

# **The experiences of part-time students in civil engineering compared with those of full-time students**

**John W Davies** (J.W.Davies@coventry.ac.uk)

Coventry University, UK

---

## **Abstract**

This paper presents the results of two studies of part-time undergraduate students of civil engineering at Coventry University. The first (presented in summary as the details are published elsewhere) involved scrutiny of data; a questionnaire to allow comparison of factual information on part-time and full-time students; and interviews with part-time students and graduates. The study confirmed that part-time students outperformed full-time students, and identified that the greatest advantage came from the skills, attitudes, and motivation that part-time students have developed in the workplace.

The main focus of this paper is a follow-on study involving two in-depth interviews with students who had particularly interesting perspectives on the contrast between the experience of part-time and full-time students. One had studied part-time, but had transferred to full-time for the final year of the course, whereas the other had studied full-time, and transferred to part-time for his final year studies. The student who changed from part-time to full-time appeared to have lost self-discipline when he moved away from a professional environment, whereas the student who changed from full-time to part-time, appeared to have acquired it, together with increased motivation arising from seeing more clearly the practical applications of the taught material and the reasons in career terms for taking the course.

Although part-time study does not suit everyone (a point that is explored in the paper), the case studies reinforce the central finding of the earlier study: that the main factor causing part-time students to outperform full-time students overall is the influence of their professional employment - the fact that they adopt a 'workplace attitude' to study.

## **Introduction**

Following a review of literature on part-time students, this paper describes two studies. The first was a study of part-time undergraduate degree students in civil engineering at Coventry University carried out in 2005/06. The detailed findings are presented elsewhere (Davies 2008) but this paper gives a summary of the findings. The second is a follow-on study carried out in 2006/07 involving two in-depth interviews with students who had interesting perspectives on the contrast between the experience of part-time and full-time students. One had transferred from part-time to full-time for the final year of the course, whereas the other had transferred from full-time to part-time for his final year studies. This paper concentrates on the findings of this second study.

## **Literature on part-time students generally**

Schuller et al. (1997) studied the motivation of part-time students in a range of subject areas and the support they received from their employers. They found that student commitment and satisfaction were high but that employer support was highly variable. Brennan et al. (1999) surveyed 6000 part-time students, including engineering students. The results suggested that there were substantial personal economic benefits to be gained from engaging in part-time study, with the majority of respondents able to obtain better jobs and salaries at the end of their courses than at the beginning.

Many recent studies of part-time students (in any subject) focus on the particular problems and challenges of part-time study (for example Kember and Leung (2004), Leung and Kember (2005) and Yum, Kember and Siaw (2006), studying part-time students in a variety of subject areas in Hong Kong; and Nicholl and Timmins (2005) studying Nursing students in the UK). Kember and Leung (2004) studied the employment of 'coping mechanisms' by part-time students. Three coping mechanisms were identified: sacrifice, support and negotiation of arrangements, operating in four domains: self, family, work and social life. 'Most young adults have full lives so taking on part-time study means that something else has to be given up. It is not normally possible to compromise on work and there is often limited leeway in sacrificing time with, and commitments to, immediate family members. Part-time study therefore normally involves some sacrifice of personal pleasure and a curtailment of social life.'

This previous work sets a clear context for this study. Understanding the reasons for the strong motivation of part-time students should help to explain their success. Part-time students certainly have to make sacrifices in their lives, and this is a major issue for some as we will see. Interestingly, many previous studies focus on the problems and challenges of part-time study as opposed to the advantages.

## **2005/06 study of part-time students**

This study of part-time undergraduate degree students in civil engineering at Coventry University aimed to answer the following questions: 1. What is the difference in performance of part-time and full-time students? 2. What are the reasons for the differences?

A comparison of performance by part-time students and full-time students for four academic years between 2002/03 and 2005/06 revealed that part-time students outperformed full-time students. 67% of full-time CEng graduates obtained 'good' degrees (1<sup>st</sup> or 2.1), whereas for part-time students the figure was considerably higher, at 96%. In level 2 modules the mean of all the part-time average marks was 6.4 percentage marks higher than the mean for all full-time average marks.

The results of a questionnaire designed to allow comparison of factual data on the circumstances of part-time and full-time students gave relevant supporting data on maths qualifications on entry, on working, studying and travelling hours, and on numbers of friends or colleagues on the course and at the University.

The core of the study was a series of interviews with three graduates (individually) and 21 students (in groups). The responses confirmed the sacrifices and challenges encountered in part-time study, but also clearly revealed the advantages of gaining

professional and academic experience in parallel, and the value to a part-time student of the skills, attitudes, and motivation developed in the workplace.

The overall conclusions attempted to identify the main reasons for the better performance by part-time students compared with full-time students. The reasons are *not* to do with maths qualifications on entry since part-time students generally have lower qualifications. Age (maturity) *may* be a factor, though not all full-time students by any means have come straight from school. Some part-time students and graduates described great benefits from being able to link the taught material to experience in the workplace, but some other students indicated this is rare. Part-time students do have high levels of commitment to their studies which partly arises from the fact that most chose civil engineering as a *job* before they chose it as an academic subject. The greatest advantage comes from the skills, attitudes, and motivation that part-time students have developed in the workplace.

### 2006/07 study

The study described above was extended by means of two in-depth interviews in the year 2006/07 with students who had a particularly interesting perspective on the contrast between the experience of part-time and full-time students. Before 2006/07, **Student A** had studied part-time, but had transferred to full-time for the final year of the course (in 2006/07). In contrast, before 2006/07 **Student B** had studied full-time, and transferred to part-time for his final year studies (with effect from 2006/07). Such moves are relatively unusual, and to have a matched pair in this way offered an opportunity to extend the study of part-time study, and to investigate more deeply the contrast between full-time and part-time study for these two students, who yielded, in effect, two short case studies.

#### Student A (from part-time to full-time)

Student A had studied for an HNC in Civil Engineering at Coventry and had continued as a part-time student on the BEng degree at level 2.

He had been an interviewee in the 2005/06 study of part-time students. At that time he related the story of how he had become a part-time student:

*- I had a career change at the age of 21, [and became] a technician for xxx [large consultants], and then I realised I can go on to bigger and better things and the best way to do that was to get a degree. But the idea of dropping out again and starting 3 years from scratch was not going to happen, so I did it part-time.*

By the time of this 2005/06 interview he had become unhappy as a part-time student. This was because he was so determined to do well in his studies that he had had to make sacrifices in his personal life that he found unacceptable. (This relates to the study by Kember and Leung (2004) referred to earlier.) At the time of the 2005/06 interview he had already decided to study full-time the following year. He describes precisely his state of mind, and how he feels his life will improve as a full-time student.

*- The studying itself ... you've got to put a lot of time into it, but it's not impossible to get the work done. But the effect on your time outside of uni and your social life is ridiculous. I mean I didn't want to go for a 2.2 or 2.1, I'm going for the first. ... The effect on my life – it's terrible ... - [When I switch to full-time for level 3] I can't see my grades getting much better, but my quality of life has got to be better. ... And I can start playing rugby again, because I had to stop my rugby training, because I don't*

*finish till late on Thursday [day of attendance at the University], I'm doing homework on the Tuesday night, and I don't have a chance of getting onto any half-decent squad because I can't attend training sessions. Next year that's going to change and I'm going to be enjoying myself.*

He was also aware that as a part-time student he was missing out on a particular life experience (that of a full-time student).

*- All the graduates at work they enjoyed university and I look back on it and I've not enjoyed what I've done so far. I'm doing the work, doing the uni, and there's no time for what I want to do.*

He was interviewed again in March 2007. There was no doubt that he had achieved his objective of enjoying life more.

*How does being a full-time student compare with being a part-time student?*

*- That's got to be the social side of it. Being a part-time student I had no time to myself, it was 9 to 5 working and then afterwards it was hit the books, whereas now I can do both. Except I think hitting the books is taking less of a priority than my sport, my socialising, so actually I'm having fun now whereas before it was all work.*

When asked if he studied more effectively as a full-time student or in previous years (as a part-time student) his answer was clear.

*- Previous years – without a doubt. I am struggling to find the discipline (this year). [When you are working] 9 to 5, if you don't get to work by 9 o'clock you get fired, so you've got the discipline of that, and you're in an environment where everyone's mature and everyone's working because that's a working environment, and now I've left that, it's quite easy to slip into just put things off and not do it and if I don't get up at 9 o'clock it's not the end of the world there's always tomorrow - so there's a big difference. Last year, the discipline was there, whether I wanted to or not I'd hit the books.*

Was he producing work of the same quality as previous years (quality that had been achieved at such great personal cost)?

*- No. I've handed in two assignments late - that would never have happened before, it wouldn't have been an option ... the work standard has dropped ridiculously. I got an assignment back – 57% - that's unheard of - I'd never got less than a first – ever...*

He described a particular characteristic of his experience which was that he was effectively a 'new full-time student'. He had moved into a hall of residence and many of his friends were first year students.

*- If I'd gone through the whole thing, year 1, year 2, year 3, full-time then I would have [settled down] ... You get used to the university life in the first year then most people settle down, knuckle down with it in the second year and I've not done that*

So, which route, part-time or full-time would have given him the best score?

*- To get the best score – would have been part-time without a doubt ... I've got a good idea of engineering in practice as well as the theory. I think I've got all the tools*

*there to get a first, I'm just not applying myself this year like I should do ... I'm not going to get a first based on my best six modules this year – that's not going to happen*

In the end, Student A scored an average of 66% at level 3 with only one mark above 70%, compared with an average of 81% at level 2 with only one mark *below* 70%! He did get first class honours, as a result of his level 2 performance

### **Student B (from full-time to part-time)**

At Coventry, transfer from part-time to full-time (Student A) is very unusual. Transfer from full-time to part-time is slightly more common. Student B completed the first two years of the degree full-time, then transferred to part-time for the final year (day release, spread over two part-time years), while starting work with a large organisation locally.

Student B had not been an interviewee in the 2005/06 study since that study had concentrated on part-time, not full-time, students. It is therefore not possible to compare attitudes expressed while both a full-time and a part-time student, only to probe his thoughts about part-time study and the contrast between the modes after making the change.

When asked about the difference between studying part-time and full-time, he emphasised the main advantages identified by the part-time students interviewed in 2005/06, particularly the discipline acquired from professional employment and being able to see the potential applications of the course material.

*- You have more discipline to do work and you've got something to apply it to as well. When you're listening to something in a lecture, you find it more interesting because you can see where it would be useful.*

The extent to which course material was relevant to professional life was an area of dispute among the part-time students interviewed in 2005/06. Some claimed to find significant benefit from the potential links between study and work, but others were much less confident that such direct links could be claimed. Student B was clear that the potential links were there and that they were a source of motivation.

*- Something like geotechnics – it's given me motivation to learn because we have to do things like flotation calcs at work, so I [wanted to] get an understanding of groundwater ...*

In striking contrast with Student A, who felt that being a part-time student prevented him from living his life the way he wanted, Student B considered that becoming part-time had allowed him 'to get on with' his life.

*- It's because I've got some money coming in so I can do the things I want to do. Picked up a flat with a mortgage, got a car.*

When asked if money motivated him, he said that it did because it gave him 'freedom' (effectively the very asset that Student A insisted he had been denied in his time as a part-time student). Student B felt that money gave him freedom to do the things he wanted to do.

*- I've got more freedom. If you're a student you haven't got the same freedom to go and do the things you want to do. I've got more money to go snow-boarding or surfing or climbing ...*

When asked if there was more pressure on his time as a part-time student, Student B agreed that there was, and described tactics he used to manage his time.

*- You need a bit of time management. Like this year – I've got 3 modules which are core modules and another which is the option module which is Procurement. So what I've done – I haven't really put much effort into Procurement – I've applied it in ways that would be useful to me at work ... I'll probably scrape through – but I've just learnt what's useful ...*

When asked if he felt he would score better marks as a part-time student, he stated that he felt he would achieve *much* higher marks. He was then asked to consider if there were any other reasons for this in addition to points already covered. He made a very interesting reference to 'thinking as a professional', and described very effectively the motivation gained.

*- You get used to thinking more as a professional – you're used to thinking around the problem. Your mind is kind of expanded you can see all the gaps there are to fill with the information when you're in the lectures. ... I can probably learn things three times as quick if I can see a point to it and I feel motivated, than if I'm just doing it because I have to.*

In discussing this motivation, as well as the importance of seeing the point of what he was learning, he described what he considered to be a significant personal characteristic: that he 'only did things for a reason'. When asked about the reason in this case, he stated that it was to progress his career.

Had he given anything up to be a part-time student? Yes – social time.

*- ... students all go out on a Wednesday night. I don't do that. You're going to have to get used to working life eventually, just go out on Friday and Saturday instead – [you'll have to] adapt to that sooner rather than later.*

Student B had scored an average of around 65% in the first two years of degree study (full-time). In 2006/07 he studied four (out of eight) final year modules as a part-time student. His performance in Procurement was as he had planned: he passed with a mark of 45%. In the other three modules, he scored an average of 57%. Clearly these numbers do not confirm his expectations of performing better as a part-time student, though his marks could easily be higher in the remaining level 3 modules taken in 2007/08.

## **Discussion**

These two short case studies add to the findings of the earlier, larger, study of part-time students, and allow some level of direct comparison of the experiences of part-time and full-time students.

The key reason identified in the earlier study for better performance by part-time students was that they adopt a 'workplace attitude' to study. This often includes a clear understanding of the career benefits of gaining a degree, and therefore a link between study ambitions and work ambitions. Since employers are generally paying

for fees (and often the time spent at university) success in studying affects employer esteem. Their motivation in studying becomes that of the workplace. They apply themselves to study for the same reasons that they apply themselves at work: to further their ambitions and improve their own, and their families', lives.

This is completely supported by the two case studies. A key word appears to be 'discipline'. Student A, who changed to full-time, appears to have lost self-discipline when he moved away from a professional environment, whereas Student B, who changed to part-time, appears to have acquired it, together with increased motivation arising from seeing more clearly the practical applications of the taught material and the reasons for taking the course in career terms.

Interestingly, both feel that the move has improved their lives. Student A has more time to pursue his interests (especially when released from the level of academic ambition he had as a part-time student), and Student B has more money to pursue his interests, even though he sometimes needs to employ fairly cynical time-management skills.

Of course we are considering two individuals with completely individual motivations. Also it is clear that both have enjoyed (and perhaps 'needed') the change *per se*. Student A 'needed' more time to enjoy his life, and Student B 'needed' the motivation from seeing the practical application of what he was learning. They both clearly relish the changes that have happened in their lives – yet the point remains that this is at the expense of academic achievement in the case of Student A, and potentially an enhancement of academic achievement for Student B (though that is not so far confirmed by the marks).

In spite of the advantages in terms of potential academic performance, part-time study does not suit everyone. Student A found the sacrifices he had to make in his social life unacceptable. Of the part-time students interviewed in 2005/06 many spoke of the sacrifices and demands, but only one other (out of 21) expressed clear regret about the choice of the part-time route.

- ... *all the social life you miss out on, all the friends you make [as a full-time student], moving away from home. ... what have you gained from university [as a part-time student]? Just your degree. You haven't gained what full-timers gain.*

Part-time student interviewed in 2005/06

But in terms of the potential benefits of part-time study, these 2006/07 case studies reinforce the main finding of the earlier study: that part-time students outperform full-time students overall because of the influence of their working environment.

So, students perform better with much less time potentially available to study provided they have the influence of the working environment. There really is a strong case for promoting the part-time mode of study, in civil engineering at least.

## References

Brennan J., Mills J., Shah T. and Woodley A. (1999) *Part-time students and employment: a report of a survey of students, graduates and diplomats*. Department for Education and Employment.

Davies J.W. (2008) Part-time undergraduate study in civil engineering – students from the workplace. *Engineering Education: Journal of the Higher Education Academy Engineering Subject Centre*. **3** (1).

Kember D. and Leung D.Y.P. (2004) Relationship between the employment of coping mechanisms and a sense of belonging for part-time students. *Educational Psychology*, **24** (3), 345-357.

Leung D.Y.P. and Kember D. (2005) The influence of the part time study experience on the development of generic capabilities. *Journal of Further and Higher Education*, **29** (2), 91-101.

Nicholl H. and Timmins F. (2005) Programme-related stressors among part-time undergraduate nursing students. *Journal of Advanced Nursing*, **50** (1), 93-100.

Schuller T., Raffe D. and Clark I. (1997) Part-time higher education and the student-employer relationship. *Journal of Education and Work*, **10** (3), 225-236.

Yum J.C.K., Kember D. and Siaw I. (2005) Coping mechanisms of part-time students. *International Journal of Lifelong Education*, **24** (4), 303-317.