

National Forum of Engineering Centres

EPC Seminar – Teaching Skills in Engineering Departments to Meet Future Challenges – Notes for Discussion Regarding Input from NFEC

1. Background to NFEC

- a) NFEC was formed in 1992 as the then National Forum of Engineering in Colleges, as a corporate membership organisation and in June 1993, was officially launched as a body that would represent the views of member colleges on all matters relating to the quality, content, structure, delivery, funding and management of programmes of training and education in Engineering within the FE Sector. NFEC subsequently became a charitable organisation.
- b) In 2004 the then Trustees of the Charity agreed that the **Forum should develop a wider focus**, to also **encompass the needs of private providers**, the **company-based providers** and the emerging specialist schools. Thus the **National Forum of Engineering Centres Ltd (NFEC Ltd) was formed**. The charitable status of its operation was maintained after this change.
- c) **NFEC Ltd is run by a small group of Directors** who volunteer their services and have specific responsibilities that reflect their wide expertise when addressing the needs of member organisations. NFEC has five regions in which are run at least two **regional seminars** each year, usually hosted by member organisations. Representatives of these attend our **National Council** which meets three times a year at the Engineering Council offices in London. This includes **representatives at national level** sitting on it from awarding bodies, SEMTA, SummitSkills, the EEF, the **EPC**, the LSC, Engineering UK, Ofsted, Engineering Council and Engineering UK. Others too may be co-opted, depending of the nature of the Agenda.
- d) NFEC is represented on the National Training Framework Committee of SEMTA, the Education and Skills Panel of Engineering UK and the Steering Committee of the Engineering Gateways Initiative of the Engineering Council.
- e) Apart from the Regional Seminars (which are FOC), **NFEC runs two National Conferences a year** addressing key topical issues. Speakers of national standing and influence are invited to address these issues.

2. Matters for Presentation

- a) In FE, HE programmes (HNC upwards) will be taught by people with HNDs/first degrees/Masters (very few in this latter category) and all staff recruited must have **meaningful industrial experience** and a **recognised teaching qualification**, either on entry or obtained during the first two or three years in the job.
- b) Pleased that within **Higher Ambitions** there is recognition that FE vocational qualifications are seen as an important route for progression to HE provision. This route has been in place for many years but raising the profile of it is very helpful.
- c) Equally pleased that progression from Advanced Apprenticeships to HE provision is recognised and will be promoted. The emergence of the Higher Apprenticeship in Engineering that includes HE qualifications is beginning to be seen as an attraction for A-Level school leavers. This is also designed to allow progression from the Advanced Apprenticeship.

- d) However – **cautionary note** here – whilst this progression route is to be applauded, there are indications that industry recruit apprentices to provide either semi skilled resources through the Apprenticeship (Level 2) route or skilled resources (Technicians with sound craft skills) through the Advanced Apprenticeships (Level 3). There might not therefore be a huge number progressing that way but some do now and will in the future.
- e) Very pleased too about other initiatives to widen participation in HE.
- f) Not so sure that the target of 50% of 18 to 30 year olds being involved in HE is necessary – yes we need graduates (if this is what the Government mean by HE) but also we need highly skilled technicians who can develop their skills through NVQs, underpinned by such as HNCs/Ds/FDs.
- g) The recognised **skills gaps in FE** will need addressing in similar ways to those in HE – e.g. specific courses, significant work placements. The costs won't be insignificant but this matter must not be ducked.
- h) Within localities, HE and FE have an opportunity to work in partnership to develop mutual programmes of CPD.
- i) Most engineering staff within FE do not receive **significant CPD** of a technological nature. There is a new organisation – the Institute for Learning (IfL) created about two years ago that has set up a data-base of all tutors in FE who have to ensure their CPD activities each year are logged on this. However, there only has to be 30 hours per year of compulsory CPD – wholly inadequate for meaningful development of the new skills and knowledge developing in the Engineering Industry. Facilitating release time is difficult due to finding effective replacements in hard-to-fill areas of Engineering.
- j) The cost of CPD is high and the 25% top-slice applied by universities franchising courses to FE does not help on this front! For this and other reasons, NFEC supports the initiative by the AoC to increase the level of direct funding from HEFCE to support HE in FE.
- k) **Areas of skill shortages in FE** include:
 - i) Systems Engineering (FMS/CIM) and the maintenance of such systems.
 - ii) Design.
 - iii) Software engineering.
 - iv) Electronics and electronic systems.
- l) Industry are interested in **graduates who “can do”** and colleges (whether they be directly funded or not), working in partnership with Universities and Industry can create programmes of training and education that can address this point by developing provision more practically based (remember the Monty Finiston Report – Engineering, Our Future – 1980!!!). Such partnerships will also help develop more effective programmes of CPD to help address skills shortages arising from creating new programmes to develop the knowledge and skill requirements of the future.

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