

Enterprise and Learning Committee

EL(3) 17-08 (p3) : 12 June 2008

Semta

Sector Skills Council Response



National Assembly Wales

Enterprise and Learning Committee's Inquiry:

12 June 2008

Committee Inquiry into the Economic Contribution of Higher Education

Purpose

The National Assembly for Wales' Enterprise and Learning Committee is undertaking an inquiry into the economic contribution of higher education in Wales. The inquiry will consider the nature of the strategic engagement of HEIs with businesses in Wales and beyond and their impact on their local and regional economies.

Semta is the Sector Skills Council for Science Engineering and Manufacturing Technologies. This sector employs 2 million people in 76,000 establishments with £74 billion per annum (10% total of UK GDP) and one third of total UK exports.

In Wales the sector is large, with over 94,000 employees and 3,300 companies accounting for ~ 23% of GVA. Manufacturing in Wales accounts for 13% of the workforce.

Semta, as a Sector Skills Council agrees sector priorities and targets with its employers to address four key goals:

Reducing skills gaps and shortages

Improving productivity

Increase opportunities to boost the skills of the workforce

Improving learning supply, including apprenticeships, Higher Education and occupational standards

Semta has recently agreed action plans with employers and key stakeholders including the Higher Education Funding Council to take forward the themes as a result of Sector Skills Agreement outcomes.

Background

Semta have worked closely with several HEIs including Bangor University, Cardiff Business School, Glamorgan University, NEWI and Swansea University. This work is related to Sector Skills Agreement outcomes and has in the main been funded through successful Knowledge Exploitation Fund bids which have been in collaboration with Further Education; the table below lists this activity:

HEI	Topic
Cardiff Business School Lean Enterprise Research Centre	To produce learning material linked to productivity and performance, Semta's role was to benchmark the programme against National Occupational Standards and prepare the programme for inclusion into the Credit and Qualification Framework for Wales.

Cardiff Business School	Working with the Manufacturing Advisory Service and Semta to provide investigation, recommendation and delivery of programmes to improve the competitiveness of Welsh companies
Glamorgan University	To provide training for small business and Entrepreneurs in innovative management.
Cardiff University	To work with FEIs to produce learning materials for introducing Micra and Nanotechnology into the design of products Semta's role was to benchmark the programme against National Occupational Standards and prepare the programme for inclusion into the Credit and Qualification Framework for Wales.
Bangor University	To support a research project into the needs of the engineering skill needs in Y Gamfa region of Wales.
North East Wales Institute (NEWI)	By collaborating with Deeside College NEWI have contributed to the successful implementation of the Higher Engineering Apprenticeship Framework; this included the development of a Foundation Degree in Aeronautical (Manufacture) Engineering now used extensively by Airbus UK at Broughton.
Swansea University	To work with partners from Bangor University to produce learning programmes for Composite Materials and related emerging technologies in particular focusing on the use of the materials in design activities

These activities have helped Universities engage with employers in Wales and provide up to date programmes of learning that take in the issues identified in Sector Skills Agreements.

Semta are currently looking at the emerging skills issues for the Bioscience sector in Wales with several Universities; this includes collaboration on issues of Leadership and Entrepreneurship and the image of the sector in attracting new employees.

Summary

The funding stream established by HEFCW in the 1990s giving support to HEI's training and consultancy activity has given higher education in Wales the momentum to build relationships with employers and to offer practical learning solutions; Semta also welcomed the 2004 initiative that required HEIs to prepare a third mission strategy to set out their impacts on both society and economy; and the "Skills and Employability" strategy that has encourage cohesion within the training and education infrastructure in Wales.

Higher Education in Wales has again led UK higher education with funding on the basis of higher education credits. This has many advantages for Semta's employers / employees and really encourages the philosophy of lifelong learning. We look forward to continuing our work with HEIs and employers to maximise the benefits of this funded credits system in higher education.

Semta agrees with HEFCW, that the framework of UK National Occupational Standards (NOS) is an under-utilised resource. Semta is currently working with the Higher Education Academy Subject Centres of Engineering, Mathematics, Physical Sciences, Bioscience and Materials to go beyond National Occupational Standards to develop generic sector specific career structures and job roles including details of job specific skills, knowledge, NOS, UK-Spec, personal qualities, responsibilities, proficiency, etc, thus informing HEIs for developing curricula that accurately reflects employer needs.

Since the Sector Skills Agreement action plan has been agreed with HEFCW; Universities are engaging with industry and its representatives to provide access to learning in new technologies; collaboration between HEIs and FEIs is also growing. Semta is encouraged by this progress.

The work that Cardiff Business School are doing in collaboration with the Manufacturing Advisory Service and Semta is providing joint practical and academic studies to deal with issues of productivity and performance and should be held up as good practice in working with employers.

Recommendations

Semta employers currently report serious skills shortages; they actually need a steady stream of qualified scientists, engineers and professional people graduating from either their own workforce or direct from University; this presents a number of challenges and opportunities for us all.

- 1) We need to work closer with higher education and employers to encourage more young people to consider studying STEM subjects at School, College and University; and to consider STEM careers. Currently too many talented young people see STEM subjects and careers as the "second-best" option.
- 2) We need more collaboration between HEIs, employer bodies and FEIs to give greater access to employers wishing to engage with

higher education.

3) We need to develop a new generation of higher education products and services including employer driven specialist options in relevant degree courses; common APEL processes; support in transforming relevant higher education qualifications into practical work-based learning programmes for workforce development.