn calonogol encouraging note, we will move on to the hwnnw, symudwn ymlaen at y cwestiwn next question from Sandy Mewies. nesaf gan Sandy Mewies.

[97] **Sandy Mewies:** I have to try to remember what it was. [*Laughter.*] It was about widening access; in fact, I think that you have answered it, because I was interested in the summer school and how you got people into it. It is Wales-wide presumably.

[98] **Professor Pykett:** Yes.

[99] **Sandy Mewies:** My question has been answered, in that case, Chair.

[100] **Mr Craddock:** We should be very proud of it, because it is being looked at across the UK.

[101] **Professor Pykett:** It is being used as a model by Universities UK.

[102] **Mr Craddock:** It was invented here.

[103] **Gareth Jones:** That is the Expanding Horizons programme.

[104] **Professor Pykett:** It is the summer university in particular that is being used as a model of good practice, but Expanding Horizons is also recognised.

[105] **Gareth Jones:** We should be very proud of those achievements; there is no doubt about that. What we dearly wish to see, as Members, and in this report, is how that translates more and more into an economic contribution. That is the essence of what this inquiry is about. Any further information that you can provide with that remit very much in mind would be gratefully appreciated by us all.

[106] Symudwn ymlaen. Nid yw Lorraine We will move on. Lorraine is not here, so I
yma, felly yr wyf am droi at Alun Cairns. turn to Alun Cairns.

[107] **Alun Cairns:** My questions were answered earlier.

[108] **Christine Chapman:** I have a brief question. You refer to the Year in Industry, which I know has happened for many years in many universities. It is my impression that students sometimes find their own placements. How proactive are you in that regard? This is also an access issue, is it not? It is about young people or mature students—anyone who is an undergraduate—having the right networks and the right contacts, and I just wonder how proactive you are as a university in arranging those placements for students.

[109] **Professor Lloyd:** To split this into two again, on some courses, particularly on the MEng course in our computer science department, a year out is essential, and that is structured. It is successful because the students come back very committed and having made good contacts for themselves—though we help to arrange that, and they are supervised. On the more general Year in Industry scheme, the university has contacts, and our alumni base can be very valuable in that regard, too. We attempt to provide a mechanism for putting people in contact with each other. However, if students have a contact of their own, as they often do, we would also look at that contact. So, it happens both ways. We will help by using our contacts, but we would not stop people from developing their own.

[110] **Christine Chapman:** There is an issue about disadvantage here, because you could argue that a year in industry will lead to well-paid jobs for some undergraduates, and so the system could already be unequal unless you were being proactive. That is the point that I am making, really.

[111] **Professor Lloyd:** I accept that point.

[112] **Mr Craddock:** If I could add to what Professor Lloyd has said, we are starting to see some of the benefits of knowledge transfer activity and the skills agenda, and the link between the two. As we develop and improve our relationships with small and large businesses, whether through consultancy work, contract research, intellectual property development, or whatever, we are also getting to know those businesses, and they are then looking to take other students, perhaps on placements or to do particular projects. An Aberystwyth hotel group approached us the other week asking whether a number of our business school students could help it with a research project, because it wanted to do a study of the potential market for conferences in the area. The students are working on that project and, when it ends, I know that the owner of that business will look to recruit one of them to market his business, once that person has graduated. So, there is an overlap between the knowledge-exchange agenda and the development-of-skills agenda in this area.

[113] **Gareth Jones:** Symudwn ymlaen a **Gareth Jones:** We will move on, and give
rhoi ail gyfle i David Melding. David Melding a second chance.

[114] **David Melding:** I am greatly honoured to get a second chance. I want to go back to the issue of techniums and science parks. We have heard evidence that techniums appear to be quite successful in some places, but that the concept has not been so coherent in other areas, and has not taken off. I am interested to note that the Wales spatial plan focuses on

hubs in the rural areas. If there are too many hubs, it seems to me that we just will not generate the capacity that we need. Is there an issue there that you could reflect upon? Your link-up with Bangor is an example. You either join together or get outreach from a larger centre, and Aberystwyth may be a point where you could see that sort of capacity develop. As I indicated, the concept of science parks seems to have worked in some parts of the UK, but not others. There may be other reasons for that, but do you feel that they could be beneficial in rural areas?

[115] **Professor Lloyd:** Perhaps this is a question for you, David.

[116] **Mr Craddock:** Yes, and I am conscious of the fact that we did not respond fully to your earlier question.

[117] **David Melding:** That is fine. I probably asked too much.

[118] **Mr Craddock:** No, but I would quite like to go back, if I may, as it might help the committee if I explained how we spin out activity generally.

10.10 a.m.

[119] First, we operate the Wales spin-out programme, which is, as you know, a pan-Wales programme. Aberystwyth has been particularly successful in the number of spin-outs we have had. On average, around three and five companies per year start up through the spin-out programme. Through Welsh Assembly Government funding, we also have our own incubation centre on the science park next to the campus, which offers hot-desking business support services for undergraduates and graduates, and office accommodation for embryonic businesses. Typically, we are finding that businesses are then graduating either into the general office market or into the technium. I believe that around three or four of the current residents at the Aber technium are university spin-outs, and that that technium has a high occupancy rate for the area. There is a lot of spin-out activity from the university in addition to that, but I do not think, to be fair, that we know exactly how many graduate start-ups there are per year; our records show that there are around 15 and 25 per year.

[120] The other thing to say is that a company spinning out of a university has a greater chance of success than a general start-up company does. In the market generally, 80 per cent of companies that start up go bust in their first year, normally through cashflow problems, but 80 per cent of the start-ups that we have had from the university are still in business, so it is almost like an inverse proportion. That is one of the positive benefits of spin-out companies, not just in that there is a decent number for the area, but also in that there is a better chance of their being successful as businesses, which, at the end of the day, is what we want to see if we are to grow and develop the economy. I do not know whether that answers your question.

[121] **David Melding:** I am still not quite sure that I have grasped what a science park is. It seems more embryonic than a technium from how you have described it. Is it where people meet and try out ideas, with a lot of mixing of ideas and cross-fertilisation or is it a bit more substantial than that? I am not being pejorative, as that is exactly what we want, but I just do not quite understand.

[122] **Professor Lloyd:** A technium provides some support, because there is a community that provides central support. The science parks, which have existed for some time, are less structured individual opportunities. Certainly, the science park in Aberystwyth is full by now, with companies that are more mature. Science parks do their own thing, as it were, and do not have that sort of connection. So, there is a continual need for companies to have this kind of support for a short period of time. The technium concept is that companies do not stay there for ever; they move through the technium to a later stage of maturity. However, they need that

kind of support for an initial period, and that is a good concept.

[123] **Mr Craddock:** I do not know whether you have been to Aberystwyth, but, interestingly, the arts centre in the university is the networking hub of businesses in the region. If you go into the arts centre cafe you will see students, local people, tourists and businesses all mingling and networking. In a sense, the university facilitates networking. It is a natural networking hub in the area.

[124] **Professor Pykett:** I was just going to say, but I am probably making the same point, that it might be worth adding to David's point. Building on that, the arts centre and the university have a plan, which is at an advanced stage—and I do not know whether the turf has been cut yet—to build some business units at the arts centre for the creative industries, for artist business units.

[125] **Professor Lloyd:** It is a timely intervention, because building started yesterday. *[Laughter.]*

[126] **Alun Cairns:** May I pursue the issue of the incubation units and the technium? There are many techniums throughout Wales that are empty and have become flash office spaces and an expensive mistake. The technium in Swansea, in fairness, is very successful and that is where the original idea came from, but that is because the link with the university is extremely effective and it is seen as an extension of the university. You have reported on success at the technium in Aberystwyth, so can you tell me about the relationship that the university has with that technium and, before you do that, can you tell me about the relationship that the university has with these incubation units, even though they are within the university? How does that work and are you ruthless? Is there is a limited period of time in which business can be there, because otherwise you could have a business there forever and a day that is not going anywhere and basically turns into a lifestyle business, which is not the objective of the incubation units? The last committee looked at incubator units across the UK and in the United States and they were generally not seen to be that effective unless you were ruthless with them.

[127] **Professor Lloyd:** That is a good point. Do you want to comment on that, David?

[128] **Mr Craddock:** I am on the technium board, and have been since prior to the technium being built or developed. An academic colleague of mine, Professor Lee, from the university's department of computer science, is also a board member. So, the university has had an academic and business input into the development of the Aberystwyth technium. So, even though it is not on our campus, we were involved in the development of the strategy and had close linkage with the technium and, through its development and operations, we still work closely with it.

[129] **Alun Cairns:** May I probe a little further into that? You are a board member, which is great, but that could mean anything from merely managing the building, which I am sure it does not, to offering a dotted line as regards the university's research to the organisations that are seeking to capitalise on that research or apply it. Is that the sort of relationship that you have as a board member and the sort of relationship between the technium and the university?

[130] **Mr Craddock:** That is exactly what we encourage. The three or four university spin-out companies in the technium have a relationship with the university anyway, because they were borne out of the university and they have an ongoing relationship with academics. To give you an example, a Scandinavian biotech company came into the Aberystwyth technium because of its interest in some of the science going on in our rural science department. In a sense, the science was attracting the company to the area, and subsequent to its taking up occupancy in the technium, we have had some contract research work with that company.

[131] **Alun Cairns:** What about the incubation units?

[132] **Mr Craddock:** The incubation units are small, so we only have offices for two or three people, which are not particularly salubrious, and we purposefully keep them that way because we do not want people to get too comfortable. Any businesses that grow rapidly move on within six to 12 months. If, for any reason, they are not progressing too well, we can turn to the tenancy agreement, which says that they have to leave after 18 months; you have to be cruel to be kind.

[133] **Professor Lloyd:** It is important for it to be a stage in a company's development. I mentioned the important and exciting merger of IGER with the university. This is an area where there are huge opportunities to transform. With the technium concept, you have to identify strengths within the university. The university is an essential part of it, and the technium must play to its strengths. For example, the arts centre, on the cultural industry side, is another of the university's strength. In terms of IGER, there are huge strengths, and many ideas have emerged, along with many commercial and business connections. I know that there is an unfulfilled demand for incubator, technium-kind space as things move forward and as companies are developed. That is another dimension to the flux in Aberystwyth.

10.20 a.m.

[134] **Gareth Jones:** Yr wyf am gyfeirio at IGER a'r ffaith eich bod yn edrych ymlaen yn arw at y dyfodol. A yw hwn yn debygol o arwain at newid sylweddol yn yr incwm a ddaw o'r gwaith ymchwil? Os yw hyn yn cael ei wireddu, oni fydd yn newid pethau llawer iawn er gwell?

Gareth Jones: I will refer to IGER and the fact that you are very much looking forward to the future. Is this likely to substantially change the amount of income generated by research work? If that is realised, it will change things very much for the better, will it not?

[135] **Yr Athro Lloyd:** Credaf ei fod yn bwysig iawn. Rhaid inni sicrhau ein bod yn dechrau'r peth yn y ffordd orau posibl ac mae hynny'n golygu fod angen i'r corff newydd gael ei ariannu ar lefel ddigonol o'r cychwyn. Yr ydym wedi dweud bod y cyngor ymchwil yn gwneud buddsoddiad sylweddol, ond mae gofyn i'r arian hwnnw gael cyllid cyfatebol o ffynonellau eraill. Nid wyf am drafod hynny'n rhy fanwl, ond mae'n ystyriaeth bwysig iawn. Mae'n gyfle unigryw, unwaith mewn bywyd, i sefydlu rhywbeth a all wneud gwahaniaeth ac mae'n rhaid ein bod ni i gyd yn ymroddedig—mae'r brifysgol yn gwbl ymroddedig i'r cyfle ac yr wyf yn falch fod y cyngor ymchwil a'r cyngor cyllido yn gefnogol. Mae pob adran o'r Cynulliad wedi bod yn gefnogol iawn ar hyd yr amser, ond dyma'r amser i droi'r gefnogaeth foisol yn gefnogaeth ariannol.

Professor Lloyd: I think that it is very important. We must ensure that we start the thing off in the best possible way, and that means that the new body must receive adequate funding from the start. We have said that the research council is making a very substantial investment, but that money will need match funding from other sources. I do not wish to go into that in too much detail, but it is a very important consideration. It is a unique, once-in-a-lifetime, opportunity to establish something that could make a difference and we must all be committed—the university is completely committed to the opportunity and I am glad that the research council and the funding council are supportive. Every Assembly department has been very supportive all along, but now is the time to turn that moral support into financial support.

[136] **Gareth Jones:** Yr wyf am barhau â hyn, gydag un agwedd benodol. Yr wyf yn deall eich bod wedi defnyddio arian ailgyflunio yn hynod effeithiol i gydweithio â

Gareth Jones: I wish to pursue one specific point. I understand that you have used reconfiguration money extremely effectively to co-operate with Bangor University. I

Phrifysgol Bangor. Mae'n siŵr bod yr arian hwnnw'n dod i ben, ond ni wn beth yw'r union sefyllfa ar hyn o bryd. Fodd bynnag, os yw'r math hwnnw o hwb ariannol yn dod â gwelliannau o ran y thema yr ydym yn ei thrin a'i thrafod ar hyn o bryd, efallai bod rheidrwydd arnom ni, fel Aelodau, i edrych ymhellach ar y ffynhonnell honno. A oes gennych unrhyw sylwadau ar ailgyflunio a'r math hwnnw o ffynhonnell ariannol?

suppose that that money is coming to an end, but I do not know exactly what the situation is at the moment. However, if that kind of financial boost brings improvements in terms of the theme that we are currently discussing, it may be that we, as Members, have an obligation to look again at that source. Do you have any comments on reconfiguration and that type of financial source?

[137] **Yr Athro Lloyd:** Mae'r fenter honno yn bwysig iawn, gan gyfeirio'n arbennig at yr ailgyflunio gyda Bangor. Mae'r cyllid am gyfnod o bum mlynedd ac yr ydym yn awr yn yr ail flwyddyn. Mae eisoes yn dangos ei werth. Yr wyf yn gwybod na all cyllid arbennig o'r fath barhau am byth, ond mae'n bwysig bod parhad i'w weld—mae angen i chi wneud cynlluniau o'r fath. Yr hyn yr ydym yn ceisio ei wneud yw defnyddio'r cyllid sydd ar gael yn effeithiol ac yn ddoeth, fel ein bod yn codi'n hunain i lefel uwch o weithredu.

Professor Lloyd: That venture is very important, with specific reference to the reconfiguration with Bangor. The funding is for a period of five years and we are now in the second year. It is already showing its worth. I know that special funding of that nature cannot last forever, but it is important that there is continuation to be seen—you need to make such plans. What we are trying to do is use the funding that is available effectively and wisely, so that we lift ourselves to a higher level of action.

[138] It is almost as if you put enough energy in to rise to a higher energy state—to use a physics analogy. It is an important mechanism for being much more effective and competitive, and to draw in a lot of research funding from outside Wales. I think that that is the key to it. Going back to the IGER issue, it will potentially bring a huge amount of funding into Wales for something that we can demonstrate to the world that we are good at. Looking to the future, an exit route or a continuation is essential, while accepting, of course, that you have to use the funding that is available over a short period of time effectively and responsibly. It is that effectiveness of use that is important.

[139] **Gareth Jones:** We follow the point that you make. We would wish to see that any extra funding allocation could be utilised effectively, along the lines that we are trying to see the sector making an impact on economic development in Wales. It is important that we get that message across clearly.

[140] **Professor Lloyd:** That is entirely understood and I think that it is an important message. Again, I do not want to spend too much time on the IGER question, but one of the things that we have done—you can imagine all the complicated processes coming together—is that we have established what we call a science and economic impact group. Again, the economic impact is an essential part of the concept. We accept that fully.

[141] **Gareth Jones:** That is certainly good news. Jeff, do you want to come in on that point?

[142] **Jeff Cuthbert:** It is a slightly different point, returning to the provision of a skilled workforce. On bespoke courses, do you have much of a relationship with industry in that regard? Does industry solicit such courses from you on a commercial basis? Is that a significant part of your work?

[143] **Professor Lloyd:** That does exist and it is something that I would like to see growing. Employer engagement is important and we need to respond appropriately to requests

and requirements when they come to us. We have a range of bodies that do this; I know that the law department has activity of this kind, interestingly, which satisfies the requirements of the profession. You have experience of this in your area as well, David.

[144] **Mr Craddock:** I was just going to say that many businesspeople enrol on all sorts of courses with the university's lifelong learning department to further their education and develop as individuals.

[145] **Jeff Cuthbert:** I was referring more to whether they specify the design of a short or long course, which does not necessarily lead to a qualification but provides for their needs and a higher level of skills.

[146] **Professor Lloyd:** It happens in the professional areas in the main—librarianship is another example. It is continuous professional development, which is generally something that I would like to see and we are working to enhance that. It is important that we are engaged in this way; it is part of the skills requirement, of course, but it is also the mechanism for developing a relationship with businesses. We have to be able to respond. You have to be careful that the quality is right, but we are working towards enhancing that.

[147] **Professor Pykett:** Going back to a point that David Craddock made earlier, we are very conscious that we need to do more in this area. We are making a bid with Bangor through the third mission strategy collaborative bid process for a programme to develop the Aberystwyth/Bangor skills centre. One strand of that programme is to work with sector skills councils to develop CPD, another is to work with undergraduates and another is to work with postgraduates or non-graduates, either within or outside the university, through working with sector skills councils.

[148] **Lorraine Barrett:** I want to put something right. I got my professors mixed up with my first question. I said that David Melding had mentioned Professor Dylan Jones-Evans, but in fact he mentioned Professor Richard Wyn Jones. At the time, I was reading comments by Professor Dylan Jones-Evans, who had said that he wanted to see more focus on equipping students with a set of transferable entrepreneurial skills. That is where my question about the co-operative side of entrepreneurship came in. I just wanted to put on record that I had mentioned the wrong professor.

[149] **Gareth Jones:** Mae'r pwynt hwnnw yn bwysig i ni. A allwch ymhelaethu ychydig mwy ynghylch sut mae prifysgol Aberystwyth yn ystyried entrepreneuriaeth? Ai cysyniad yw hwn, neu a oes modd ei drosi'n bwynt diriaethol a phwysig i'r unigolyn? Sut yr ydych yn ystyried y cysyniad o entrepreneuriaeth?

Gareth Jones: That is a very important point for us. Could you expand a little more on how Aberystwyth university views entrepreneurship? Is it a concept, or is there a way of translating this into something concrete and important for the individual? How do you view the concept of entrepreneurship?

[150] **Yr Athro Lloyd:** Mae hwnnw'n gwestiwn diddorol, sy'n arwain at y cwestiwn a yw'n rhywbeth y gallwch ei ddysgu neu a yw'n feddylfryd yr ydych yn ei ysgogi? Fel y dywedais ar gychwyn y cyfarfod, yr wyf yn teimlo ein bod yn ceisio creu awyrgylch sy'n rhoi hyder i bobl i fod yn entrepreneuriaid ac i allu datblygu syniadau.

Professor Lloyd: That is an interesting question, which leads to the question of whether it is something that you can learn or is it a mindset that you encourage. As I said at the beginning of the meeting, I feel that we are trying to create an atmosphere that gives people the confidence to be entrepreneurs and to develop their ideas.

[151] It is quite important that we establish a culture that favours entrepreneurship of all

kinds. We spoke earlier about the summer university; funding for that has been derived from some entrepreneurship on the part of the people who run it. So, it is not just about setting up new businesses; it is a much wider concept than that. We must realise that we must be flexible; it is innovate or die in all areas of our activity. What we are trying to develop, and what I would like to deliver, is a culture whereby this is the way in which people think. It is much harder to do that. There are courses on entrepreneurship—which would certainly be done within the business school—but I think that it is more a case of developing the culture than trying to teach it in a formal sense.

10.30 a.m.

[152] **Mr Craddock:** I just want to add to Professor Lloyd's point and emphasise the linkages between our activities. This is another area where we have a linkage with our crisalis incubator unit, which is also, through the entrepreneurship programme, delivering networking events and general business training, where you can learn about marketing, sales, how to develop a business plan, and so on. So, broader training, in a sense, is feeding the potential spin-out stream in the future, or, alternatively, it is providing better educated and better skilled graduates to go into companies and other organisations in the workforce.

[153] I am pleased to announce that an Aberystwyth University team of students from our business school won the pan-Wales flux event, which was an entrepreneurial event that we organised in Aberystwyth last week. The Aberystwyth team presented their business case to a number of *Dragon's-Den*-style business entrepreneurs, and won the event and they are going to represent Wales in the pan-UK event later on in the year.

[154] **Gareth Jones:** Llongyfarchiadau a dymuniadau gorau i'r tîm hwnnw. **Gareth Jones:** Congratulations and best wishes to that team.

[155] Credaf ein bod yn dirwyn i ben yn awr. Nid oes cwestiynau pellach, ac felly dof â'r cyfarfod i ben drwy ddiolch i'r pedwar ohonoch am eich cyflwyniad a'ch amser, am drafodaeth hynod o ddifyr a diddorol, ac hefyd am ichi gyfleu inni'r gwaith da y mae Prifysgol Aberystwyth yn ei gyflawni. Deallwn fod pob math o her yn eich wynebu, ond gwerthfawrogwn y gwaith yr ydych yn ei wneud, a'n lle ni, fel Aelodau Cynulliad, a'r Cynulliad ei hun yw'ch cefnogi chi a rhoi pob cefnogaeth posibl yn y dyfodol i sicrhau bod y sector addysg uwch yn gwneud gwahaniaeth i economi Cymru. Mawr obeithiwn, drwy'r drafodaeth yr ydym wedi ei chael â chi ag eraill, y bydd yr adroddiad hwn o fudd, ac yn arwain, efallai, y ffordd ymlaen yng Nghymru, er gwell.

I think that we are coming to a close now. There are no further questions, and therefore I would like to bring this meeting to a close by thanking the four of you for your presentation and time, for a very interesting discussion, and also for telling us about the good work that Aberystwyth University is doing. We understand that there are all sorts of challenges ahead, but we appreciate the work that you are doing, and it is our place, as Assembly Members, and the Assembly itself, to support you and to give you every possible support in the future to ensure that the higher education sector makes a difference to the economy of Wales. We very much hope, through the discussion that we have had with you and with others, that this report will be beneficial, and will, perhaps, lead the way forward in Wales, for the better.

[156] Cyn ichi fynd, gofynnaf i'r Aelodau nodi un papur, sef cofnodion y cyfarfod blaenorol. Yr wyf eisoes wedi diolch i Janet am gadeirio'r cyfarfod hwnnw. Gwelaf ein bod yn derbyn y papur hwnnw.

Before you go, I ask Members to note one paper, that is, the minutes of the previous meeting. I have already thanked Janet for chairing that meeting. I see that we all accept that paper.

[157] Diolch yn fawr iawn a dymuniadau Thank you and best wishes to you.

gorau i chi.

[158] **Yr Athro Lloyd:** Diolchaf i chi hefyd am y drafodaeth a'r cyfle. Mae hi wedi bod yn drafodaeth ddiddorol, a diolch i chi am y cwestiynau. Un peth sydd wedi amlygu'i hun yw pwysigrwydd creu cysylltiadau rhngom, fel ein bod yn deall anghenion ein gilydd yn well, ac, i mi, mae hynny wedi bod yn thema y bore hwn.

Professor Lloyd: Thank you, too, for the discussion and the opportunity. It has been an interesting discussion, and thank you for your questions. One thing that has become apparent is the importance of creating links between us, so that we can understand each other's needs, and, for me, that has been a theme this morning.

[159] **Gareth Jones:** Diolch yn fawr iawn.

Gareth Jones: Thank you very much.

*Daeth y cyfarfod i ben am 10.33 a.m.
The meeting ended at 10.33 a.m.*