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## Part-time students in the workforce – enhancing practice in course provision

John W Davies ([J.W.Davies@coventry.ac.uk](mailto:J.W.Davies@coventry.ac.uk)), Brian Counter ([B.Counter@derby.ac.uk](mailto:B.Counter@derby.ac.uk)), Mark Davison ([mark.davison@ntu.ac.uk](mailto:mark.davison@ntu.ac.uk)), Steve Luke ([S.P.Luke@aston.ac.uk](mailto:S.P.Luke@aston.ac.uk)) and Peter Mills ([Peter.Mills@wlv.ac.uk](mailto:Peter.Mills@wlv.ac.uk))

Coventry University, University of Derby, Nottingham Trent University, Aston University and University of Wolverhampton (respectively), UK

**Abstract:** *This paper describes a recent project on HE delivery to part-time students in the workforce. The main aim has been to investigate and propose effective practice in part-time provision in engineering in order to enhance the experience of part-time students at the same time as giving potential benefits to courses, departments and all students. The project has included interviews with employers and a questionnaire survey for current part-time students. The final guidance has been assembled with the aim of supporting the enhancement of existing courses and the development of new part-time provision. The paper presents the approaches taken in the project as a whole, analyses the results of the student survey, and summarises the overall outcomes.*

### Introduction

Part-time students in the workforce benefit from the juxtaposition of academic learning and practical application, providing students with an excellent context for their education, and providing employers with graduates whose skills they have helped to form. However, part-time courses present challenges to students and to departments. Five universities offering part-time provision in engineering have collaborated, with funding from the National HE STEM Programme via the Midlands and East Anglia spoke, to produce guidance and support materials for part-time course delivery. The work has involved an analysis of effective models of provision for part-time students in the workforce reflecting the variety of practice in engineering education (including Bachelors degrees and Foundation Degrees). This has been based on material collected from within the collaborating universities, from other regional universities and colleges, from discussions with employers, and from a questionnaire survey of part-time students. The resulting guidance is presented as practical support for those seeking to enhance or adapt existing part-time provision, or to create new provision. It includes recommendations on how to respond to the needs of part-time students, and how to value their potential contribution.

The aim of this paper is to set the scene for the project, and to report on and evaluate the approach that has been used, in the context of the needs and characteristics of part-time students. The paper focuses particularly on the student view by presenting an analysis of the results of the questionnaire survey, which sought to identify approaches to part-time delivery that are considered by students to be effective and those that are not, and to collect ideas about encouraging more part-time study. The paper explains how all the elements have been used to determine the structure and scope of the guidance that has been produced.

### The project

The main collaborators are closely involved with on-campus part-time delivery at their own institutions on the following courses.

Coventry University, Civil Engineering

Aston University, Power Engineering

University of Derby, Civil Engineering

Nottingham Trent University, Civil Engineering

University of Wolverhampton, Civil Engineering

At Coventry, 30% of undergraduate civil engineering students are part-time students in the workforce, attending on day-release, mostly taught together with full-time students. Recent initiatives at Coventry have recognised part-time students as a significant resource and involved them in enhancing the experience for all students. At Aston, the Foundation Degrees in Power Engineering have been developed in collaboration with National Grid plc, Scottish and Southern Energy and E-on UK to meet skills development needs at Incorporated Engineer level. They are taught primarily on a block release basis. At Derby the course was originally set up specifically to attract part-time students from local industry (especially in railways and highways), but now has significant full-time recruitment in addition. At Nottingham Trent, there is concern about problems of timetabling for part-time and full-time students and about the impact of the current economic climate on employer support, but also recognition of the value of part-time students to the course as a whole. For many years Wolverhampton has offered part-time courses in civil engineering as well as other built environment courses; the presence of part-time students has helped to forge strong links with local companies.

Each collaborator has fed into the project contributions from their own institutions on the part-time courses they have direct involvement with, and on other relevant part-time courses at the institution.

Effective practice at other HEIs in the region offering part-time courses has also been investigated to identify useful examples. The region has been taken as the Midlands and East Anglia, as defined within the National HE STEM Programme. The universities visited have been:

Anglia Ruskin University, Civil Engineering

Burton and South Derbyshire College, Civil Engineering

Harper Adams University College, Agricultural Engineering

New College Nottingham, Civil Engineering

The Open University, Mathematics

Stourbridge College, Construction, Built Environment, Building Services Engineering

Staffordshire University, Engineering

In addition, interviews have been held with a sample of employers (using existing contacts of the collaborators) to identify the key issues from an employer's perspective. The employers involved have been:

Amey

Carillion

E-on UK

John Nolan Associates (small consultancy)

JNP (medium consultancy)

Network Rail

Severn Trent Water

URS Scott Wilson (large consultancy)

In summary, employers are supportive of staff studying part-time, as a form of motivation and staff development. The future, including the impact of fee increases in 2012, is not seen negatively. One small/medium employer is clear that staff will need to make a greater contribution to fees, but larger employers do not seem to be particularly concerned about fee increases. A common concern is the relevance of course material to the workplace, and some employers feel they would like more input into curriculum design. One large employer indicated that in future they are going to move towards an internal system based on work-based learning rather than conventional day-release.

Further details of the employer interviews can be found in Davies et al. (2012).

## Part-time students

There is no such thing as a 'typical' part-time student. Most larger studies of this student population make that important point:

*Like other studies, our research reveals the enormous diversity of part-time higher education students, and of their backgrounds, circumstances and aspirations. There is no 'typical' part-time higher education student. (Schuller et al., 1999)*

Of course, this diversity is partly a result of the range of part-time modes available.

The circumstances and needs of part-time students are related to some key characteristics: employment experience; previous education; and age.

### Employment experience

Part-time students employed in a professional discipline related to their studies have the potential to benefit from the juxtaposition of academic learning and its practical applications. This provides an excellent, meaningful context for their education. They also apply professional skills acquired at work along with a distinctive 'workplace attitude' to their studies which generally enhance their academic achievements.

Part-time students employed in a different area from their study discipline may experience the second benefit but not the first. In any case, studying must compete for time with work and family/leisure commitments.

### Previous education

Some part-time students leave secondary education with comparable qualifications to those who take a more 'conventional' full-time route (for example, good A-levels). Others have left school or college with incomplete qualifications and pursued a complex route to part-time higher education.

### Age

Typically, part-time students take longer to complete their HE studies and have often taken longer to reach the stage of starting them. They are, therefore, older than full-time students at the same level.

This can be a significant factor in the attitude of part-time students to their studies, but differences in age should not be oversimplified. A study of students of Civil Engineering at Coventry University (Davies, 2008) found that the average age of part-timers in years 2 and 3 was 26.4 compared with 23.4 for full-time students. Most of the full-time students were, as expected, in the age range 20 to 22, but many were significantly older. The distribution of those aged 30+ was fairly similar for both groups.

## Challenges in part-time study

### Time and priorities

Feedback from part-time students consistently indicates that their study demands hard work, eats into social life, and (for many) feels as if it takes over completely. Family commitments can make this even harder. Particular requirements at work can also add to the pressures. The challenge is to achieve a balance between work, study and life.

This aspect of the part-time study experience appears to have attracted most attention of researchers. For example Kember and Leung (2004) and Yum *et al.* (2005), who studied part-time students in a range of subject areas in Hong Kong, consider the employment of 'coping mechanisms' by part-timers and identify the sacrifices that must be made. Nicholl and Timmins (2005), studying nursing students in the UK, concentrate on the high levels of stress experienced by part-time students.

Competition for time is the prevailing challenge for part-time students and moulds their needs for support during their studies. However, many, especially those who work in their area of their studies, benefit from some advantages identified in the preceding sections, including juxtaposition of work and study, and the opportunity to use their workplace skills and motivation to enhance their performance.

## Academic study

Pressures of time and competing priorities affect part-time students' experience of academic study. Also, some feel that they are simply the type of person who thrives more in work than in a study environment.

For others, the gap since their last period of studying, or the incompleteness or discontinuity in their previous education, makes adjusting to academic study in higher education a significant challenge.

## Maths

In engineering subjects, the disjointed or incomplete preparation for HE that part-time students may have experienced can cause particular problems in the area of mathematics. For example, in a survey (Davies, 2008) of 80 students of Civil Engineering at Coventry University (involving roughly equal numbers of part- and full-timers), the proportion with A-level maths was 69% of full-time students, but only 17% of part-time students (the remainder of whom had, instead, HNC or similar qualifications).

## Student view

Part of the project has been the collection of views directly from students via an online questionnaire, which is a particular focus of this paper. Part-time students at the four institutions (Aston, Coventry, Derby, Nottingham Trent, Wolverhampton) were contacted by their programme manager (or the project collaborator) with a link to the survey, some encouragement to take part, and participant information. The survey was completed anonymously and the name of the university was not requested. The aim was to identify which approaches to part-time delivery were considered by students to be effective and which not effective, and to collect ideas about encouraging more part-time study. Feedback on specific courses was not being sought and there was no intention to compare the responses for one institution with those for another. The questionnaire was deliberately kept simple. It simply asked for open text responses to three prompts:

1. *Please name 3 aspects of your course that were well suited to the needs of part-time students*
2. *Please identify 3 aspects of your course that were a problem for part-time students*
3. *Please name 3 things that could be done (or changed) to encourage more students to study your course part-time*

The responses provide a student view on part-time delivery, which can be compared with the intentions and assumptions of course teams.

The responses are collated below with an indication of the comparative level of consensus (among the 52 respondents). It is felt that this approach to the data adequately conveys the student view of the relative importance of the issues, and that more precise quantification is not justified. Responses have been grouped under the following headings.

- Contact/support
- Programme
- Timetable
- Students
- Coursework
- Relevance
- Opportunity
- Challenges
- Promotion of courses

## Contact/support

Two of the most common areas for comment in the entire survey are off-site communication with lecturers and VLE usage. Positive and negative comments are more or less in balance. Respondents consider the following are well suited to the needs of part-time students.

*Off site communication with lecturers i.e. lecturers always available to speak on the phone and quickly respond to emails*

*[VLE] and remote access. These are very useful!*

Yet others indicate that these same areas are a problem for part-time students.

*Lack of appreciation from some lecturers that queries require response by email due to the opportunity of contact time being limited.*

*Some lecturers do not post all the information promptly online*

These aspects are important because part-time students have limited access to lecturers while they are attending on campus because of the fullness of their timetable. Indeed, difficulty in gaining direct contact with lecturers outside classes was the most commonly cited problem of all.

*Lack of opportunity to seek support*

*[Not enough] time to talk to lecturers out of lectures*

These were counteracted by some positive comments.

*[Good] availability of lecturers to suit with work schedule and limited time on campus*

But on the subject of direct contact with lecturers, negative comments prevailed. And in spite of the potential for remote communication, students still value this direct contact.

*Sometimes face to face contact is better*

*Some lecturers are very receptive of the requirements of part-time students (others not so much)!*

## Programme

Comments on programme structure were generally positive.

*Module number per year (4 modules) is an acceptable amount for part-time students to complete*

*Length of course can be lengthened or shortened to suit students*

*Flexibility of certain academic pre-requisites. i.e. students being out of full-time education for longer than 10 years and offering the necessary support*

## Timetable

The most common of all the positive comments was that the timetable suited the needs of part-time students (at Aston, blocks of attendance, at the other institutions, day release).

*Course based on one day a week attendance [suits the needs of part-time students]*

*Laboratory work is usually organised in a manner which fits the time required into the day of attendance for part-timers*

However, perhaps confirming the importance of the timetable to part-time students, there were also many negative comments in this area. These particularly concerned last minute changes to the timetable, the timetabling of laboratory classes, gaps in the timetable during the attendance day, and occasions when attendance was expected outside the usual pattern. The timetable problem about which there was most consensus was that the attendance day was tiring and heavily loaded.

*The one day at university can be a very long day with so much to take in!*

*Study on a single day can be very intense when combined with a week at work*

## Students

There were positive comments about the network formed with other students. These were mostly with other part-time students, but there were some positive comments about networking with full-time students.

*Network with other part time and full time students forming support groups*

*The university encouraging working on projects with full-time students, a benefit to both parties*

However, there were several negative comments about group work.

*I work as part of a team every day at work, but working as part of a team at uni was so much more difficult. Not everyone is as dedicated as yourself and this makes things very difficult when you only see them one day a week.*

There were some particularly negative comments about part-time and full-time students being required to work together in groups.

*Forcing part-time students to work in (coursework) groups with full time students in order to share the part time students' experience is unfair / a complete hindrance.*

Some comments implied a low opinion of some fellow students.

*[Unhappy about the] amount of time spent listening to the same information being repeated for those who arrived late*

## Coursework

In this area positive comments prevailed and gave a clear picture of the preferences of part-time students.

*Some assignments are able to be submitted online, this is very useful for part time students*

*Hand-in dates set to be study days to allow part time students the same opportunity as full time*

*You are given assignments early so you have ample time to prepare and write them while you carry on with your day job*

There were negative comments requesting better coordination of hand-in dates and earlier availability of assignments.

## Relevance

There were a number of positive comments on the relevance of course material to work.

*[Course is] industry driven, industry recognised*

*Meets specific industry requirements*

*Some modules are practically/industrially based and reflect real-life projects*

There were several comments that closer links between universities and employers could be a means of encouraging more students to study part-time.

## Opportunity

There were positive comments about the opportunities created by part-time study.

*Part-time education has created for me an opportunity to get a degree whilst being funded by my employer. I am gaining vital experience within the civil engineering industry at the same time as getting my academic base.*

## Challenges

A number of challenges for part-time students were identified. The most commonly stated was the time pressure created by the study work-load and the resulting competition for time between study, work and family.

*I've found it tricky to do a group project on top of my dissertation in year 3. Work and family life have suffered more than usual*

*Sometimes the intensity of coursework for part-time students was difficult due to work/family commitments*

Another challenge referred to by some is long travel distances to get to university.

## Promotion of courses

Responses to the request for ideas to encourage more students to study part-time emphasised promotion and advertising of the benefits of part-time study particularly in terms of professional qualification. Several respondents felt that the accreditation of the course and the importance of professional qualifications were not sufficiently advertised or promoted.

*I think publicity about the part-time courses is needed which also tells people about the benefits of it; it is generally [and mistakenly] accepted by most people that if you're going to university after college or sixth form for example that you've got to do it full time.*

*Accreditation is a big positive in favour of the course and should be highlighted*

The other main thrust in this area was for employers to be better supported in providing part-time study opportunities.

*Provide employers with incentives to send employees on part time courses*

*More employers need to employ staff on a day release training basis with clear progression from a draughtsman to engineer. The experience gained by working and the fact you are earning while your learning are very good points, especially if employers also pay university fees.*

## Guidance

The guidance produced as the main output of the project covers all modes of part-time delivery but gives most detail on part-time courses delivered on campus. Using the experience of the collaborators, in conjunction with the inputs from other universities and colleges, and from employers and students, the main issues in part-time delivery are discussed and guidance is provided. It is set out in sections including:

- Introductory material on the project, and on part-time students and part-time course delivery
- Entry, transition and induction
- Course structures
- Integration of modes and timetabling
- Group work
- Contributions by part-time students
- Tailoring provision, employer input
- Flexible modes: blended and distance learning, work-based learning, bite-sized provision
- Support for part-time students
- Promotion of part-time mode and increasing participation

To illustrate particular aspects, highlighted case studies are presented. Examples of these are:

- Guidance on preparation for higher level learning
- Bridging module content
- Induction sessions and online quiz content
- Integrating part-time and full-time programmes
- Timetable formats and their implications – examples
- Group selection for project work
- Web-based maths support
- Embedding professional technician qualifications
- Mentoring by part-time students

The guidance will be accessible online via the website of the National HE STEM Programme (Davies et al., 2012).

## Evaluation

Evaluation of the project outcomes has been carried out by the collaborators themselves, by an independent evaluator from a different university who has worked throughout with the collaborators, and a senior member of staff at Coventry University who had no earlier involvement with the project. The resulting comments have been used to ensure that the guidance meets its aims.

The views expressed in the questionnaire survey have been a significant contribution to identifying the issues of most importance to students. These are: direct access to lecturers outside classes, online access to lecturers while students are off-campus, effective use of a VLE, strict and predictable

adherence to the timetable format, care that when part-time and full-time students work together the contact is a positive experience for both, well-structured coursework hand-in arrangements, relevance of course material to the work place, awareness of the time pressures experienced by part-time students, and the need to promote and advertise the benefits and opportunities of part-time study.

Reflection on the project as a whole suggests many positive outcomes. It is felt that the final guidance will form a valuable and useful resource. The network formed by the collaborators has allowed the pooling of a significant amount of expertise and experience in part-time delivery. Three out of four of the main collaborators have some experiences in common: delivery of day-release programmes in civil engineering. But the challenges faced in each institution provide strong contrasts, and areas of shared interest have promoted in-depth discussion without the need to constantly define the context. The contrast provided by the inputs from Aston, dealing with a different subject area (power engineering), a different mode (block release), and a closer relationship with employers, has added greatly. The first-hand experience of the team has only covered on-campus delivery, and the outcomes are inevitably focused on this mode. The network itself has been very valuable. It is already clear that it will be sustained as further collaborations have already started.

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