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Higher Education Innovation Fund

**Summary evaluation of the first round
(2001-05)**



Office of Science and Technology

HIGHER EDUCATION
FUNDING COUNCIL *hefce* FOR ENGLAND

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Executive summary

1. This report is an summary evaluation of the first round of the Higher Education Innovation Fund.
2. Between December 2001 and April 2002, 89 awards were confirmed under HEIF 1, ranging from £200,000 to £5 million paid over three years, including 16 collaborative projects. Over £77 million was awarded in total by HEFCE and the Office of Science and Technology (OST).
3. Activities supported under HEIF 1 include commercialisation of world-class research, collaboration between HEIs to exploit shared knowledge and facilities, and universities and colleges being involved in the regeneration of their regions and beyond. Annex A comprises five HEIF 1 case studies which illustrate the range of outcomes from the funding.
4. The summary evaluation concludes that third stream activity has been much improved within higher education institutions and their business and community partners as a result of the funding. Furthermore the HE sector is strongly committed to continuing to develop third stream activity as a core activity. Future rounds of HEIF funding will be able to build on the foundations of round one, to continue the successful business and community interactions and impact achieved by HEIs to date.
5. For more background on the HEIF initiative see www.hefce.ac.uk under Business & community/HEIF.

Background

1. The Higher Education Innovation Fund (HEIF) programme provides funding to higher education institutions (HEIs) to build on the activity carried out under 'third stream' funding initiated by the Higher Education Reach-out to Business and the Community (HEROBC) fund. It forms the basis of the Government's commitment for a permanent stream of funding to enhance the contribution of higher education to the economy and society.
2. The invitation to apply for the first round of the Higher Education Innovation Fund (HEIF 1) was issued in May 2001 (HEFCE publication 01/34) to HEFCE-funded HEIs. Institutions were invited to apply for funding to support activities that would increase their capability to respond to the needs of business (including companies of all sizes and sectors and a range of bodies within the wider community), where this would lead to identifiable economic benefits. Third stream activities supported by the funding were designed to sit alongside HEIs' teaching and research activities, enabling them to secure the maximum economic benefit from the resource already invested in those activities.
3. Funding of £80 million was made available through the Office of Science and Technology (OST): £20 million per year for the first two years of the initiative and £40 million for 2003-04. The invitation to apply for HEIF funding was run concurrently with three separate, but related, OST schemes: University Challenge (UC), Science Enterprise Challenge (SEC) and the Public Sector Research Exploitation Fund (PSREF). This represented a first step to merging the various streams of support for knowledge transfer and related activities; UC and SEC activity was incorporated into HEIF 2 in 2004.

Impact of the initiative

4. The impact of HEIF 1 on HEIs and their partners typifies what can be achieved by the considered deployment of public funding into the higher education sector in England. On the other hand there are also lessons to be learnt, not least from the effects of the time-bound competitive approach adopted by HEFCE and OST in allocating HEIF 1 funds. Evidence suggests that in preparing bids for a competitive process some HEIs are able to develop projects that make a real impact in the economy and society, while others may over-reach their capabilities and lack sufficient infrastructure and long term commitment to support and embed third stream culture more strategically.
5. Eighty-nine awards were made under HEIF 1 (including 16 collaborative awards). Many continued to build on activities initiated under HEROBC, and in 2004 some were given further support through the second round of HEIF funding. Activities supported under HEIF 1 include commercialisation of world-class research, collaboration between HEIs to exploit shared knowledge and facilities, and universities and colleges being involved in the regeneration of their regions and beyond, through working with SMEs and non-commercial organisations and other partners.

Assessment process and awards

6. Under HEIF 1 HEFCE received 136 applications for funding from 128 HEIs, including 34 proposals from consortia of HEIs. The value of HEIF 1 applications totalled approximately £178 million, more than double the available funds. The assessment of proposals was conducted in a robust and transparent manner using mainly electronic processes to circulate and transmit HEIs' proposals to all involved. The approach was one of competitive bidding, which caused some concern in the sector regarding the administrative burden and its effectiveness as a way of allocating funds.

7. Each application for HEIF funding was assessed by four separate groups:

a. Consultants (appointed by the OST), who also evaluated the proposals under the concurrent UC, SEC and PSREF schemes. This provided an overview and 'joined up' approach to the funding of third stream activities across the sector.

b. Regional Advisory Groups, chaired by HEFCE regional consultants and including representatives from the relevant Government Office and Regional Development Agency (RDA), modelled on those which were set up to consider applications for HEROBC funding.

c. A HEFCE-nominated pool of heads of HEIs and business leaders (the HE/Business Group), of whom all but one had carried out a similar role for the two phases of HEROBC assessment and award in 1999 and 2000.

d. A team of officials from the Department of Trade and Industry (DTI), again generally made up of senior individuals who had been directly involved in HEROBC and previous higher education knowledge transfer competitions.

Decisions were made by a national advisory panel, based on the assessments of the above groups. This panel was chaired by the Director General of the Research Councils, supported by the HEFCE chief executive, and included members of the assessment streams as well as others drawn from business, community, government and education backgrounds.

8. Funding of around £78 million was awarded to 89 applicants, ranging from £150,000 to a single institution up to £5 million for a large-scale strategic collaboration. Sixteen of the awards were made to consortia of HEIs, and several institutions received awards both as an individual institution and as lead institution of a consortium. In cases where the final awards advisory panel recommended modifications and/or reductions to awards, HEIs were able to develop their proposals in an iterative way with HEFCE/OST to agree the final shape of their plans. The sum of £1 million was retained from the fund to support the development of relevant professional training. A full list of all award holders was published in HEFCE 02/04 'Higher Education Innovation Fund: funding allocations'. All HEIF 1 awards were for a 36 month period from their final approval dates (varying between December 2001 and April 2002).

Monitoring

9. Progress on the awards to single institutions was reported through HEIs' annual monitoring statements to HEFCE, which are submitted in July of each year. Progress on awards to consortia of HEIs was reported separately by the lead institution with input from Regional Advisory Groups, similar to those that were set up to make the initial assessment of applications for funding.

Outcomes

10. HEFCE's analysis of the final summative reports provided by HEIs showed 14 projects that had performed above expectations and were rated as excellent. Those that made good progress and achieved what they had proposed during the extremely competitive award process numbered 59 and were rated good. The remainder were judged to have made insufficient progress overall, and discussions were held with HEFCE to ensure corrective action. It should be remembered that many HEIs started from a low baseline of activity and as such those institutions were likely to suffer more than others from a shortage of experienced knowledge transfer professionals.

11. Our analysis of the final reports from HEIs looked at four key areas of business and community work, and revealed the following.

Internal focus change of HEI

12. There seems to have been a change across the sector over the last few years, with greater emphasis now placed on the importance of knowledge transfer and third stream activities. Many HEIs also now tend to manage all their third stream activity in a strategic manner; this is desirable in terms of co-ordination and linking projects, but can reduce the distinctiveness of targets and outcomes between separately funded projects.

13. Funding has been deployed to catalyse cultural change. Many HEIs now view knowledge transfer as a core activity and have taken steps to ensure that the activity is embedded at the institutional strategic planning level. This has raised the awareness of third stream activities across all levels of HEI staff and governors.

14. As the business and community agenda is embedded within the HE sector, it is being developed by institutions to sit alongside their existing strategies for teaching, research, widening participation and regional development. Some institutions regard part of their role as providing world-class research collaboration with major industrial partners. Others focus on regionally specific priorities such as continuing professional development (CPD) and working with SMEs.

External impact

15. Across the sector there is evidence of a greater degree of contact and engagement with external bodies, from SMEs, larger industrial companies, the public sector and not-for-profit organisations to social, community and cultural partners.

16. Due to the many and diverse activities supported by HEIF 1 it is not possible to aggregate or equate quantitative outputs in a meaningful manner. The HE-business interaction survey (HE-BI), and its successor the HE business and community interaction survey (HE-BCI), were conducted to measure the volume and trends of knowledge transfer and related activity. These surveys have shown increases in a range of indicators of activity over the life of HEIF 1, particularly in consultancy and collaborative research¹.

17. A common theme of many HEIF 1 programmes has been the creation of business development functions within HEIs, including incubator units. This has successfully helped urban and rural business to grow, which has long-term benefits within a region both socially and economically. HEIs involved in such initiatives also benefit culturally by forming close links with businesses and the development of the region.

18. The range of third stream knowledge exchange activities carried out by HEIF 1 programmes form part of ongoing regeneration programmes regionally, nationally and sectorally. They have achieved far-reaching benefits beyond the HE sector. As a result RDAs have found HEIs to be essential and progressively more natural partners in terms of driving regional knowledge economies and increasing productivity.

Third party investment

19. A substantial additional investment in the activities of HEIs was made by other organisations, such as the RDAs, who have shown strong support and interest in higher education third stream activities. This investment is deployed in different ways to meet diverse needs across the English regions.

Future activity

20. The predecessor to HEIF 1, HEROBC, demonstrated the potential breadth and usefulness of business and community activity to all stakeholders as the first stage of strategic HE activity. This gave confidence to institutions in building third stream activity and when continuity of funding was assured by HEIF 1, reduced pressures to employ staff on short-term contracts.

21. The HEIF 1 funding overlapped with and followed HEROBC funding successfully, with institutions building on the third stream activity already in place. There is evidence

¹ These surveys are published annually by HEFCE and are available at www.hefce.ac.uk under Business & community/HE-BCI

from most projects of a strong commitment to the continuation of such activity, much of it to be funded by subsequent rounds of HEIF funding. A key stated aim of HEIF has been to move toward a permanent, embedded third stream of funding for HEIs. HEIF 2 increased the total amount of resource available (it provided £185 million to be allocated over 2004-06), and HEIF 3 has taken a major step towards this goal by allocating 75% of the available funding by formula². Formula funding gives HEIs more notice of funding levels, which helps them recruit the expert individuals needed to continue to drive forward culture change and enhance the impact of universities and colleges on their local economy, the UK and beyond.

Lessons learned

22. Electronic submission and assessments helped improve the co-ordination, speed and efficiency of assessment. Although the competitive bidding process was considered very resource-intensive, both to HEIs and in the administration of the programme, many agree that such a process drives HEIs to be more imaginative in producing plans and helps catalyse the step-change in HE-business and community interactions that is central to both HEFCE and the Government's plans for developing the UK into a 21st century knowledge economy.

23. Annual monitoring of the HEIF third stream activities through the established route of the HEFCE annual monitoring statements was a sensible and effective use of resources, and enabled HEFCE to relate progress to the full range of an HEI's operations. Due to the timing of HEIF 1, reporting did not follow academic years. This meant that the first monitoring reports covered only initial setup and staff recruitment. While HEIs often note the administrative burden represented by specific monitoring such as the HEFCE annual monitoring statement and the higher level data collection of the HE-BCI survey, most understand that it is vital that HEFCE and the OST are able to provide evidence on the effectiveness of third stream funding for government spending reviews. It is precisely this kind of evidence that led to the substantial increases in available third stream resource since 1999-2000.

24. Many institutions experienced problems due to the competitive bidding process and delays in the recruitment of the necessary professional staff across the sector. The main reason for this was the number of skilled staff required across the sector in a short space of time. Evidence from the HE-BCI survey shows that in 2005 there were over 5,000 dedicated business and community staff working at UK HEIs.

Conclusion

25. The HEIF initiative has credibly built upon the positive elements of HEROBC activities and has driven the third stream agenda forward. The profile and credibility of third stream activity, and the targeting of outputs and outcomes, have been much

² For more information on HEIF 3 see HEFCE 2005/46 at www.hefce.ac.uk under Publications/2005

improved within higher education institutions and their business and community partners. Third stream activity is now firmly embedded within institutions, and the sector is strongly committed to continuing to develop this as a core activity of HE, in order to further contribute to the society and economy.

26. Future rounds of HEIF funding will be able to utilise the strong foundations and embedded cultural change achieved by round one, to continue the successful business and community interactions and impact achieved by HEIs so far.

Annex A

Selected case studies

Institute of Cancer Research: Training of Institute Scientists

HEIF 1 funding allowed the Institute of Cancer Research (ICR) to sponsor Institute scientists to attend courses on intellectual property rights (IPR) management and business skills. In developing a more entrepreneurial culture, career scientists were able to meet and interact with colleagues from industry and increase their appreciation of commercial culture. The courses were oversubscribed and feedback was uniformly positive; some scientists decided to make a career change to technology transfer because of this training (as ICR had expected) while others found it enhanced their understanding of the technology transfer process, adding value to their academic discovery roles.

Harper Adams University College: Business Clubs

At the time of the HEIF 1 award, the Business Club concept was not widely recognised within Harper Adams University College (HAUC). The emphasis on customer focus (creating a membership and then working to meet the expressed needs) shows HAUC's commitment to working with external partners. A number of Business Clubs were all initially founded on research findings including:

- The On-Farm Composting Network brought together research findings concerning technical composting processes, and information on new markets, with commercial suppliers of recently developed equipment. The network reached a very high proportion of the farmers in the UK who have established composting businesses.
- The Food Business Initiative strongly focused on improving food chain safety, particularly in the development of understanding of the Hazard Analysis Critical Control Point (HACCP) approach to product safety, including new models which have been developed for smaller food businesses.

All Business Clubs supported by HEIF 1 have been and continue to be concerned specifically with the support and development of new and existing rural businesses. In aggregate they have gained over 2,500 members.

Kings College London: Training in Drug Discovery Skills

Within an innovative MSc programme, students are equipped with industrially relevant skills to enhance their understanding of, and technical expertise in, the drug discovery process. This programme was developed with partners from the pharmaceutical industry. Representatives from industry sit on the advisory committee to monitor and guide development of the course to ensure its continuing relevance to drug discovery; they also take student placements as part of the programme and offer a number of sponsored bursaries.

University of the West of England: Development of a Health Community

The University of the West of England (UWE) undertook a project across three faculties to review existing provision and develop new approaches for working with the health industry. Staff exchange programmes supported further development of leadership programmes and the re-design of education modules (now available for part-time study). These programmes are now 'fit for purpose'. UWE offers improved leadership studies in the Business School, and enhanced CPD in the Faculty of Health and Social Care, benefiting both commercial and not-for-profit partners.

This work is being further developed under HEIF 2 to develop science communities of practice in health. The initial analysis undertaken by UWE with HEIF 1 funds has resulted in significantly improved education and research for business and community partners. External relations have been strengthened, with benchmark study for customer relationship management, a network of community and business fellows, and the development of an effective interface with the health sector.

Bournemouth University: Northey Technologies

With support from HEIF, one of the University's Business Fellows (Product Design Engineering) has worked with Northey Technologies Ltd to develop a new series of pumps and compressors. The project, undertaken over two years as part of a Knowledge Transfer Partnership scheme, has enabled the company to develop and implement modern computer tool technologies such as Computer Aided Design (CAD) and Computational Fluid Dynamics (CFD).

This has led to the development and launch of a unique compressor with seal-less capability using advanced materials such as carbon graphite, and innovative technologies such as magnetic drives. The company expects a significant increase of its profit nationally and internationally, and is currently applying for ISO certification and a European patent to protect the design of the new compressor. The company now sees research and development and partnership with higher education as long-term requirements that will offer them increased awareness of new technologies and opportunities.

List of abbreviations

CPD	Continuing professional development
HE	Higher education
HE-BCI	Higher education-business and community interaction (survey)
HEFCE	Higher Education Funding Council for England
HEI	Higher education institution
HEIF	Higher Education Innovation Fund
HEROBC	Higher Education Reach-out to Business and the Community
PSREF	Public Sector Research Exploitation Fund
RDA	Regional Development Agency
SEC	Science Enterprise Challenge
SME	Small and medium sized enterprise
UC	University Challenge