

EMPLOYMENT PATTERNS OF UNDERGRADUATE CONSTRUCTION STUDENTS

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ABSTRACT

This paper examines the employment patterns of undergraduate students enrolled in the Bachelor of Construction course at the University of Technology Sydney (UTS) and the issues that emanate from such employment. The research underpinning this paper is based on two surveys conducted by the author in 2005 and 2006. The study builds on similar research conducted between 2003-05 for full-time students studying property related undergraduate courses in Australia. The UTS course comprises a relatively even mixture of full-time and part-time students and thus provides a good comparison to these previous studies that largely focused on full-time students. The survey results showed that 97% of UTS construction students were in some form of paid employment and that 42% of students employed in the construction industry worked forty or more hours per week during teaching periods. Whilst most of these students were enrolled on a part-time basis, the hours worked by a major proportion of UTS students were found to be excessive. Whilst most students placed a high value on concurrent industry experience, it is clear that there is a need for both the university and employers to address this situation and better cater for the needs and welfare of these students.

KEYWORDS:

Part-time employment, university education, student employment patterns

INTRODUCTION

The propensity for Australian university students to undertake employment during their university studies has increased substantially in the past decade and has emerged as a major issue for the university sector. Universities are now being forced to re-analyse their educational programs and services to cater for this changing pattern. The shift in emphasis towards employment is dramatically changing the university

experience for many students. McInnes and Hartley (2002) have found that many students now have little sense of the richness that a campus-based university experience can provide. University is becoming only a small part of their lives as students increasingly spend only the hours they need to on campus. Students in vocation oriented courses such as property and construction are particularly likely to seek industry employment during their studies. This paper examines the employment patterns of undergraduate construction students at the University of Technology Sydney in the light of this changing university environment.

LITERATURE REVIEW

Literature on the employment patterns of university students shows that concurrent employment has increased markedly in recent years and is greatly changing the university experience for many students (Vickers *et al.* 2003). A study by McInnes (2001) found that the number of hours spent by Australian university students in paid employment had increased by 38% over the preceding decade and identified a growing disengagement with university life. Long and Hayden (2001) found that 78% of full-time enrolled Australian university students had paid employment and that these employment trends were similar in other developed countries such as the United Kingdom, United States and Canada. The UK government has recognised employer demands that graduates have a range of generic work-related skills and are actually developing strategies to enable all higher education students to undertake work experience during their studies (Little 2001).

Employment has long been a necessity for many university students. The issue now is the extent to which this employment interferes with their studies or perhaps conversely the extent to which their study impacts on their employment. McInnes and Hartley (2002) comment that academics are increasingly voicing concerns about the high proportion of students who appear to lack commitment to their studies, miss lectures and largely disengage with university life. Dwyer *et al.* (2001) contend that student lives are more complex and less certain than in the past and that there is an emerging trend for students to have a more pragmatic approach to tertiary education. Mills and Ashford (2004) found that students are viewing education as subordinate to employment and that the main role of universities is to prepare them for the workplace.

The financial burden on students is another key factor. In a national survey of 35,000 undergraduate students, Long and Hayden (2001) found consistent evidence of financial barriers to full-time study and the need to work to have sufficient income to continue their studies. Increases in student fees and the inadequacy of student allowances were highlighted in the study. The cost of living in major city centres such as Sydney is also a major financial impediment.

In terms of the employment patterns of undergraduate students enrolled in construction and property related courses, studies by Lingard *et al.* (2003), Mills and Ashford (2004) and Mills *et al.* (2005) have shown that employment in this sector is higher than national averages. In a survey of full-time students in the Bachelor of Construction and Property course at the University of Melbourne, Lingard *et al.* (2003) found that 77% were in paid employment and that most students worked as many if not more hours than they spent studying on campus. By the 3rd and 4th years of the course the students were working an average 20 hours per week with some working as many as 40-50 hours in industry-based jobs. They cited findings by Curtis and Lucas (2001) that hours in excess of 10-15 hours per week are detrimental to the educational experience of full-time students. Mills and Ashford (2004) surveyed over 500 students enrolled in construction-based undergraduate degrees in five Australian universities. They found that these students averaged 18 hours work per week during teaching periods. They also found that most students believed that part-time employment benefited their long-term careers and were reluctant to reduce their work commitment. Mills *et al.* (2005) found that students now take a minimalist attitude to education and view access to professional work experience and the development of workplace skills as more important.

This student focus on the workplace is perhaps also reflective of general changes in the Australian workplace. Australians now have the second longest average working hours of countries in the OECD and current trends indicate that they will soon top this list.¹ The Australian Council of Trade Unions (ACTU) found the following:

“ACTU research into workplace issues has found that long hours and the increasing intensification of work is the overwhelming primary concern of workers. For much of the last century Australia led the world in fair working time. But in 1980 Australia started to buck the international trend and hours began to grow. Currently, Australia

¹ OECD research reveals that Korea has the longest working hours in the OECD group.

has the second longest working hours in the OECD. On current trends we will soon have the longest. It is a sad irony that Australia now has one of the worst records in the world. It is time to once again civilise working time” (ACTU 2005, p.1).

THE UTS BACHELOR OF CONSTRUCTION COURSE

Undergraduate degree courses in Quantity Surveying and Construction Management have been provided at UTS since the 1970s. The current Bachelor of Construction course was introduced in 2003 as the result of a merger between the previous Bachelor of Building in Construction Management and Bachelor of Building in Construction Economics courses. The new course is fully accredited by the major domestic and international professional associations for quantity surveying and construction management and provides graduates with academic qualifications in both professional disciplines.

The course is a 4 years full-time or 6 years part-time program with approximately 400 students currently enrolled. The quantity surveying and construction management courses have traditionally been established as part-time courses with a strong emphasis on concurrent industry experience. Up until the early 1990s the normal attendance pattern was 6 years part-time with few students enrolled in full-time study. However, since then, there has been a gradual increase in the number of students choosing to do at least part of the course full-time. The majority of students now undertake the first two years full-time then opt to part-time studies in the latter stages of the course. However, the distinction between part-time and full-time students is now quite blurred with many students classified as full-time but also working full-time.

RESEARCH METHODOLOGY AND FINDINGS

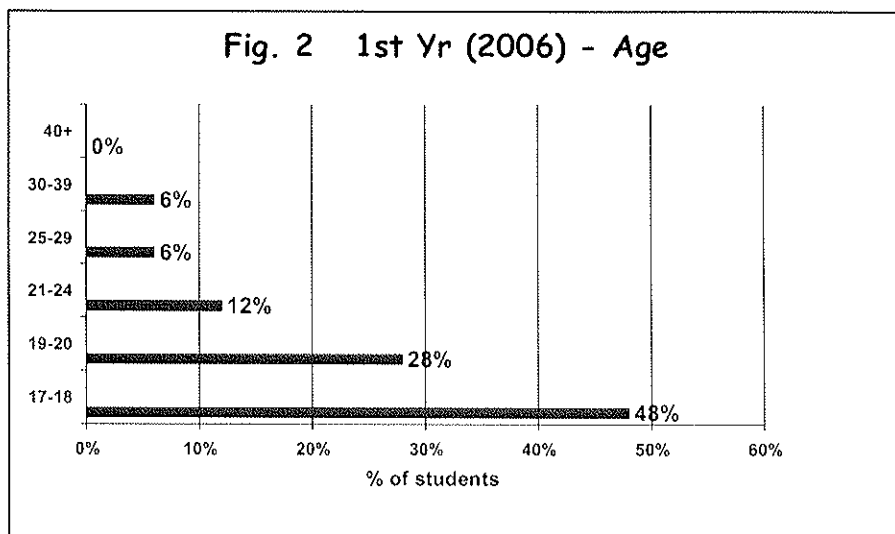
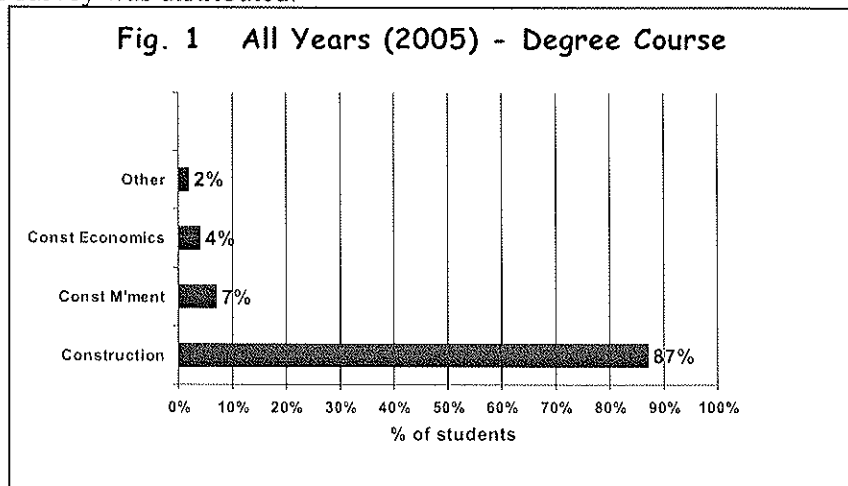
The methodology for this study was based on two surveys of the UTS students conducted by the author in 2005 and 2006.

Survey Sample

The first survey was carried in November 2005 and targeted all students in the program. The survey was distributed in classes representative of each year in the course. As not all students were surveyed it was not possible to identify a response rate. Nevertheless a total of 193 students responded representing nearly 50% of the

total student population. 87% of the sample were enrolled in the new Bachelor of Construction course with the remainder enrolled in either the previous Construction Economics or Construction Management course as shown in Figure 1. This survey group will be referred to as existing students.

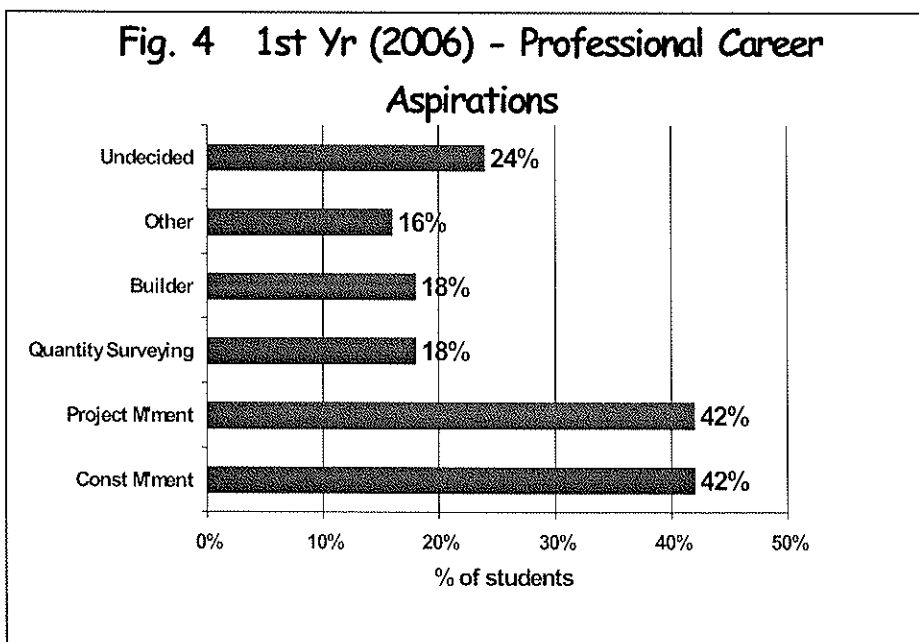
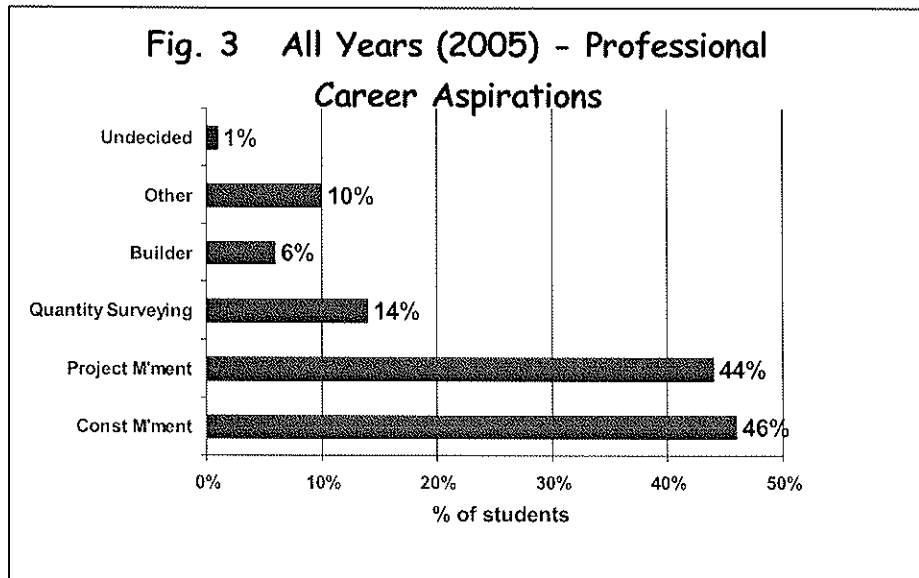
A second survey was carried out the following year in March 2006 and targeted first year students who had just commenced their course. This enabled comparison of the employment plans of new students against the actual employment patterns of existing students. A total of 50 students responded which represented approximately 72% of the first year intake. This survey group will be referred to as new students. An interesting aspect of this sample was that only 48% of these students were in the 17-18 age group that represent immediate school leavers. 28% were in the 19-20 age group which suggests that a significant proportion either defer their university studies for a year after leaving school or transfer from other courses. The proportions for mature age students are actually understated in these statistics as many mature students with previous tertiary qualifications get exemptions from the first year class in which this survey was distributed.



Career Aspirations

The new course provides students with wide employment opportunities including but not limited to quantity surveying, construction management and project management. The career aspirations of students in both surveys are shown in Figures 3 and 4. Students could nominate more than one profession hence the percentages exceeding 100% in total.

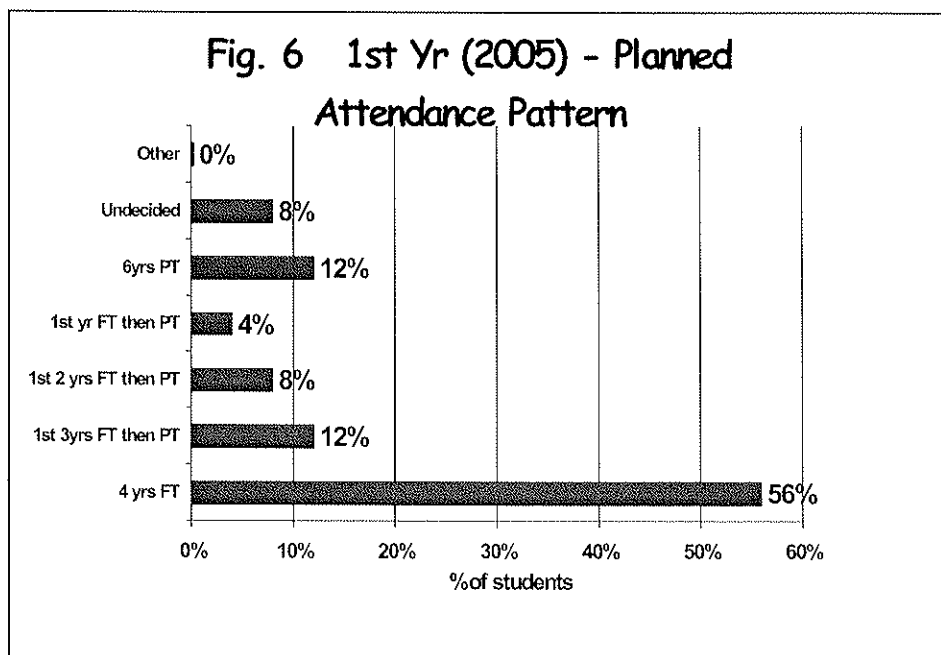
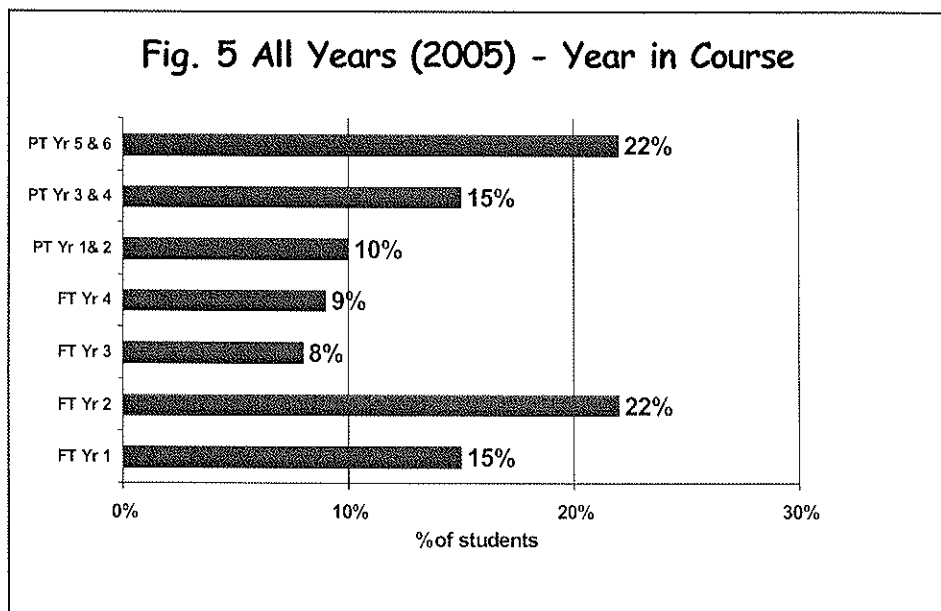
Construction and project management were the clear choice for both existing and new students with 42-46% interested in these areas. 14-18% were interested in quantity surveying. Perhaps surprising was the low percentage of existing students (6%) who were interested in becoming building contractors although this was higher with new students at 18%. However, it was interesting to note that nearly one quarter of the new students were undecided on their career direction but only 1% of existing students were undecided. The most common "other" career for both groups was property development.



University Attendance Patterns

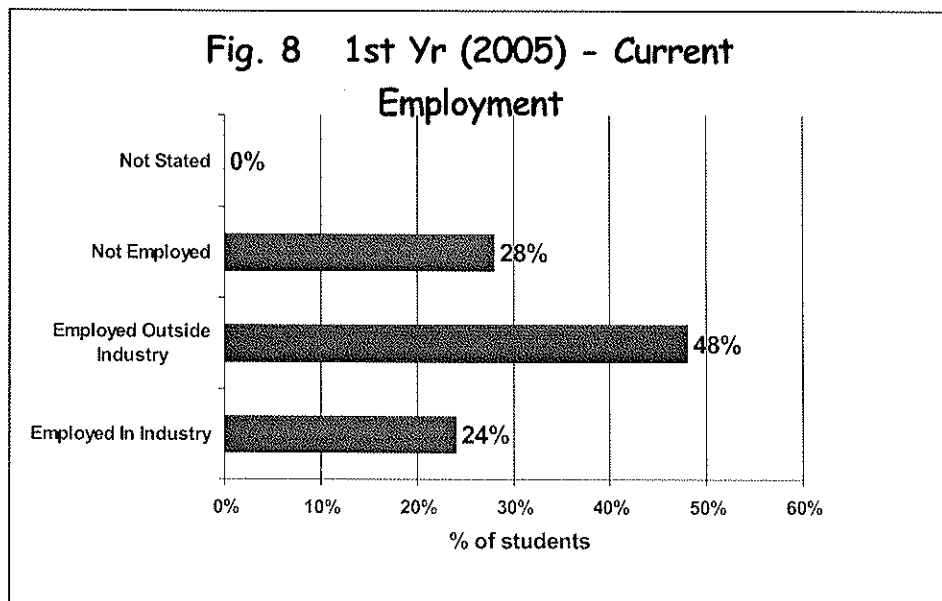
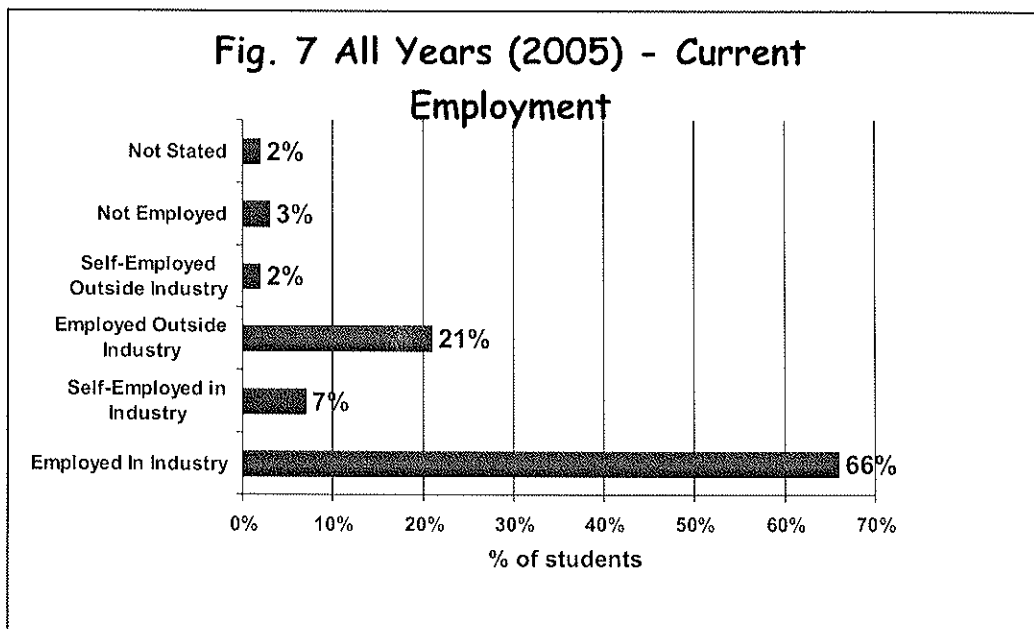
The attendance patterns of the samples are shown in Figures 5 and 6. The existing student sample provided a relatively even spread of part-time and full-time students throughout the course, 47% were part time and the remainder full time.

This provides an interesting contrast to the intended attendance pattern for the new students. 56% of new students planned to complete the entire course full-time whilst the existing student sample indicates that the vast majority switch to a part-time mode during the course. The need for industry experience clearly becomes more important to students as they progress through the course. Perhaps it indicates that students upon commencement do not realise the correlation between tertiary studies and industry experience.



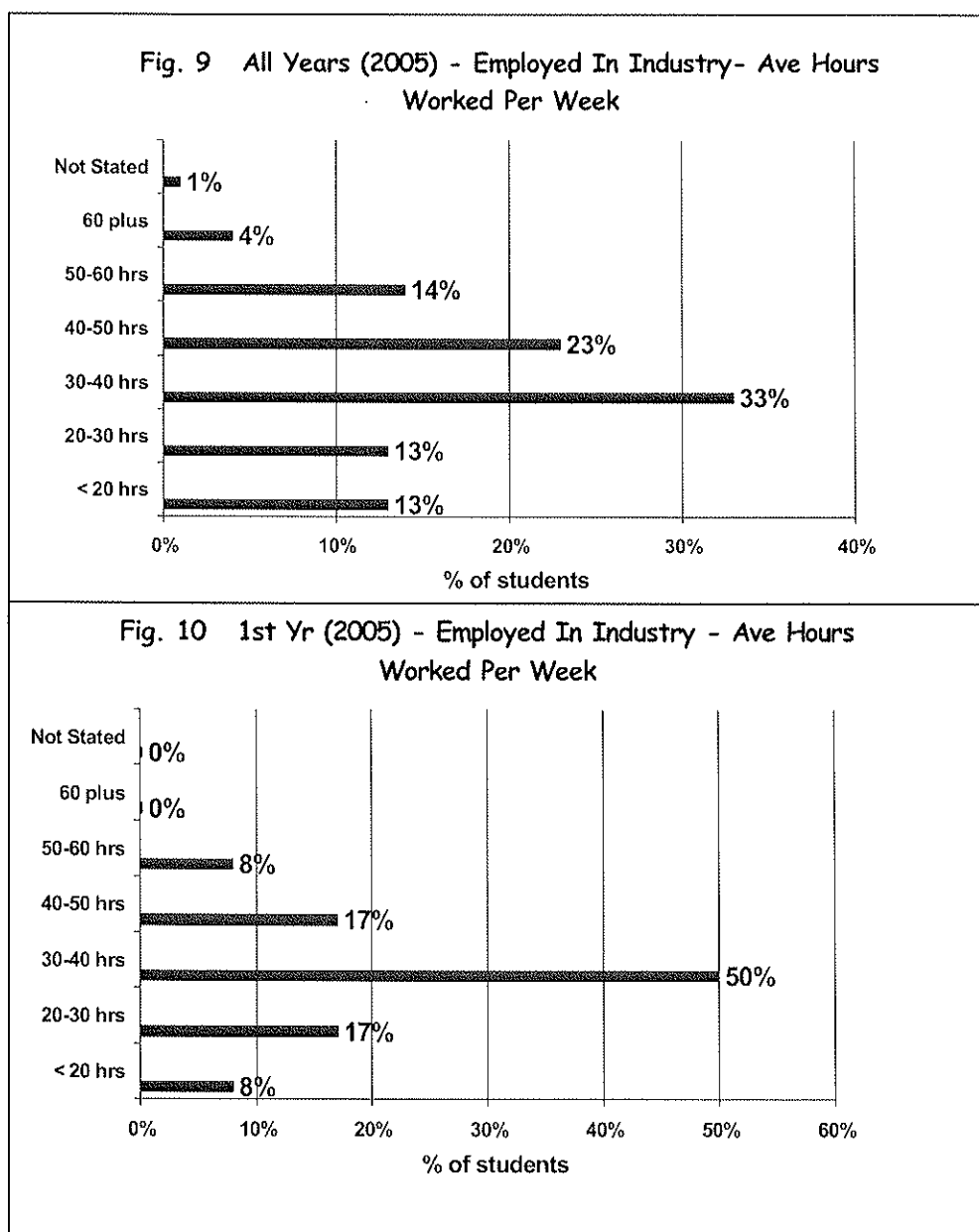
Employment Patterns

Figures 7 and 8 show the current employment status of existing and new students. 66% of existing students were employed in the construction industry compared to 24% of new students. Conversely, 21% of existing students were employed outside the industry compared to 48% of new students. Perhaps the most striking statistic though is that 28% of new students were not employed at all yet only 3% of existing students were not employed. This and the preceding statistics suggest that many new students do not envisage the need for employment within or outside the industry but that this view is likely to change as they progress through the course.



Employment in Industry

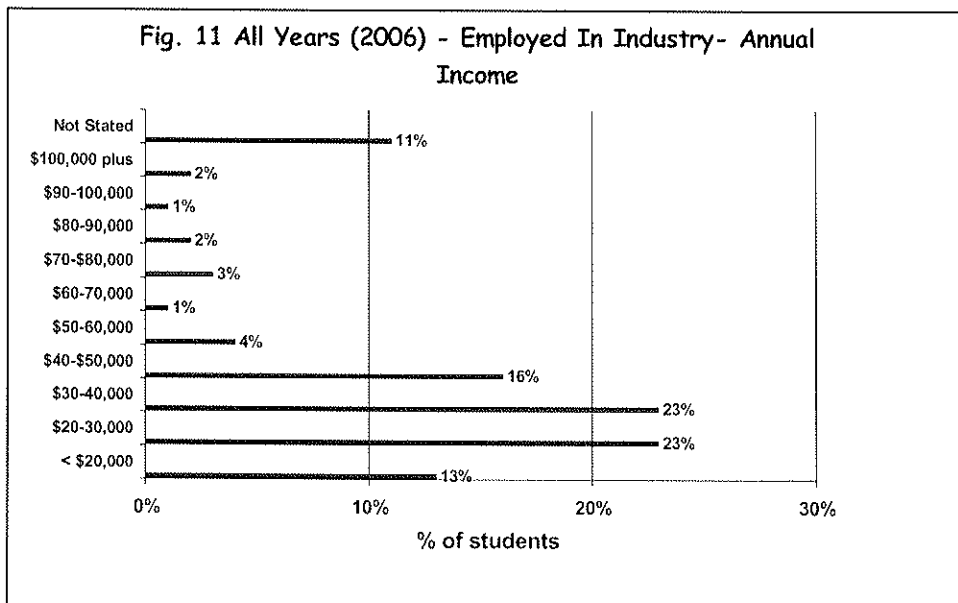
Both sample groups were asked about the number of hours they worked both within industry and outside industry during semester (teaching) periods with the results shown in Figures 9 and 10. These hours are in addition to those spent on their university studies. For those working in industry, the results clearly show that the majority of these students work considerable hours. Interestingly, the work hours of new and existing students are relatively similar. What is of concern is that 41% of existing students employed in industry and 25% of new students work more than 40 hours per week in addition to their university studies.

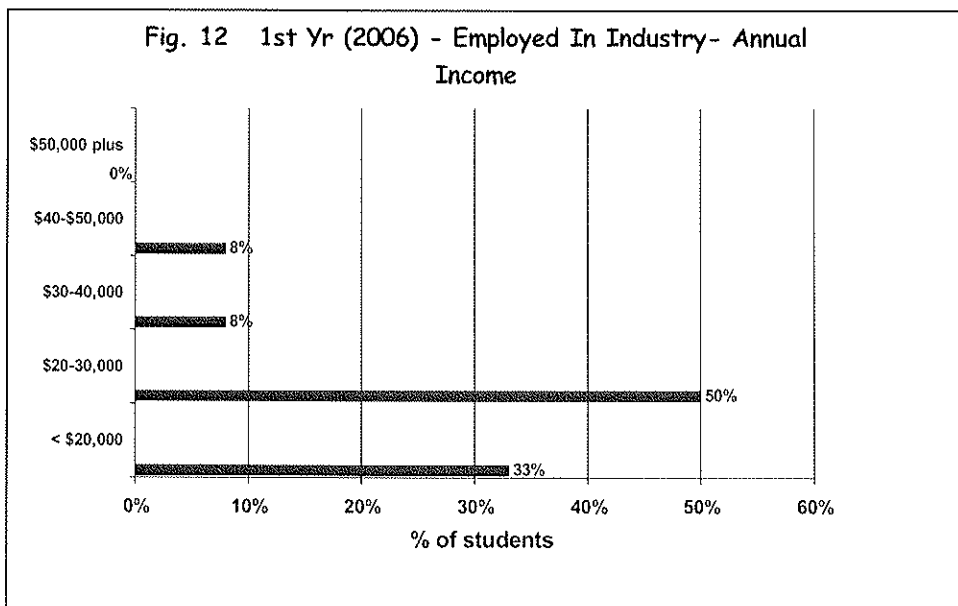


Not surprisingly existing students in the 5th and 6th part-time years of the course worked the longest hours. For these 40 students, 97% worked more than 30 hours. 74% worked more than 40 hours, 33% more than 50 hours and 8% more than 60 hours. Those in years 3 and 4 also worked similar hours. For these 27 students, 85% worked more than 30 hours, 48% worked more than 40 hours, 22% more than 50 hours and 4% more than 60 hours. Of the 17 students doing 1st or 2nd year part-time, 100% worked more than 30 hours, 36% worked more than 40 hours and 12% more than 50 hours.

Even allowing for the part-time attendance mode, these are excessive hours of work that leave very limited time for university life let alone other social and sporting pursuits. The average number of contact class hours per week for these part-time students is 8-12 hours per week. Coupled with travel to and from the university, assignment work and study the average hours spent per week would reasonably be expected to be well over 20 hours per week. If added to the above work hours it is clear that it is virtually impossible for many students to devote the necessary hours to their studies. Hence, there is a need for many students to cut corners by missing classes and reducing the quality and scope of their studies.

The annual income of students in industry employment is shown in Figures 11 and 12. As might be expected, the majority of students are on low incomes. 59% of existing students working in industry earn less than \$40,000 per annum whilst 83% of new students earn less than \$30,000. This suggests that these lower incomes are due to the fact that employers provide on the job training and therefore there is a two way benefit. The concern though is that students are being exploited in the pursuit of their industry experience.





Employment Outside Industry

In terms of employment outside the industry, Figures 13 and 14 show that the number of hours worked was substantially lower than for those working in industry. Existing students working outside the industry numbered 48 of which 54% worked less than 20 hours per week and 27% 20-30 hours. Of new students employed outside the industry, 75% worked less than 20 hours per week. These figures indicate that these students tend to limit this form of employment to concentrate on their studies.

As would also be expected, the average annual incomes of these students is low with 67% of existing and 88% of new students earning less than \$20,000 per annum as shown in Figures 15 and 16.

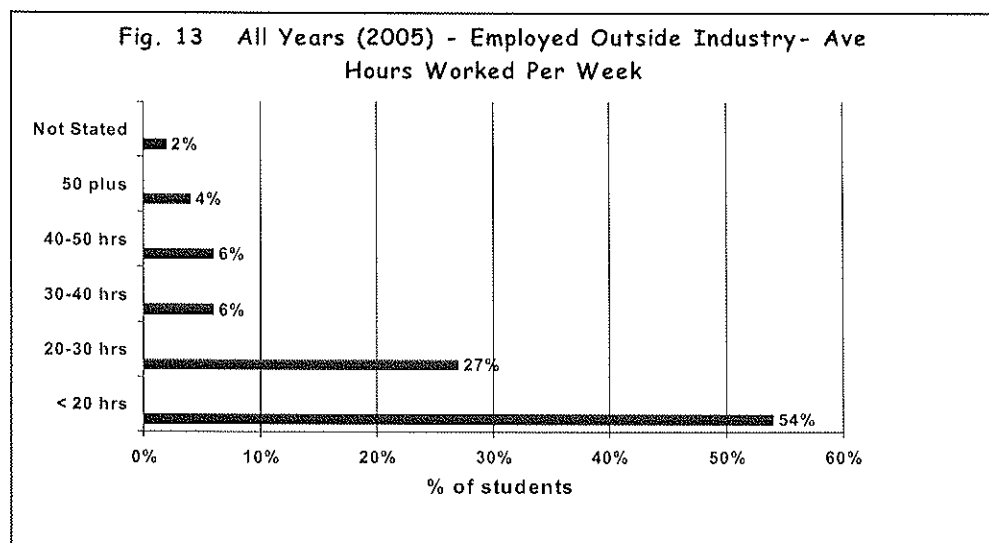


Fig. 14 1st Yr (2006) - Employed Outside Industry- Ave Hours Worked Per Week

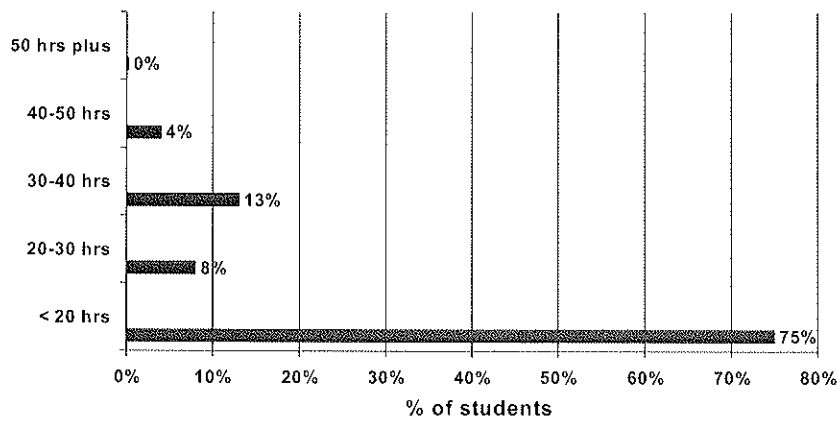


Fig. 15 All Years (2005) - Employed Outside Industry- Annual Income

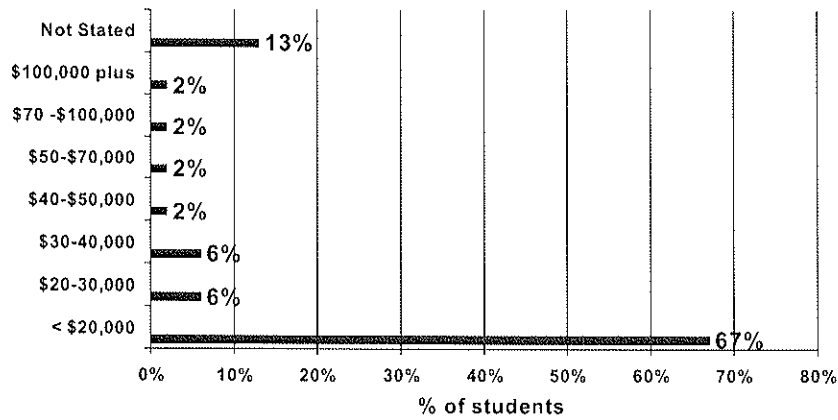
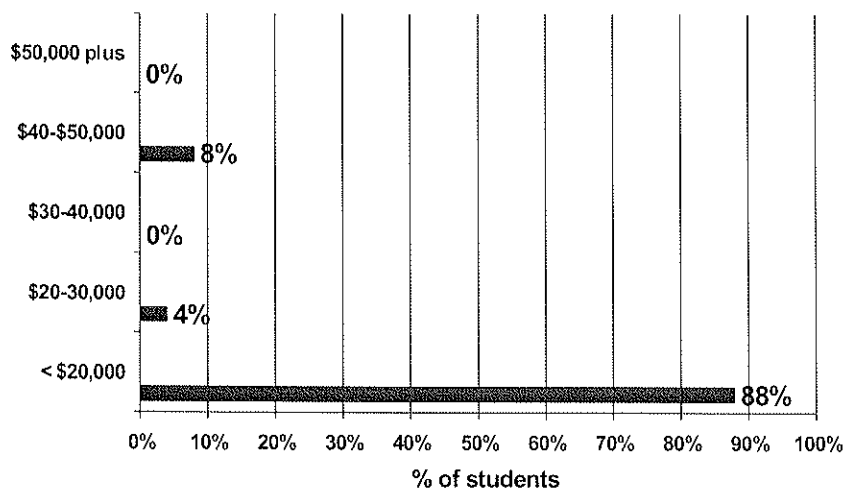


Fig. 16 1st Yr (2005) - Employed Outside Industry- Annual Income



MAJOR ISSUES

This section examines the main issues that emanate from the preceding results and also draw on comments made by the students in each of the surveys.

Working Hours

The results showed that many students employed in industry are working excessive hours that must be detrimental to their university studies. This compares to those working outside the industry where hours worked are significantly less but still high. These latter students appear to be able to better control the hours worked. Conversely, once employed in industry, it appears that students do not have as great a choice in hours worked. Some students commented on the pressure placed on them by employers, either overtly or subtly, to work longer hours to improve their longer term interests in the firm or to simply cope with their workload.

Value of Employment

The large number of existing students working in industry indicates the importance that they place on concurrent industry experience. Many comments were received about the value of the experience gained despite the long hours worked. Conversely, some felt that the course did not do enough to cater for the needs of those working in industry.

University Timetable

The university timetable was the predominant issue of concern for students. Students, both full-time and part-time, were extremely critical of timetables that required them to be at university more than two days per week or where classes were scheduled with large gaps in between or where there was just one class for the day. The favoured attendance pattern was one full day of classes for part-timers and two full days for full-timers. This mode may not be academically sound but clearly provides students with greater employment opportunities. Perhaps this suggests more than anything that many students place more importance on their employment than their university studies. Students in the latter years of the course were particularly concerned with the course timetables and felt that there was a need for greater recognition of their employment experience.

Flexible Learning Options

Many stated the wish for work based learning options particularly in relation to assignment work. They felt that it was unnecessary to have to do assignment work in areas that they were working on in the workplace. Students also stressed the need for more flexibility in terms of class attendance and assessment. Mixing up subjects with online learning and off campus assessment tasks to reduce the number of contact hours on campus were considered important to help the students cope with industry demands.

Over Assessment

Given the number of hours worked by many students, student assessment loads now take on even greater importance. There is probably a tendency in many construction programs (and university courses generally) to over-assess students, overload them with assignment work and not provide them with the opportunity to step back and develop thinking and reflective skills. An emphasis on quality assessment rather than quantity of assessment is necessary.

Duration of Course

Some students commented that the course was unnecessarily long. Given that comparative courses in countries like the United Kingdom are typically 3 year full-time programs (compared to 4 years in Australia) this argument may have some merit. This may particularly be the case with students studying a course over 4-6 years in a combination of full and part time study modes. There is a tendency for many construction related degree programs to try and cover as many topic areas as possible and typically there is the lament that there is not enough scope to cover everything properly. Perhaps there is a need to re-think the scope of study for students and to focus more on the competency and learning skills of the students rather than trying to cover too much.

CONCLUSION

The survey results have shown that the vast majority of students in the UTS program place great value on concurrent industry employment and are prepared to work long hours to obtain this experience. The hours worked are well above those identified in previous studies. This is largely due to the emphasis placed on part-time study in the UTS program. An interesting finding was that the majority of students at the commencement of their course planned to complete their program entirely full-time

but only a small proportion end up completing in that mode. As students progress through the course the value of employment becomes more evident and the majority of students end up in a part-time mode in the latter years of the course. The strong emphasis placed on co-operative education by UTS is very much in tune with current trends in education and the workplace. The challenge for both the university and industry employers is to provide a more reasonable balance between the workplace and university to enable students to optimise the benefits that both provide.

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FOREWORD

Welcome to the 31st Annual AUBEA Conference held at UTS 12- 14 July 2006. AUBEA is not only the biggest and most important Australian conference in its field but is now well established as an important international conference attracting offers of papers from North and South America, Europe, Africa and Asia: a total of twelve different countries as well as all Australasian university schools of building.

The papers included in this volume of proceedings have gone through a rigorous reviewing process. Initially all abstracts were reviewed by a panel of experts in the areas covered by the conference. The full papers, based on accepted abstracts, were then independently peer reviewed by a minimum of two Australian and/or international experts and where substantial rewriting was required, these changes were again reviewed. As a result of this process, the revisions required were frequently very significant and at the same time the rejection rate was quite high.

The result, we think, is a set of stimulating, thought provoking and significant papers that we hope you will enjoy for their contribution to our discipline.

Göran Runeson and Rick Best

July 2006