Rejuvenating the Land-Based Economy: using education and skills to drive the renewal of the Land-Based Economy in East Devon and West Dorset

Bicton College

Introduction

This document is the Final Report of the Rejuvenating the Land-Based Economy (RLBE) project. The project ran from 1st August 2010 to 31st July 2011 and was supported by the Learning and Skills Improvement Service (LSIS) through its Flexibility and Innovation Fund. The project was led by Bicton College located in East Devon working in partnership with Kingston Maurward College whose campus is just outside of Dorchester in the County of Dorset. Both institutions are specialist land-based colleges.

Project synopsis

The focus of RLBE was on accelerating the diffusion of knowledge and understanding about renewable and low carbon technologies and their potential role is supporting the renewable of rural and coastal economies.

Set in the context of broader organisational strategies, a key element of the project was to encourage and support staff champions initiate change in their curriculum areas. The idea was to encourage 'bottom-up' as well as 'top-down' change.

Project aims

The specific aims of the project and associated intended outcomes are detailed in Table 1 below.

Table 1. Project aims and intended outcomes.

Aim	Intended outcomes
Utilise the EARTH Centre to offer a range of realistic working environments	Observation and demonstration of environmental and renewable technologies
Use digital technology to access new knowledge	Establish an information repository to share and exchange information
Enhance the knowledge, understanding and skills of teaching staff in respect of environmental and renewable technologies	Build new understanding and capacity within the staffing base of both colleges
Use of peer-to-peer working involving staff from both colleges	Stimulate the sharing of professional practice and exchange of knowledge
Develop new learning materials	Establish a curriculum fund to support the development of new content

New curriculum content	Pilot, subsequently refine and embed new content
Maximise the role of work-based learning programmes and student placements to transfer knowledge	Use work-based learning programmes and work placements to diffuse new knowledge

The project was innovative for a number of reasons, these included:

- The subject material and its application to rural and coastal economies
- The use of peer-to-peer learning involving staff from two colleges exchanging practice and knowledge in the context of land-based courses and skills development.
- Peer-to-peer learning was based on a utilising a number of mechanisms, including inter-institutional visits. I.e. taking and showing peers different working environments and methods of working
- A focus on bottom-up change by supporting a number of selected staff champions to undertake the role of early adopters of low carbon technologies. Part of this role focussed on including new content in the learning programmes they delivered offering a practical demonstration of what can be achieved and helping to encourage colleagues within their institution to follow their example.

Project delivery

The project was managed through the two institutional leads (a senior member of the teaching staff from each college) and an independent project co-ordinator. The three individuals formed the Project Management Group (PMG) which met formally seven times during the course of the project at a location broadly equi-distance between the two colleges (NB. The colleges are separated by some 50 miles and a minimum journey time of 1hour 20 minutes)

The PMG meetings, monthly from September 2010 until the final stages of the project, ensured appropriate management co-ordination and operational direction to the project. Formal meetings were backed-up by regular email correspondence and the use of the information gateway to provide access to a range of documents.

The broader group of stakeholders involved with RBLE, included businesses, representative organisations and local authorities.

Learning from the project, included:

Curriculum Fund:

The benefit of using a dedicated curriculum fund to support individual teaching staff (staff champions) in their desire to introduce new content on low carbon technologies into the curriculum. The fund supported innovations in practice-based education across a range of curriculum areas by releasing small sums of money against agreed plans to allow investment in curriculum development. Projects undertaken included, for example, the production and use of biodiesel; use of a portable weather station to map different sites and their suitability for renewal technologies; wind and solar trainer to demonstrate the principles of these technologies; coppice rotation; and composting.

Enhanced knowledge

A significantly enhanced knowledge base for those staff participating in RLBE across a range of environmental and renewable technologies and the business benefits associated with each. The knowledge gained resulted from a pooling of information and the sharing of different data sources.

Information sources

Identified benefits of signing-up to the Department of Energy and Climate Changes 'e' mail alert service to gain frequent updates on government policy and related activities in relation to low carbon technologies, during a period of particularly rapid change. For further information go to: http://www.decc.gov.uk/

Interactive tools

Finding a number of useful interactive tools to be used with learners for the purposes of developing their knowledge and understanding of environmental and renewable energies. Examples of the interactive tools which were used for learning with students included 'My 2050' (For further information go to: http://my2050.decc.gov.uk/) and 'My Sustainable House' (For further information go to: http://www.mysusthouse.org/game.html Staff found both of the tools cited to be very useful teaching aids when used with appropriate groups.

Excellence Gateway

Use of the Excellence Gateway to develop an Information Repository dedicated to the project and its use in posting and sharing information

New contacts

Identification of a number of leading companies located in the region of South West of England who are either market leaders in supplying environmental and renewable technologies, or exemplars in effectively utilising such technologies within the business. Business contacts proved to be a very useful resource for the project. For example, staff from both colleges spend half-a-day at the Bridgwater plant of Robert Wiseman hearing about the company's approach to sustainability and touring the site. The company's Bridgwater plant, which is the largest diary in Europe, offered a number of insights into a how a large business working with the farming industry is tackling sustainability issues. For further information on Wiseman's approach go to: http://www.wiseman-ir.co.uk/wiseman_and_the_environment

Unforeseen issues, which were outside of the control of the project, were essentially two, namely:

- The delayed completion of the EaRTH Centre. As a result a number of staff involved in RBLE reviewed the facilities at the Centre for Alternative Technology, Wales, and the Genesis Centre in Taunton and fed their findings back into the project.
- We did not foreseen the impact the incoming Westminster Governing would have on funding, and a number planned enrichment activities which we were expected to be introduce for 2011/12 could no-longer be supported

In considering the question of what we might do differently if a similar project was run again in future, our overall view is based on the judgement the approach and management of the project generally worked well. Thus the fundamentals for the project, including concept and management would remain unchanged. Minor issues however arose in terms of how quickly pieces of equipment could be procured, partly down to issues with suppliers (some of which were overseas). These issues simply meant that it took longer to get hold of the required equipment than planned. Given the nature of a project which was experimental and not driven top-down it is difficult to see how this might be totally overcome. It was however a cause of frustration for some staff.

Project outcomes

The project, as evidenced above, met its aims.

A summary of the project's results and outcomes are detailed below:

- Demonstrated the benefits of using a bottom-up approach and support committed members of staff to help drive change.
- Significant enhancement in the knowledge based amongst participants from both projects
- The development of an Information Repository using the Excellence Gateway, leading to a much better awareness and understanding of how the site might be used for other activities or projects
- The pilot of a significant number of demonstrator projects which resulted in the highly successful engagement of learners. These projects will be continued and built upon for 2011/12
- Detailed consideration of how new content could be used during period of work placement
- The development of individual links between staff at both institutions and sharing of knowledge

Unforeseen outcomes

- The low carbon agenda presents many challenges and many individuals and organisations have only reached the first stage of understanding. The need for independent and unbiased sources of information on low carbon technologies is now much clear. This is potentially a role for FE colleges.
- Even those organisations that might be expected to have a good understanding of the issues and application of low carbon technologies may not do so. For example, one of the two colleges acquired solar and wind trainers as a portable teaching aids, allowing students to observe and record renewable energy output. The intended aim in using this equipment was primarily with Level 2 students. What was not foreseen was that these same tools proved of significant value when demonstrating these technologies to members and officers of a local authority. The individuals concerned were likely to be making significant planning decisions about the incorporation of low carbon technologies in new physical developments, involving both the construction of new buildings and the refurbishment and repurposing of existing buildings. Demonstrated accurate scale-models of these technologies greatly assisted their understanding of what the technologies could do, and issues in relation to their physical sighting and efficiency.

The impact of the project was on individual members of staff, curriculum content and delivery and learners. At the start of the project was that there was little by way of curriculum content on low carbon technologies in most curriculum areas. One year on there has been considerable change with a number of successful demonstrator projects having been piloted at both colleges. These will be built on for 2011/12, meaning increasing number of learners will gain exposure to some of the key issues and questions around the low carbon economy. Whilst this process is incomplete, when compared to the start-point considerable progress has been achieved. Further, because the project has used essentially a bottom-up process based on supporting mainstream teaching staff, the activities are already embedded in the curriculum and not dependent on the action of senior staff or managers to sustain the change. To put it more simply sustainability was designed into the project from the outset.

Sharing of project findings

We will continue to share the learning from the project widely. Mechanisms for dissemination and sharing include working with the Association of Colleges – South West, utilising a number of their networking groups to communicate learning, and through the organisation of LANDEX.