

## AG-01: Industrial Training

Employers are increasingly demanding that graduates have work experience in a relevant discipline, either through summer placements or 12 month industrial placements. Many institutions now offer students a chance to undertake 12 months industrial experience as part of their degree programme and students have become increasingly interested in this option. Organisations often provide structured training courses to develop and enhance existing industrial skills and knowledge and this project will introduce a number of industrial training programmes at Reading with appropriate support materials.

This project aimed to create Industrial Placements within the School, primarily through the creation of a 4-year degree programme with the option for all students to undertake 12 months industrial training. This included revising the programme specification, developing the module content and developing the mechanism for monitoring students on placements.

The option of industrial training has been embedded in to the School, with students on all degree programmes in APD having the opportunity to undertake summer placements or 12 months industrial training. Whilst uptake of 12 month placements in this initial phase has been limited, higher numbers have undertaken summer placements, and it is anticipated that greater numbers of students will be increasingly interested in these opportunities. APD has also received approaches from other Schools that offer placements for advice on all aspects of this project.

**Project Code:** AG-01      **Discipline:** School of Agriculture, Policy and Development      **Project Title:** Industrial Training

**Description:** Employers are increasingly demanding that graduates have work experience in a relevant discipline either through summer placements or 12 month industrial placements. Many institutions now offer students a chance to undertake 12 months industrial experience as part of their degree programme and students have become increasingly interested in this option. Organisations often provide structured training courses to develop and enhance existing industrial skills and knowledge and this project will introduce a number of industrial training programmes at Reading with appropriate support materials.

<p><b>A</b></p> <p><b>What is the perceived problem or challenge?</b></p>	<p><b>B</b></p> <p><b>Enabling Factors</b></p> <p>What resources will facilitate the project?</p>	<p><b>C</b></p> <p><b>Processes</b></p> <p>How is this project going to be achieved?</p>	<p><b>D</b></p> <p><b>Objectives</b></p> <p>What is the end product or result of the project?</p>	<p><b>E</b></p> <p><b>Evaluation Data</b></p> <p>What methods can be used to demonstrate the success or impact of this project?</p>	<p><b>F</b></p> <p><b>Unintended consequences</b></p> <p>What have been the unintended consequences of enacting this project?</p>
<p><b>The industrial perspective Challenge:</b> Employers are increasingly demanding that graduates are fully equipped to have an almost immediate impact on their organisation with little further training. This expectation is not always met.</p> <p><b>The student perspective Challenge:</b> Working in a relevant industry prior to graduation enables students to acquire more of the skills and knowledge required for contributing effectively to future workplaces.</p> <p><b>The staff perspective Challenge:</b> Increased contact between academic staff and industry would encourage wider opportunities for student placements and for research collaborations.</p>	<p>A Teaching Associate will be employed to develop systems to support work based placements. PROFILE software (developed by University of West England as part of an FDTL 4 project) will be purchased. Awareness of work placement opportunities can be promoted through the existing career management module. A Teaching Associate will promote the benefits of industrial training to students through an introductory lecture and as part of the Career Management Skills (CMS) module (as a presentation and visits to two employers). In addition, promotional activities will include speakers from placement organisations to highlight the benefits and opportunities of placements and presentations from students returning from placement. Academic staff will help to identify placements. General support will be provided from the CETL-AURS Director and from the Agriculture Fellow.</p>	<p>A module description for the placement will be devised and incorporated into programme specifications.</p> <p>The Teaching Associate will develop guidelines for placement students and use an on-line system (PROFILE) to track placement students.</p> <p>CMS Module will include visits to employers, speakers from placement organisations to highlight the benefits and opportunities of placements and presentations from students on their return.</p> <p>Job databases will be searched regularly and relevant adverts are passed onto students via email and the student notice board.</p> <p>Staff involved with external speakers and off-site visits will be used to promote the industrial training scheme to potential employers and to investigate the possibility of providing placements. Staff will be asked to supervise and visit placement students and to mark coursework.</p>	<p><b>Student Perspective:</b> Undertaking relevant work experience will provide the industrial-specific and transferable skills employers are increasingly demanding.</p> <p><b>Staff/Institutional Perspective:</b> Staff will have increased contact with industry, with possibilities for research collaboration and student visits. The project may help to increase the attractiveness of programmes at Reading.</p> <p><b>The industrial perspective</b> Students will leave University better prepared for the working environment and armed with a better understanding of their chosen industry as well as the skills required for their career.</p>	<p><b>Uptake of placements</b> Currently no students from the School have undertaken 12 month industrial placements therefore success can be partly measured by the number of students who elect this option. The range and number of degree programmes within which this has occurred will be monitored.</p> <p><b>Graduate destinations</b> Many organisations use industrial placements as an extended interview process. The proportion of students subsequently employed in their placement organisation will be mapped.</p> <p>The proportion of placement students who are in a relevant industry 6 months after graduating from University compared to students who have not taken this option can be collected</p>	<p>Several ex-Reading students have recently contacted us asking if we could exclusively advertise placements for their companies. In addition, we are now advertising summer placements and graduate placements to students.</p> <p>With each student on a work placement generating 0.5 FTE, this is an easy way to boost student numbers to justify new staffing.</p>

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## 1. Project Progress and Timeline

### 1.1 Timeline

Done	Project stage post	planned	actual date end date
	Start September 2005		
<input checked="" type="checkbox"/>	Advertise industrial placement opportunities to Part 2 students	Oct 05	Oct 05
<input checked="" type="checkbox"/>	Literature review of other similar projects	Nov 05	Nov 05
<input checked="" type="checkbox"/>	Liaison with colleagues in other departments	Dec 05	Dec 05
<input checked="" type="checkbox"/>	Designing and developing industrial training scheme and materials	Dec 05	Jan 06
<input checked="" type="checkbox"/>	Present option to School Board of Studies	Mar 06	Mar 06
<input checked="" type="checkbox"/>	Develop Profile software to monitor students out on placement	Mar 06	Mar 06
<input checked="" type="checkbox"/>	Present option to Faculty Board for T&L (FBTL)	Apr 06	Apr 06
<input checked="" type="checkbox"/>	Revise and produce new degree programme based on FBTL comments	Apr 06	Apr 06
<input checked="" type="checkbox"/>	Organise visits to placement providers as part of CMS module	Jun 06	Jun 06
<input checked="" type="checkbox"/>	New degree programme accepted by FBTL	Jun 06	Jun 06
<input checked="" type="checkbox"/>	Help students find placements, prepare CVs, covering letters, applications	Aug 06	Aug 06
<input checked="" type="checkbox"/>	Advertise industrial placement opportunities to Part 2 students	Sep 06	Sep 06
<input checked="" type="checkbox"/>	Organise a lunch time session for students advertising work experience	Nov 06	Nov 06
<input type="checkbox"/>	Organise visits to placement providers as part of CMS module	Jun 07	
<input type="checkbox"/>	Help students find placements, prepare CVs, covering letters, applications	Aug 07	
<input type="checkbox"/>	First students go out on placements	Aug 07	
<input type="checkbox"/>	Advertise industrial placement opportunities to Part 2 students	Oct 07	
<input type="checkbox"/>	Organise a lunch time session for students advertising work experience	Nov 07	
<input type="checkbox"/>	Organise visits to placement providers as part of CMS module	Jun 08	
<input type="checkbox"/>	Help students find placements, prepare CV, covering letter, application	Aug 08	
<input type="checkbox"/>	Second lot of students go out on placements	Aug 08	

## 1.2 Enabling Factors: State the resources used in this L&T-enhancement project

This project has primarily been managed by the *Teaching Associate (TA)*, who spent 50% of her time in the academic year 05/06 putting in place a framework for an industrial placement scheme in a School where placements had not previously existed. This included: revising *Programme Specifications* to accommodate placements; developing the module content and its requisite *Module Description Form*; and developing the mechanism required for the monitoring framework while the placements were happening.

Monitoring placements will take place over the web, rather than a paper-based system, using 'Profile' software (developed at the *University of Western England* through FDTL4 funding at a cost of £100). This software links databases and forms in a friendly manner and has been considerably adapted for use at the University of Reading.

The TA has been proactive in identifying and making industrial placement contacts with about 30 organisations who offer placements in areas of interest to our undergraduate students. She is also responsible for advertising the industrial placements to students and supports students through the application and training experience, spending approximately 15% of her time doing this, mainly targeting current first year students.

The TA will continue to promote the benefits of industrial training to students through an introductory lecture and as part of the existing *Career Management Skills (CMS)* module (as a presentation and visits to two employers). In addition, promotional activities will include speakers from placement organisations to highlight the benefits and opportunities of placements, and presentations from students returning from placement.

Colleagues throughout the School are advertising placements to students through lectures and as part of students' *Personal and Academic Record (PAR)* interviews. In addition, colleagues help to locate host organisations through existing contacts and visits.

General support for this initiative is provided from the CETL-AURS Innovation Manager and from the Agriculture Fellow.

## 1.3 Processes: What were the key challenges in delivering this project?

This project was setting up industrial placements within a School which had no previous history of doing this. All participants (staff, student, industrial partners) were thus on a learning curve. Challenges encountered included:

**developing literature for students interested in undertaking an industrial placement.** A document has been produced that can be used as advertising for the scheme, aimed at prospective students and their parents as well as existing students who'd like to find out more information. The document is also suitable for employers who are interested in offering placements.

**developing a method for monitoring placement students.** Students need to remain in contact with the University throughout their placement, and there were a number of methods available to us. We decided to use the 'Profile' software, developed by *University of Western England*. This software allows three way contact between the student, the University and the workplace and can also be tailored towards the School and University needs. This is achieved by creating 'forms' (Appendix 1) that are hosted on the software and completed by the required person.

**developing an appropriate method of assessment for the placements.** This needed to allow the students to reflect on their experience and to recognise what they have gained from their placement. It is also important that one of the products of the assessment

could be used as a marketing tool, to encourage the next cohort of students to seek industrial placements.

**finding sufficient placements.** The *TA* created a database of local and national employers who will offer placements to our students. Colleagues involved with external speakers and off-site visits are used to promote the industrial training scheme to potential employers, and to investigate the possibility of providing placements.

**embedding the scheme into Programme Specifications.** University guidelines dictate that new 4-year degree programmes must be developed to incorporate industrial training (as opposed to incorporating it as a module into existing programmes). A 4-year degree programme, using *BSc Rural Environmental Sciences* as an example, was submitted to the Faculty Board for Teaching and Learning on the basis that if students wished to have a placement in any other degree programme, this specification could act as the model.

**encouraging students to undertake industrial training.** The *Careers Management Skills* (CMS) Module, taken by all students, will include visits to employers. Speakers from placement organisations will highlight the benefits and opportunities of placements alongside presentations from students returning from the experience. One particular challenge is that until the School has an established track record of sending students on placements, it is difficult to 'sell' the benefits to students. Ideally students should enter the University knowing that they have the opportunity to undertake 12 months industrial training rather than being approached as they are part-way through their studies. Speaking to prospective students about industrial training is crucial.

**ensuring the management of placements is sustainable.** While the *TA* is currently supporting the development of placements, and managing the scheme, sustainability should be achievable through the generation of 0.5FTE with each placement, and the contribution this can make to the School in requesting additional academic posts in proportion to taught FTEs.

## 2. Outputs and Evaluation

### 2.1 List the evaluation evidence/data collected

Date	Quantitative or qualitative	Evaluation by	Description / Method
Oct 05	Qualitative	<i>TA</i>	Discussions with departments that currently offer placements
Nov 05	Qualitative	<i>TA</i>	Literature review on the benefits of industrial placements
Jul-07	Qualitative	Students	Number of students undertaking Industrial Placements
Jul-07	Qualitative	Students	Number of students undertaking Summer Placements

### 2.2 Summarise the key results from your data

Previously, no students from the School have undertaken Industrial Placements, whereas now students on all degree programmes within the School have the opportunity to undertake 12 months Industrial Training. The success of the project will be measured by

the uptake of placements from summer 2007 onwards. Currently one student has successfully obtained a placement for 2007/2008. This is less than our target of 5 students but we are confident of significantly increasing numbers next year. Students are also being encouraged to undertake summer placements and 2 students have now been awarded places on a specialised Agricultural Journalism course. Encouraging an ethos in the School where going out on industrial placement is seen as the expected norm amongst our students is a key part of our strategy.

### **2.3 How would you, as the PI, summarise the success of this project?**

Many aspects of this project have been very successful. Staff throughout the School have been very supportive, actively seeking out placements and regularly discussing placements with their industrial contacts, before passing the details to the TA to chase up/advertise to students.

Following constant encouragement, the current cohort of first year students are particularly interested in the industrial placement option and we have spoken to about 20 students about the possibility of them undertaking an Industrial Training year. Similarly, prospective students have shown interest at UCAS and Open days and the availability of an industrial training placement is becoming a key part of our marketing strategy.

Evidence from elsewhere suggests that students returning from placements will come back enthused and excited, which will stimulate more students to undertake placements. As employers demand graduates with relevant work experience, uptake of placements should also increase. In order to be successful, students must enter the School in Part 1 having already decided to choose the Industrial Training option. Approaching students later at the end of their first year or start of their second year, we believe, is too late. Due to the timeline of the project, we have been unable to advertise this option to students early enough. Prospectus and course booklets now mention industrial training, and this should increase the uptake by students.

The School is becoming increasingly known throughout the University for its work in the area of Industrial Training, thus raising the profile of the School. Head of School has noted that the Dean has commented on how pleased she was with the creating of the Industrial Placement scheme.

Several other Schools, such as the *School of Systems Engineering*, the *School of Biological Sciences* and the *Centre for Career Management Skills*, have approached SAPD asking for advice on all aspects of the project, and in particular with relation to the on-line placement forms which have been developed as part of this initiative.

The School of Systems Engineering have adopted the Profile system for monitoring placement students and comments from their placement organisations (including IBM and Microsoft) have been very favourable. The School of Biological Sciences have asked for advice for setting up a similar scheme and the TA is now a consultant on their Industrial Training Advisory Panel.

### **3. Impact and Consequences**

#### **3.1 How many students (and at what level and in which programme areas) has this L&T enhancement project impacted on?**

Although take up in this initial year has been limited, APD is confident that we have “sold” the concept of an industrial placement year to current Part I students and we have set a target of 10 students on placement next year which we are optimistic of achieving. This project has resulted in the benefits of work experience being highlighted to students, many of whom have undertaken summer placements. The School now has links with an Agriculture Journalist training course, and 2 students from the School have been awarded places on a highly competitive training course. At least 10 students have undertaken summer placements as a direct result of the marketing of work experience, and, given the emphasis currently placed on students to seek summer placements; this is expected to increase to 20 students for 2007/8.

Involvement with the existing *Career Management Skills* module impacted circa 75 students in 2006 and will impact 112 students when next run in June 2007. Students visited two employers who offer industrial placements, and through a series of lectures advice was given on work experience, including how to create an attractive CV.

It has also had an impact in the *other* Schools (*Systems Engineering, Biological Sciences*) which are adopting this scheme.

#### **3.2 Has this project positively contributed to the teaching environment and satisfaction of the academic staff delivering this provision?**

The staff within the School have been involved in various stages of the Industrial Training module creation, and, from lecturers to the Head of School, have been incredibly supportive of this project and actively seek placement providers. This ranges from engaging employers in discussion about placements to passing on advertisements that colleagues have seen. Staff contact with industry, therefore has increased as a result, which may lead to increased funding from employers (e.g. for research proposals etc) and options for student visits. Several programme directors have commented on the usefulness of being able to mention industrial placements and the fact that we effectively have a “placement officer” for prospective students and parents to talk to.

#### **3.3 Summarise the unforeseen consequences of this project**

Part 1 students have been encouraged to seek summer placements as an introduction to Industrial Training.

Prospective students are increasingly interested in this option and often enquire about the work experience options available to them. It is likely that the recruitment of the School may be enhanced because students can undertake Industrial Training. Many of the School’s competitors offer Industrial Training options, therefore by introducing similar schemes the School can now compete on another level.

This option has resulted in increased dialogue with employers, who not only send details of 12 month schemes, but also advertise summer placements and graduate positions which benefit all students throughout the School.

*School of Agriculture, Policy and Development's Industrial Training* is recognised by other departments within the University – advised *Systems Engineering* and the *School of Biological Sciences*.

## 4. Dissemination

### 4.1 Log dissemination activities relating to this L&T Project

Date	Main Audience	Type	Dissemination activity
Aug-06	UoR Academics	Action	<i>Systems Engineering</i> adopting the 'Profile' system for monitoring placement students
Sep-06	UoR Academics	Information	Discussed how Schools can encourage and maintain contact with organisations who offer placements
Sep-06	UoR Academics	Information	Discussed how <i>School of Biosciences</i> could initiate an Industrial training scheme for their students
Oct-06	UoR Academics	Action	Consultant for <i>School of Biological Sciences</i> Industrial Training Panel

### 4.2 Beyond this evaluation, do you see any scope for pedagogic research in this area of learning?

There are two areas for pedagogic research.

1. Although many Universities offer industrial placement options to students, many do not. A paper could document the creation of such an option, what we've tried and succeeded with and what didn't work so well.
2. Previous research has suggested that students who have taken an industrial training option gain a higher class of degree than those who have not. Collaboration with other departments (Food Biosciences) and other institutes (University of Western England) could generate data on students grades before they undertake a placement compared with the grades they achieve on their return. This data could be compared with data from students who do not undertake placements.

#### Project Developer's names:

Dr. Gillian Fraser, TA Agriculture

Dr. Julian Park, Fellow, Agriculture

Dr. Anne Crook, Innovation Manager, CETL-AURS

**Appendix 1. Sample Induction Checklist form the students must complete during the first week of their placement.**

**Induction Items**

The following items should be included in your induction into the organisation, preferably on your first day. Please check off the items below when they occur and inform your placement organiser of any items not covered. This form should be completed fully and signed off by your placement supervisor in the first week of the placement.

Task	Tick when completed
Introduced to key staff members and their roles explained	✓ <input type="checkbox"/>
Location of toilet facilities	✓ <input type="checkbox"/>
Location of rest room, canteen (if relevant), etc.	✓ <input type="checkbox"/>
Lunch, tea and coffee arrangements	✓ <input type="checkbox"/>
Place of work	✓ <input type="checkbox"/>
Dress code	✓ <input type="checkbox"/>
Work space	✓ <input type="checkbox"/>
How to answer the telephone, transfer calls and make internal and external calls	✓ <input type="checkbox"/>
Post arrangements	✓ <input type="checkbox"/>
Car parking	✓ <input type="checkbox"/>
Health & Safety Issues	Tick when completed
Emergency procedures	✓ <input type="checkbox"/>
Safety policy received or location known	✓ <input type="checkbox"/>
Location of First Aid box	✓ <input type="checkbox"/>
First Aid arrangements ( <i>including names of first aiders</i> ):	✓ <input type="checkbox"/>