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A Model of the Conflicts between Student Work and Study

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ABSTRACT

Excessive work demands cause students to have less time available for study, which results in them missing lectures and tutorials. This study seeks a more accurate understanding of why students undertake part-time work to the level that they do. This paper examines the extent of employment of undergraduate students enrolled in property and construction at RMIT University. Students responded to a questionnaire on the duration and nature of their part-time work.

The results of the paper suggest that one of the major issues facing educators is that students themselves believe that part-time employment benefits their long term career. Hence they are reluctant to reduce their work commitment. Past research suggests that there is sufficient evidence that this will create work-study conflicts. The paper concludes by suggesting that some form of work-integrated learning process may benefit both the student's learning and their need to obtain work skills.

Keywords: student work study balance, work life balance.

INTRODUCTION

Graduates of construction course enter an industry which is under supplied with tertiary trained people and salary prospects are very good. This research asked students about their long-term motivations for work and contrasted this with their short-term financial imperatives. In addition, this research considers whether universities have a responsibility to their students to assist them in obtaining the best educational outcomes and not just provide them with pathways to a job

Students seem to accept a view that education is subordinate to employment, and that a university exists to prepare individuals for the world of work. This statement is based on a study of over 500 students who were enrolled in construction-based undergraduate courses in five universities across Australia conducted by the authors a few years earlier. (Lingard, Mills and Ashford 2003, Mills and Ashford 2004)

The changing attitudes of students towards their own education are having an impact on the ability of universities to offer broad educational experiences. Past research by the authors (Mills and Ashford,2004; Lingard et al, 2003) has shown that students now adopt a minimalist attitude to tertiary education because they have become aware that a degree alone will not guarantee entry to a profession. The value of an undergraduate education is less valuable than it once was. In addition, students are

spending larger amounts of time undertaking part-time work. The paper suggests that professional work experience should be included in undergraduate courses in a more formalised manner.

Aims and Objectives

This paper builds on previous work which measured the amount of paid work being undertaken by built environment students; comprising, quantity surveying and construction and project management. The paper presents an exploratory analysis of the factors predicting construction undergraduates' work conflict with university study. The aims of this paper were to:

- explore the extent to which students work and study; and
- develop a model of the work-study interface, describing the Conflict between paid work and study due to time commitments to paid work and study,

The conflict between one's work role and other life roles is an important aspect of the relationship between work and non-work life. Much research and theory building has focused on the conflict between work and family. For example, Greenhaus and Beutell (1985, p77) defined work-family conflict as "a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect." In adult life work and family are primary life domains and researchers have developed and tested various models of the antecedents (eg work hours, number of children etc) and consequences (eg absenteeism, low job satisfaction) of work-family conflict. Very little theory development has related to the forms of inter-role conflict affecting adolescents or young adults in full time education. However, the work-family literature provides a useful basis for this development.

Markel and Frone (1998) suggest that that, in adolescent life, work and education are likely to be primary life domains. Empirical evidence indicates that the number of hours spent in paid employment each week is positively associated with a sense of conflict between work and education among adolescents and young adults (Markel and Frone 1998)

Work Study Conflicts

McInnis (2003) stated that the results of various studies over a number of years showed that undergraduate students are unclear about their obligations to the university, and tend to spend less time on tasks that improve their learning experience. Instead, students are more pragmatic about their study and view learning as a vehicle to obtain work. The emphasis is now focusing on the universities who are beginning to detect that modern students have lower expectations of higher education and consequently there is a lower demand for full educational experiences. This according to McInnis (2003) has reduced the student incentives to be engaged in the education process.

Other studies (e.g. Curtis, 2000) have found that many students do not consider university to be a full-time occupation and that when not in class they are available to work. This attitude can have a detrimental effect on the cohesion of group work performed outside class and can consume the time available for extra reading around subjects.(Watts 2002).This can lead to a climate of individuals straddling their academic work and the labour market whilst not being fully committed to the cultures of either (Hodgson and Spours 2000).

Other research, (Taylor 1998) found that, although students were often contracted to undertake work hours that do not conflict with university commitments, it was common to find that employers subsequently do place students under pressure to work hours that interfere with their study, including during exams periods. Only 32 per cent of respondents in the study by (Curtis 2000) said their employers allowed them to work fewer hours around examination time and these findings were reflected in the comments made by students in the study presented here.

A model of the work and university interface

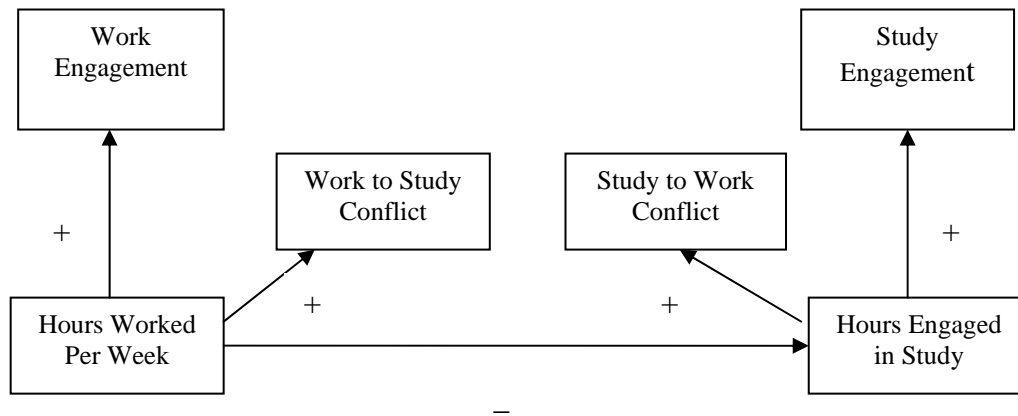
For the purposes of this study a model of the work-university interface was developed based upon a model of the work-family interface, proposed and tested by (Frone, Yardley and Markel 1997). This model uses work-study conflict as a key mediating variable in the relationship between the time demands of both work and university, students' satisfaction with work and university life and burnout. Thus it is suggested that time demands impact upon students' work-study conflict.

Work-university conflict represents the extent to which involvement in one role (e.g. work) interferes with students' ability to participate in the other role (e.g. university). However, consistent with the research on the work-family interface, work-university conflict is conceptualized as a bi-directional phenomenon. Therefore, a distinction is made between the extent to which participation in paid work interferes with students' ability to meet university responsibilities (work-to-university conflict) and the extent to which participation in university life interferes with students' ability to fulfill the requirements of their paid work (university-to-work conflict).

In the model (Figure 1), role-related time commitments are regarded as predictors of work-university conflict. Time is a limited resource and university students' time commitments to paid work reduce the time available to fulfill duties required of another role. It may therefore be expected that excessive time involvement in paid work would make the fulfillment of university requirements more difficult for students, giving rise to a sense of work-to-university conflict. Conversely, the time requirements of university might negatively interfere with students' work responsibilities, for example when a lecture clashes with a scheduled project meeting. Thus it was expected that there would be a positive relationship between the number of hours spent at university and university-to-work conflict.

This research focused on the motivations of students to seek work during semester time. The hypothesised model in Figure 1 has been used to validate work-study conflicts of construction students The next section of this paper outlines the research instrument used to collect the data on student attitudes to work.

Figure 1 Hypothesized Model of Work – Study Interface



METHODOLOGY

The research was based on a paper-based questionnaire, which was adapted from similar studies of Work-Family conflict. Three academic staff from RMIT university were contacted, each were asked if they would assist by offering a questionnaire to their students enrolled in the RMIT University, Property Construction and Project Management courses. Students were asked to respond to questions on a number of issues including; the reasons for seeking work, the type of work undertaken, and the amount of time spent in paid employment and the amount of time spent studying during semester.

The survey forms were given to each course coordinator for distribution to students in class. The completed survey forms were returned anonymously into a closed box. The data was entered into an Excel spreadsheet, which was later converted in to SPSS for analysis. In addition, each course coordinator was asked to specify the total number of students enrolled in their courses. The overall response rate was 23% (104/450) indicating that the survey represents a sufficiently large sample of the courses

The survey contained 35 questions in a closed format; however a number of questions allowed students the opportunity to add additional comments. Random checks were undertaken to rule out the possibility of non-response bias. Each year level in the courses offered comprises between 40-90 students, and in all cases a minimum one-quarter of the cohort responded. The next section of the paper presents the results of the survey.

One of the principle aims of the research was to explore more deeply the impact of paid work on the undergraduate student study experience. Past research by the authors

(Mills and Ashford, 2004; Lingard et al, 2003) indicated that students were working sufficiently long hours to experience conflicts with university study. Work-to-Study conflict was measured using a modified version of the bi-directional work-family conflict scale developed by (Netemeyer, Boles and Mcmurrian 1996). Items were reworded to replace aspects of family life with study or university life. For example, “the demands of my work interfere with my home and family life” was changed to “the demands of my work interfere with my study.” Items were rated on a seven point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The next section presents the results of the questionnaire, including the amount of time students spend on work and study. In addition, the respondents were quizzed about their perceptions of their work-study conflicts, this data was then analysed to produce a model of the work-university interface.

RESULTS

The number of hours students work during semester-time was relatively high. Table 1 indicates that students spend on average 24 hours per week engaged in part-time work during semester. This is slightly higher than the amount of time spent by students in a prior study of built environment courses around Australia. The results of previous research conducted by the authors (Mills and Ashford, 2004; Lingard et al, 2003) showed that other university students averaged 18 hours of paid industry work per week during semester time.

Table 1. Average number of hours worked per week (Semester 2) by Type and Year

	Casual Work	Industry-based Work	Average
Year 1	19.0	5.3	17.1
Year 2	17.5	23.3	20.2
Year 3	19.8	17.1	17.7
Year 4*	26.2	41.1	38.1
Total	19.7	27.1	24.0

* 4th year students are only enrolled in research projects that require only limited class attendance

Table 2 shows that the average number of hours worked each week by type of employment. Industry based work comprised employment in junior positions in quantity surveying, construction and project management. Casual jobs were those that were not related to the construction industry, and did not have a career dimension that was relevant to the student’s course of study.

Casual work (i.e. non-industry work) consumes the fewest hours each week (19.7 hours), while working in industry-related jobs consumes more time (27.1 hours). An independent sample T-test was conducted to assess whether there were significant statistical differences between the work types. Students working in industry-based occupations do work significantly more hours per week than those in casual employment at the 5% level. ($t=-.2.882, p=.005$).

As expected, the results of Table 1 shows that most students tend to work in industry-based jobs in the latter stages of their course. The results show that only 14% of Year 1 students work in Industry; this rises to 80% by Year 4. This shift begins to occur from about third year when students reduce their preference for casual-based work. This indicates that students perceive there is more benefit in perusing industry-based work compared to casual work when it becomes available.

The results in Table 2 show that the average time spent on campus for study purposes was 16.1 hours per week. This was time allowed to attend lectures and tutorials, and also includes time spent in study groups and access to the library. The data shows that students spend more time on campus in the early years of their course, compared to the latter years. The results of this study (16.1 hours) is similar the research done previously by the authors (Mills and Ashford, 2004; Lingard et al, 2003) which as 18.0 hours.

Table 2. Average number of hours engaged in learning per week (Semester 2) by Worker Type and Year

	Casual Worker Learning	Industry-based Worker Learning*	Average
Year 1	20.5	19.3	20.4
Year 2	15.3	18.5	16.9
Year 3	20.3	16.7	17.4
Year 4*	12.8	10.9	11.3
Total	18.0	14.9	16.1

* 4th year students are only enrolled in research projects that require only limited class attendance

Motivations for seeking work

The survey asked respondents about their reasons for seeking work; the questions were based on a similar study by Lucas, (1997). The students were offered a limited list of seven reasons for work. The results of the study (Table 3) indicate that financial gain was not the most important reason why students work. Instead, students believed that work was mostly undertaken because it benefited their long term career, as well as their undergraduate studies.

The results of present research support the work of Lucas; students work for a variety of reasons but financial imperatives are not the main motivation. This result indicates that students perceive industry-based work is of greater educational/career development value than its ability to provide financial reward. This also supports the work of (Micklewright, Rajah and Smith 1994) who suggested that the unknown future state of the industry encourages students to seek work as soon as possible.

Although the students stated that the most important reasons they seek industry work is because it benefits their long-term career. It may be reasonable to suggest that the benefits may be due to maintaining industry contacts and developing a stronger resume for future job applications. This may be occurring in spite of the negative impact on their educational experience at university.

Table 3 -Indicate the extent to which the following statements relate your reasons for work (Disagree 1 to Agree 5) (Q17)

Reason for work	Mean Score	Rank
It benefits my long term career	2.3	1
Because it is beneficial to my studies	2.7	2
To pay for my essential living expenses	2.7	2
To provide income for my social activities	2.7	2
To save money for special purposes	3.0	5
I feel it necessary to have a job in industry	3.1	6
The rates are better than for casual employment	3.8	7

An independent sample T-test was conducted to assess whether there were significant statistical differences between the *Reasons For Work* (Q17) between various groups within the survey. The results of Q17 were analyzed by university, gender, and course and no statistical difference was evident at the 5% level. This indicates that student motivations for work are essentially the same across all major subgroups within the sample.

The overall results indicate that students engaged in a significant amount of paid work while enrolled as full time students. There appears to be sufficient evidence that students may experience work-university conflicts. The next section of the paper examines the student's perception of that conflict and whether it can be predicted by the time spent at work or engaged in university learning.

Factor Analysis of Work and Study

Past literature on Work-Family conflict suggested that there were a number of issues that resulted from the amount of time students spent working and studying. A set of questions were devised to examine the effects of;

- (1) Work to Study conflict
- (2) Study to Work conflict
- (3) Work Engagement
- (4) Study Engagement

The questions in Table 4 show factor loadings that applied to the above aspects of work-study interfaces. A principal components factor analysis with varimax rotation confirmed the discriminant validity of the four dimensions. The results of this analysis are presented in Table 4. Items loaded clearly on the four factors which explained 76% of the variance.

The factor loading were saved and correlated with the time spent in work and time spent engaged in study. The next section of the paper examines the correlations of each of the components and offers some possible explanations of the results.

Table 4 – Factor Analysis of Work Study Conflict

Survey Question	Component			
	1	2	3	4
I am enthusiastic about my paid work	.066	-.072	.812	.136
My job really inspires me	-.026	.065	.930	.040
I find my job full of meaning and purpose	.032	.118	.881	.091
I am enthusiastic about my university study	-.014	-.012	.187	.861
My study really inspires me	-.115	.053	-.052	.936
I find my university study full of meaning and purpose	.018	-.183	.153	.868
The demands of my work interfere with my study	.875	.126	.053	.043
Because of my job I can't involve myself as much as I would like in my study	.913	.094	.063	.017
The things that I want to do at university do not get done because of the demands my job puts on me	.864	.213	-.018	-.140
There is conflict between my job and the commitments I have as a university student	.831	.319	-.039	-.076
The demands of my study interferes with work-related activities	.463	.618	.122	-.017
I sometimes have to miss work so that study responsibilities are met	.422	.691	.182	.046
Things I want to do at work do not get done because of the demands my university study puts on me	.307	.827	.077	-.064
My study interferes with my responsibilities at work, such as getting to work on time, accomplishing daily tasks and working overtime	.251	.833	.058	.026
My employers and/or co-workers dislike how often I am preoccupied with university life	-.162	.623	-.186	-.145

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 5 iterations.

Correlations

Bivariate Pearson correlations between the variables measured in the research are presented in Table 5. Inter-correlations between the factors and the work and study hours showed that little conflict seems to exist. Surprisingly only *Work to Study Conflict* was significant. Contrary to expectations, neither the number of hours students spent in paid work or the number of hours per week engaged in learning were significantly correlated with the *Study to Work Conflict* dimension.

The results (Table 5) indicated that *Work to Study Conflict* was also positively correlated with *Hours Engaged in Learning* ($r = .264, p = .010$). *Hours Worked per Week* was negatively correlated with *Work to Study Conflict* ($r = -.371, p = .000$). And also *Hours Work per week* was also negatively correlated with *Hours Engaged in Learning* ($r = -.434, p = .000$).

The results of the survey have shown that students seemingly work long hours in industry-based jobs while also engaged in full-time study. Past research indicated that this mix was a recipe for conflicts. The incidence of high levels of work does translate into Work to Study conflicts, but surprisingly not into Study to Work conflicts. This suggests that students are concerned more about meeting work obligations, and less

worried about missing learning opportunities and study. The next section of the paper discusses the above findings and draws some conclusions.

Table 5 : Bi-variate correlations between the variables

Factor	1.	2.	3.	4.	5.	6.
1. Work to Study conflict	1					
2. Study to Work Conflict	.000	1				
3. Work Engagement	.000	.000	1			
4. Study Engagement	.000	.000	.000	1		
5. Hours Worked per week	-.371**	-.075	-.016	.170	1	
6. Hours Engaged in Learning per week	.264**	-.063	.152	-.071	-.434**	1

** Correlation is significant at the 0.01 level (2-tailed)

DISCUSSION

As previously mentioned Watts and Pickering (2000) indicated that the skills learned at work are transferable, and students who work are more employable due to the development of organizational and time management skills. However, work in excess of the 10-15 hours per week is believed not to be beneficial to student learning (Curtis and Lucas, 2001). The results of this research was that students appear to be working longer than what may be considered useful to gain work skills. Instead, students appear to be increasingly uninterested in connecting with the broader university experience, and instead seek to adopt a minimalist approach to learning.

The results of the RMIT study validate the previous studies of other built environment courses across Australia. Students in Built Environment courses tend to work longer than average for all students in Australia which is 14.7 hours per week (Mcinnis 2003)

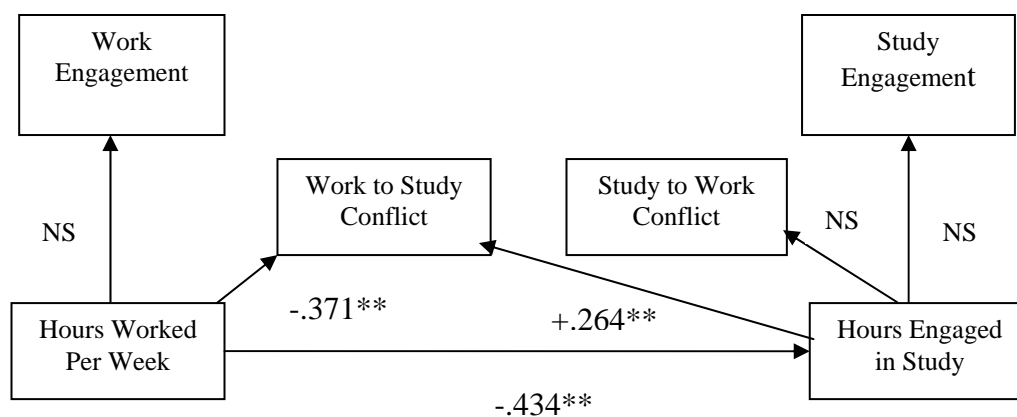
This seems to be supported by the results of Table 3 which shows that highest ranked reason for work was that it benefited their long –term career. The results show that students change their preference from casual work in the early part of their course to industry-based jobs in the later years. It seems that over time the benefits of casual jobs become more limiting because it is not possible to obtain career experience while undertaking non-industry work. The undergraduates in the study seek property and construction related positions as soon as they can in order to begin their careers.

The study confirmed that many students were working and studying for long hours during a typical semester week. This suggested that there is some evidence to suggest that work-study conflict exist, although the conflict seems to be asymmetrical and does not seem to affect their ability to meet the demands of study. The next section explores some aspects of the conflicts as perceived by the student respondents

Work to Study Conflict

Past research based on work-family conflicts suggested that impacts were expected to be bi-directional in nature. In other words, there should be both study to work conflict, and work to study conflict. The results of this research were somewhat surprising. Students' experiences at the work-university interface are presently asymmetrical with students indicating a greater tolerance for the time demands of paid work than those of university study. Overall these findings suggest that the students in the present sample resent the time commitments required of university.

Figure 2 - Correlation coefficients for work-university interface



** Correlation is significant at .01 level (2-tailed)

NS Correlation is Not Significant

Students who spend more time at work seem to spend less time at university engaged in study. The results correlation analysis in Table 5 has been used to form the model in Figure 2. The model indicates that when student worked longer hours it reduced the time available for university but that contributed to less *Work to Study Conflict*. In addition, there were no significant correlations with the *Study to Work Conflict*.

The non-significant relationship between time involvement and students' perceptions of work-university conflict was unexpected. This finding indicates that work-university conflict does not mediate the relationship between time demands of work or university and the outcome variables measured in the study. This is in contrast to the role played by work-family conflict, which mediates the relationship between time demands of work and burnout in employed adults. This result also suggests that, among the students in our study, the amount of time spent in paid work may be a less significant source of work-university conflict than other variables. This finding is similar to a report by (Ackerman and Gross 2003) that marketing students in an American university were less affected by a perceived scarcity of free time than by an individual's emotional reaction to work and university commitments.

Future research should examine the extent to which variables other than time involvement predict students' work-university conflict. Other variables of interest may include subjective perceptions of the qualitative and quantitative workload,

available resources and support and the amount of control that the students are able to exercise over their work and university arrangements. Students' commitment to their work and/or their university education was not measured in this study but it is possible that these findings reflect that the role of employee is more salient to Property and Construction students than the role of university student.

CONCLUSIONS

In higher education research there is a growing interest in the importance of work-based learning, which is defined as linking learning to the work role. The significance of this research was that it demonstrated that when student worked longer hours it reduced the time available for university, but that it also contributed to less *Work to Study Conflict*. In addition, there were no significant correlations with the *Study to Work Conflict* suggesting that they placed greater value on work experience than on study, particularly in the final years of their course. If this is the case universities should consider whether the length and type of education on offer is still appropriate to students intending to enter the construction industry.

Garavan and Murphy (2001) suggested that work-based learning requires consensus and agreement from key players in the learning process, namely: the individual student; the employer; and the higher education institution. Work-based learning helps to bridge the gap between theory and practice by permitting reflection on actions and the testing out and re-applying of theories when faced with dilemmas and when confronting new situations in the workplace. The results of this research suggests that some form of work-based learning may provide the necessary link between the students need for work and the necessity for deeper educational experiences as a student.

Past research by Garavan and Murphy (2001) identified a number of different models of work-integrated learning none of which has been examined in this research. For example, one model explores how each course could develop an alternate model of assessment so that students can choose to either do the standard piece or an equivalent work-based one, which draws on and uses their paid work experiences/activities. In other words, students could either do the assignments as set by their lecturer, or alternatively negotiate with the lecturer to undertake work-based tasks that can be used for academic assessment. This requires great care to ensure that lecturers can assess the work-based experiences against rigorous academic standards rather than just industry custom and practice, i.e. the alternative assessment must capture students' independent reflection and learning. This is also likely to require some cooperation and commitment from the student's employers.

Another model identified a set of capabilities in the program which could give credit for a portfolio of evidence that documents the development of these capabilities from work-based activities. Multiple assessment options could be developed and spread across the program or be clustered around discipline specific capabilities. In this way recognition of concurrent relevant industry-based learning will be acknowledged and formalised. In other words, academic credit may be given to the acquisition of broad professional competences gained in the work place. The research by (Sher *et al.* 2004)

matched work-based learning experiences with the development of profession competence of the Australian Institute of Building.

However, it is unclear whether universities should require industry experience as a formalized component of the course. University policies generally do not allow students to be remunerated whilst undertaking practical work experience that is assessed as part of an undergraduate degree. Whilst industry would readily accept free student practical experience labour, this may be an unreasonable expectation on the student as well as a financial burden. In addition, university monitoring of student experiences would then be necessary as part of the package for quality assurance purposes which leads to higher educational costs to the university.

Although there is substantial past research that shows that work can provide very positive benefits for obtaining employability skills. This study suggests that there are three major challenges. Firstly, to identify the employability skills and attributes that students need to obtain. Secondly to identify the model for learning that best integrates their work and study experiences. Thirdly, to develop tools that allows students access to the learning experiences.

The development of a partnership between the University and the industry in providing work experience that complements the program of study would be helpful. Without this partnership, students may not get the range of experience they need and may struggle to find the linkages between theory and practice. More research is needed to determine the form and structure of the work-integrated learning program. Nevertheless the results of this research show that such a program is likely to be very well received by students. Universities have a responsibility to their students to assist them in obtaining the best educational outcomes from their degree courses. Given the reality of student employment, this must include being flexible and supportive of students in paid work.

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