

## **Australian Employment Patterns And Course Participation Preferences Of Accounting Students**

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*The relationship between the employment patterns of undergraduate accounting students studying at a regional Australian university and students' course participation preferences is investigated in this study. The employment patterns which proxy students' socio-economic circumstances and their patterns of study are documented to discern course delivery strategies needed to better attract future accounting students, given the current shortage of qualified professional practitioners. A pilot study surveyed third year accounting students. There was no significant relationship found between participation in courses and employment patterns. However, significantly students who worked irregular hours achieved greater positive academic outcome. Other findings identify a preference for internet based learning, and employer requirements as a barrier to university attendance. The implications of this are the need for increased resources for internet delivered materials and infrastructure, a rethink of the form and relevance of contemporary accounting instruction materials, and the requisite changes to academic workplace tasks. This study uniquely contributes to an understanding of Australian employment patterns and the course participation preferences of accounting students.*

**Field of Research: Accounting Education.**

### **1. Introduction**

While there is a plethora of studies identifying factors that affect student participation and achievement in university accounting courses, these have two significant limitations. First, they have been done primarily in United Kingdom and American colleges and universities, leaving a lacuna of studies from the perspectives of the Asian and Australian regions. Secondly, the authors can identify no study to date that examines the effects of employment and socio-economic circumstances on the academic achievement of students enrolled in undergraduate accounting programs in Australia. This is highly significant both economically and politically because of the inability of the profession to attract able students to accounting programs in Australian universities, and subsequently to retain quality graduates domestically. The result has been a chronic shortage of professional practitioners (Robert Half International 2005, Australian Government Department of Immigration and Multicultural Affairs 2006). Recent high international student enrolments in

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Australian university accounting degrees, and the reductions to government funded student financial support schemes to Australian students including the introduction of the Higher Education Contribution Scheme and full fee paying places, has meant the financial circumstances of the accounting student body at Australian universities has altered markedly in recent years. However, the impact of these changes on academic achievement for accounting students and the Australian accounting profession has not yet been assessed.

This paper reports a pilot study investigating three deficiencies in the literature. First the quantity and nature of course participation undertaken by working students is surveyed. Secondly the work patterns of third year undergraduate accounting students at an Australian regional university are documented. Thirdly, the study tests whether there is a relationship between accounting student employment patterns which indicate their economic welfare, and their course participation and academic performance in an undergraduate accounting degree. A survey was done of students enrolled in a capstone 12 credit point financial accounting subject at the University of Wollongong in Autumn session 2006.

## **2. Literature examining the impact of accounting student employment patterns on course participation.**

There is a dearth of research on the impact of socio-economic factors affecting tertiary student performance. A survey of the literature exploring the relationship between the amount of paid employment undertaken by undergraduate accounting students while studying and the impact of this on their course participation and academic performance revealed inconclusive results. The studies to date fall into two groups, first those that indicate a relationship between work and academic performance, and secondly those studies that find no relationship. Of the first group the results are inconclusive and the nature of the relationship is ambiguous. It is the intention of this study to contribute to the resolution of this ambiguity. Section 2.1 below will first review studies indicating an increase in the amount of student paid employment will be given, giving justification to the relevance of this pilot study. Section 2.2 will examine the prior studies that find a positive relationship between student employment and course participation. Section 2.3 will identify prior studies that support a negative relationship between student employment and course participation. Finally section 2.4 will identify studies that find no relationship between student employment and academic performance.

### **2.1 Studies indicating increases in student employment while studying.**

The thesis of this pilot research is that an increase in student employment would result in less time available for students to participate in their course through attendance and private study, and eventuate in poorer academic performance. Evidence to support a reduction in student attendance was found in the studies of Gose (1988) and Nonis and Hudson (2006). Gose (1998) found an increase in the number of students employed with 39% of students working 16 or more hours per week in 1998 compared with 35% working in 1993. This corresponds with findings of Nonis and Hudson (2006), who also identify a need for empirical research to determine the impact of student work on academic performance, and its impact on

the design of academic programs. Nonis and Hudson (2006) note that the Higher Education Research Institute at UCLA's Graduate School of Education has found that since 1987 the time students spend studying outside of class has declined each year, with only 47% spending six or more hours per week studying outside of class compared with 34% in 2003. However, their study found a lack of evidence for a direct relationship between time spent working and academic performance.

Vickers et al. (2003) examined the effects of part-time employment of students on their participation and attrition in tertiary study in Australian universities. They report that the proportion of full-time students undertaking work has increased between 1990 and 2000 from 46% to 56%. They find that an inverse relationship between the number of face to face course hours and the drop out rate of tertiary students, with the more hours of classes the less the drop out rate. They also found that students working 20 or more hours per week are more likely to drop out of tertiary study by 160 – 200% than those who work less than 20 hours. Vickers et al. discover that students receiving Youth Allowance are more likely to drop out of tertiary study than those who do not receive Youth Allowance, despite the fact that the majority of this group do not work part time. They also observe that the odds of dropping out of university decrease by 31-32% if a student is from the highest socio-economic quartile as opposed to the lowest. Those who work between one and 20 hours per week are just as likely to continue in study as those who do not work at all during their studies. The Vickers et al. study is important because it signifies a change in the university experience not only for students but also for academic staff who teach working students. It is also relevant to this paper because it is set in the Australian context.

Etter et al. (2000) examined the impact of supplemental instruction on improving student performance and retention in courses with a history of high failure and withdrawal rates. Their study was in response to the Accounting Education Change Commission Report (1992) and they examined 132 introductory accounting classes with supplemental instruction programs from 21 four-year colleges and universities in North America. Factors considered were student performance, failure and withdrawal rates, and participants in the supplemental instruction programs. Participants in the supplemental instruction programs were observed to have higher average course grades and lower failure and withdrawal rates. Also for a sub-sample of nine schools the course attrition rates measured as D and F grades and withdrawals were lower. They concluded that participants in the supplemental instruction sessions were able to achieve higher average course grades and had lower failure and withdrawal rates than non-participants, who were enrolled in introductory accounting courses. In addition such programs had a positive effect on the participants' experiences and indirectly positively influenced them to a major in accounting. This study is of interest because of its inference that if student employment patterns prevent them from participating in face to face classes and supplemental instruction programs, there are negative implications for academic outcomes. However, the study must be considered in light of its limitations of not controlling for variables such as a students' academic background, or their motivation and exposure to accounting knowledge outside their course.

There are limited studies outside the Western context. Cheung and Kan (2002) examined factors related to student performance in a distance learning business

communications course in Hong Kong. Their results based on studying 168 students showed females outperformed males, and a positive correlation between previous academic achievement and related academic background and student performance (p261). A positive correlation was found between tutorial attendance and student performance and between previous learning experience and student performance. No relationship was found between semester course loads and student performance. The results are similar to prior Western studies, despite the differences in culture in the education environment. This study is relevant because in finding a relationship between tutorial attendance and student performance, it implies a commitment of student time in course participation.

Consistent with the findings of Cheung and Kan (2002) Hutcheson and Tse (2006) at the University of Technology Sydney found that on average students who attended more than half of the tutorials obtained a higher final mark than students who did not, and that this was particularly so for international students. This begs further research as to why, when students pay high fees for classes, they do not attend. This paper identifies the need to investigate whether the need to work is one possible reason for this finding.

## **2.2 Prior studies indicating a positive relationship between student employment and course participation.**

There are a number of studies that indicate a positive relationship between paid employment and course participation. A study undertaken in the second and final year levels of an accounting degree at a Welsh university by Gracia and Jenkins (2003) considered gender, prior year performance and students' application to study and their relationship to student performance. Gracia and Jenkins (2003) argue that academic failure creates both emotional and financial costs for students, and that students who have work experience perform significantly better than students who go straight from the second to the final year. They argue that the work experience allows students to get their finances in order thereby reducing the need for them to earn money while studying in the final year, thereby reducing financial and time management pressures. This finding is consistent with a study done by Dobson and Sharma (1999) which examined the relationship between student performance and the cost of failure. They find that there are both the public and the private dimensions to the cost of failure.

Koh and Koh (1999) argued the need to identify success factors of students to be admitted to university accounting degree programs, to evaluate their suitability and probable academic success. A study was undertaken at Nanyang Business school, where Koh and Koh investigated the impact of gender, prior accounting knowledge, academic aptitude, mathematical background, previous working experience and age on the performance of students in a three-year accountancy degree program. They sampled 526 graduates of a three-year accountancy program in 1990. Their study is significant to this research because they identify that working experience has not yet received much attention in the literature, but that it is likely to be of intrinsic value to student experience. They argue the real working world is integral to the relevance of accounting study. The paper concluded that the six variables of gender, prior accounting knowledge, academic aptitude, mathematical background, previous working experience and age all significantly affect examination results. Academic

aptitude is found to be the most important determinant. While males outperformed females in this study, there was no evidence that prior high school accounting knowledge gives students any advantage. However, this study has several deficiencies. Studies on the internship and work experience are limited in that they only measure performance in specific technical courses, and diverse educational backgrounds and other work experience are not measured or considered. Also, there is no indication as to the generalizability of the results given the differing contexts of institutions and educational settings.

Naser and Peel (1998) undertook a study of student performance in a first level principles of accounting course at Birzeit University in the Occupied West Bank. Attitudinal variables were included in a questionnaire to establish how important in terms of examination performance, students perceptions were. Perceptions were measured in relation to the lecturer's ability and efforts, the course complexity, the difficulty of the examination, and the student's own efforts. A regression analyses found that gender, age and school English and mathematics grades, and whether the school was a public or private school did not impact significantly on student performance. However, students who had previous accounting experience or more advanced university mathematics performed at a significantly higher level. The significance of the Naser and Peer (1998) study to this research is that the prior accounting experience identified could be obtained through workplace employment. However, other factors such as student perceptions of the attributes of the course lecturer, examination difficulty and the extent to which they relied on their own efforts were significantly related to their examination performance. The limitation of this study is that a response bias may be present because the answers given were subsequent to the experience of sitting the final examination.

Wijewardena and Rudkin (1999) undertook a study of students enrolled in a first year accounting program at a regional Australian university. They identified that students' attendance at tutorial classes, the commitment of a major in accounting and a demonstrated interest in accounting correlate positively and significantly with academic performance. They also find that local students perform better than their overseas counterparts and that part-time students (who work full time) outperform full time students.

### **2.3 Prior studies indicating a negative relationship between student employment and course participation.**

Sullaiman and Mohezar conducted a study at the University of Malaya in their MBA program. They found conflicting evidence of the impact of work experience on student academic performance. They note studies by McClure, Wells and Bowerman (1986), Schellhardt (1988) and Dreher and Ryan (2000) finding a positive relationship between work experience and academic performance, but studies by Dreher and Ryan (2000, 2002 and 2004) Dugan et al. (2006) and Graham (2001) and Peiperl and Trevelyan (1997) found no relationship between students working and their grade point average. Sullaiman and Mohezar's study found that work experience is not related to MBA performance.

#### **2.4 Prior studies indicating no relationship between student employment and course participation.**

Jaggia and Kelly-Hawke (1999) did examine the impact of socio-economic factors on academic performance, but this study is limited in relevance as it was done in the context of primary and secondary students, in North America. The study used 1992 Massachusetts Educational Assessment Program (MEAP) test scores from students in the fourth, eighth and twelfth grades as a measure of student performance, and used an ordered logit model incorporating the academic results. Their primary finding was that family background and the stability of the community are the main influences on positive academic performance. Significantly, Jaggia and Kelly-Hawke (1999) had higher levels of funding produce no consistent or systematic relationship with student performance.

Wooten (1998) undertook a study of 271 students taking introductory accounting at a major south-eastern American university of which there were 74 students identified as non-traditional defined as aged 25 years or older, and 127 traditional students aged under 25 years. Wooten found that for the traditional cohort grade history, motivations and family responsibilities all influenced the amount of effort these students made. However, neither extracurricular activities nor work responsibilities influenced their effort. However for the non-traditional students, motivation was the only variable that significantly influenced effort. Neither grade history nor extracurricular activities, nor work responsibilities, nor family responsibilities had an effect on motivations. Family activities had a significant negative impact on effort for the traditional students, but not for the nontraditional students. It is conjectured by the authors of this paper that these differences in ages may also capture different socio-economic circumstances.

Gul and Fong (1993) conducted a Hong Kong study on first year accounting students, and found predictors of academic achievement to be personality type, grades achieved at the school certificate in mathematics and accounting, and previous knowledge of accounting. They did not identify employment as a relevant factor. Another possible explanation for the issues non-attendance raised by Hutcheson and Tse (2006) is student satisfaction with the teaching performance and course delivery. Strong and Watts (2005) investigated factors affecting accounting student satisfaction at a small public university in New South Wales. They found improvements in the effective allocation of casual and full time staff and the introduction and of common subject outlines lead to improvements in student performance indicators of satisfaction.

This study addresses deficiencies identified. Many studies of accounting higher education students focus on first year students, and these themselves are predominantly from the UK or US, and their relevancy and currency to the Australian context is limited. This study focuses on second and final year accounting students in an Australian context, encompassing domestic and international student differences. The study also is novel in its examination of the impact of socio-economic factors affecting student performance in an accounting degree.

### 3. Method

This paper presents an examination of the relationship between employment patterns and course participation and academic achievement of third year accounting students and the University of Wollongong, Australia. It documents the performance of those students who work either part time or full time while studying an accounting degree. The pilot study was produced from an analysis of 100 questionnaires completed by third year students. The purpose of the study is to provide contemporary documentation of the employment and study relationship in the current Australian context, and encompass both the experiences of domestic and international accounting students.

The School of Accounting and Finance at the University of Wollongong offers a full-time three year accounting degree with professional entry requirements for both the CPA Australia and the Institute of Chartered Accountants in Australia. Admission is based on grades obtained in the University Admissions Index (UAI), or equivalent. Mathematics is not a compulsory entry requirement. There are no domestic undergraduate full fee paying students. All domestic places incur subsidized student fees, through the loan scheme of Commonwealth Government Higher Education Contribution Scheme, and repayable through the Australian Taxation Office.

Participant students were enrolled in a Bachelor of Commerce with a major in accounting. This requires students follow a prescribed course of study using a subject prerequisite system. This pilot study surveyed one hundred third year students in the final compulsory financial accounting subject of 12 credit points. The students surveyed were asked about their academic experiences and socio-economic circumstances in the prior session, spring 2005. To obtain a complete sample, students who failed their prerequisite subject in the prior session spring 2005 were also surveyed to obtain a representative population. Academic performance for the purpose of this study is determined as the final grade in the second year financial accounting subject ACCY201, studied in spring 2005.

The research was conducted by paper surveys handed out in compulsory tutorial classes in the last week of session. Participation in the survey was optional. Both day time and night time tutorial classes were surveyed, to ensure a representative mix of part time and full time patterns of study and work commitments. Results were then collated as described in section four results and discussion as shown below.

One hundred students were surveyed, 44 males and 56 females. Of the 44 male students, 34 (77%) are enrolled in full time study, while 10 (23%) are enrolled in part time study. Contrastingly, 52 of 56 (93%) of female students are enrolled as full time, while only 3 (7%) are enrolled as part time students. The total number of students that were enrolled full time was 86 out of 100 compared to 14 out of 100 enrolled part time. The mix of students in the cohort is indicative of the high international student enrolment. In the pilot study of 100 students, 60 (60%) were domestic students, while 40 (40%) were international students. While all but one of the international students were studying full time, 47 out of 60 or 78% of domestic students were enrolled as full time students, while 13 out of 60 or 22% were enrolled as part time students. (See Table 1).

Table 1  
Enrolment Pattern

	<i>Enrolled Part Time</i>		<i>Enrolled Full time</i>		<b>Total</b>	
	Count	%	Count	%	Count	%
Male	10	71%	34	40%	44	44%
Female	4	29%	52	60%	56	56%
	14	100%	86	100%	100	100%
Domestic	13	93%	47	55%	60	60%
International	1	7%	39	45%	40	40%
	14	100%	86	100%	100	100%

#### 4. Results and Discussion

First, the findings pertaining to student work obligations and their socio-economic circumstances will be discussed. Out of the 100 pilot surveys, 96 students answered questions regarding paid employment. For the purpose of the survey, those working 20 hours or less a week are regarded as part time workers, consistent with the Australian government working regulations of student visas for full time international students. Also, in the Vickers et al. (2003) study 20 hours per week work was a significant indicator as their paper found those students who worked above this amount were most likely to withdraw from university study. There were 19 out of 96 (20%) of students indicated that they were not in paid employment. Those who worked between 1 and 20 hours were 55 out of 96 (57%), while those who worked more than 20 hours were 22 out of 96 (23%). This immediately indicates that while only 14% were enrolled part time, 23% were working a full time load, meaning 9% were working full time and studying full time simultaneously. The chi-square test carried out found no significant relationship between the number of hours worked and the academic performance of the students (refer Table 2). This is consistent with the previous study by Nonis and Hudson (2006) who found no relationship between the time spent working and academic performance and Sullaimar and Moheza (2006) who found work experience is not related to academic performance. However, it is contrary to the findings of Gracia and Jenkins (2003) who found students with work experience do better academically, and with Wijewardena and Rudkin (1999) who found part time students academically outperform full time students.



Table 2  
Hours Worked and Student Performance

<i>Hours worked</i>	<i>Student Performance</i>			<i>Number of Students</i>	
	0-44	45-64	>65	Total	%
None	6	3	10	19	20%
1-20 hours	15	8	32	55	57%
21 and above	7	5	10	22	23%
	28	16	52	96	100%

$X^2=1.2809, P=0.8646$

Students were also asked whether their position was permanent, casual or a contract position, the authors assuming those with permanent positions have access to paid leave, and more economic certainty, as opposed to those on casual or contract hours that do not have a guaranteed amount of work or necessarily predictable hours. However, the chi-square test carried out found that there was no significant relationship between being employed on the basis of permanent, casual or contract conditions, and academic performance (see table 3 below).

Table 3  
Employment

<i>Type of Employment</i>	<i>Student Performance</i>			<i>Number of Students</i>	
	0-44	45-64	>65	Total	%
Permanent	4	4	6	14	18%
Casual	16	9	34	59	77%
Contract	2	0	2	4	5%
	22	13	42	77	100%

$X^2=3.05587, P=0.5485.$

The survey also asked students whether they did changing shift work or worked regular hours. It was the assumption of the researchers that those students who worked shift work did not have regular timetables and this may impact negatively on their ability to attend classes and participate successfully in study. Of the 59 valid responses, 38 (64%) indicated that they worked changing shift work compared to 21 students (36%) who worked regular hours. An unexpected finding was a positive significant relationship between those who worked changing shifts and academic performance. Of those 38 students that worked shifts, 23 (62%) achieved a credit grade or better. This compared with 5 students (9.5%) of the 21 students who worked regular hours who achieved a credit grade or better. (See table 4 below). This is an unanticipated result with no obvious intuitive explanation. This finding is identified as an area for further research in a wider study.

Table 4  
Nature of Work

	<i>Student Performance</i>			<b>Number Students</b>	<b>of</b>
	0-44	45-64	>65		
Changing shift work	7	8	23	Total 38	% 64%
Regular hours	15	1	5	21	36%
	22	9	28	59	100%
$X^2=16.3872, P=0.0000$ –Significant at 1% level					

It was asked “In spring session 2005, on average how long did a typical journey take you to travel to university?” The university is a regional university that attracts many students from the metropolitan Sydney catchment area 80 kilometres away. With limited train transport and only local private bus services, many students must travel by car. Also the area has a high local unemployment rate, and many students obtain casual work outside the region. It is the assumption of the researchers that the time spent travelling to and from university first is a proxy for socio-economic circumstance as students who can afford to will live closer to their place of study rather than areas of better employment prospects. Second, it is considered that time spent travelling is time not available for quality university studies and participation. Out of the sample of 100 responses, 72 students indicated that they travelled less than one hour one way to attend university, while 28 students said they travelled more than one hour to attend university in a day. However, there was no significant relationship found between times spent travelling and academic performance, as indicated in Table 5 below.

Table 5  
Relationship between Traveling Time and Student Performance

<i>Hours Travelled</i>	<i>Student Performance</i>			<b>Number Students</b>	<b>of</b>
	0-44	45-64	>65		
Less than hour	23	12	37	Total 72	% 72%
More than hour	5	6	17	28	28%
	28	18	54	100	100%
$X^2=2.0075, P=0.3665$					

Next, the quantity and nature of course participation undertaken by working students is surveyed. First, students were asked the question whether they missed classes because of work. 82 students answered, with 32 (39%) indicating that they always missed classes because of work. 13 (15.9%) indicated that they missed classes most of the time because of work. 9 (11%) indicated that they missed classes about half the time for work related reasons, while 14 (17.1%) said they only sometimes missed classes because of work. 14 (17.1%) never missed classes because of

work. These findings suggest that while there is no significant relationship found between the amount of work students do and their academic performance, it does indicate that these students are missing out on the quality of the academic experience in terms of community engagement and networking opportunities. It also intuitively explains the high reliance upon online course materials. It has strong implications for course designers as to how to embed generic skills into courses such as the ability to articulate and communicate effectively ones view verbally in a group situation, for example.

Second it was of interest to the authors to discover the amount of course participation of working students. Students were asked about their class participation selections for the prerequisite compulsory accounting subject ACCY201 taken the previous session. This subject required students to undertake two one hour lectures per week and a compulsory one hour tutorial. Lectures were repeated in evening to accommodate part time students, and tutorial times had evening offerings. In addition, students had access to online lecture notes, a text book, tutorial questions and solutions, additional readings and the opportunity to visit tutors and lecturers during their consultation hours. As tutorial participation is compulsory, it is of interest to the authors of this study to discover the amount and nature of voluntary participation students are engaging in, given the demands of paid employment on their time.

With respect to lecture attendance, 4% of students say they never attend lectures, 6.1% attend only sometimes, 40.4% attend most of the time, and 49.5% always attend. From this data it is indicated that while not as highly utilized as desirable, students still find the lecture format beneficial to the students. However, it is observed that their style of participation is moving away from traditional note taking during lectures. Students were asked to indicate how often they took written notes during lectures. Only 40.4% of students said always, while a low 36.4% indicated they took written notes most of the time. 18.2% of students took notes only sometimes, and 5.1% never took written notes.

Another move away from traditional study methods is indicated by student use of their prescribed text book. Students were asked how often they read their text. Out of the 100 pilot students surveyed, 97 valid responses were received to the question "please indicate your involvement in the spring session 2005 of how often you read the text book". Students that indicated they read the text book always were 28 out of 97 (28.9%), those who read it most of the time were 41 out of 97 (42.3%), while those admitting to reading it only sometimes were 27 out of 97 students or (27.8%) and one student (1%) said they never read the text book.

An explanation for the lack of note taking in lectures and reading the text book is offered by the students' use of online lecture notes. These were not those supplied by the text book publisher, but those written uniquely for the course by the subject coordinator and teaching team. When students surveyed were asked the question how often they used the online lecture notes provided, 99 out of 100 gave a valid response to the question. 81 out of 99 students (81.8%) indicated they always used the online lecture notes. 16 out of 99 students (16.2%) indicated they used online lecture notes most of the time, while 2 out of 99 students (2%) indicated they only sometimes used online lecture notes. Reliance on these notes was much greater

than for lectures and textbooks. Students were not asked why they did not read the book, and this is identified as an area of interest for further research. However, as multiple copies of the textbook are available from the library, and there is an active second hand book market, it is the view of the authors that all students had access to the book and so the socio-economic circumstance of affording the book is not considered predominant.

These observations are significant because traditional work load models of academics require resources to be spent on traditional modes of delivery such as face to face lectures. While there are pedagogical imperatives that favour this format such as a synchronous engagement of knowledge building, these findings question the proportion of preparation given to face to face lectures as opposed to online resources when students are most reliant on online materials. This is argued that further research is needed into the effectiveness of various styles of online course material delivery in the accounting discipline as opposed to face to face lectures.

## 5. Conclusions

This pilot study is significant because it offers possible explanations for the inability of the accounting profession in Australia to attract and retain able students, and subsequently retain accounting graduates domestically. In examining the relationship between employment and study of accounting students in Australia, this paper identifies ramifications for the nature of accounting program delivery to a student population actively participating in the paid work force, and the quality of university education experience with which the students can engage. In doing so, a unique contribution to the lacuna of research in this area is made, by documenting student employment patterns. This paper makes a contribution to clarifying the ambiguities of the employment/study dichotomy identified in the literature.

This initial investigation did not find a direct significant relationship between the hours worked and student academic performance in accounting. However a significant positive relationship between shift workers and academic performance was revealed that offers no obvious explanation. This is identified as an area for further investigation.

With respect to the nature of academic accounting programs in Australia, in this study students recorded a preference for online materials. This challenges the efficiency and effectiveness of traditional forms of delivery being lectures and use of a textbook. Students indicated their inability to attend lectures due to work commitments and their heavy reliance on online lecture notes indicates the flexibility of this delivery as needed. This has two implications. First, it identifies a needed research area into the effectiveness of various styles of online course delivery in accounting programs and its implications for the effective embedding of generic skills needed for a profession such as accounting. Secondly, it raises questions as to the value to students of tertiary accounting textbooks in their present form in terms of the practical application of them to student learning and course design. This is identified as an area of further research. Thirdly, it questions the current academic workload assumptions intrinsic to academic employment regarding time spent in face to face lecturing as opposed to time needed for online course material development.

Limitations of this study are acknowledged to include first the use of self reporting by students of lecture attendance, text book use and time spent travelling. Secondly, the small sample size of the pilot study is acknowledged. Further research at different degree stages with a wider sample is identified for future research. Thirdly, this study was conducted at a regional university in Australia, and a comparative study at a metropolitan university would confirm whether the findings can be generalized.

With respect to the quality of university education experience of accounting students, there are indicators that accounting students may not be optimally engaging in a full university experience because of work pressures. There were 9% of students found to be working fulltime and studying full time simultaneously. The fact that many choose not to present on campus but access materials online does not afford them the opportunities associated with campus life including generic skill development of a social nature, networking with their future professional peers, and engagement with the benefits of cultural exchange with an international student body. In the light of the findings by Vickers et al. (2003) if students work more than 20 hours per week they are 160%-200% more likely to drop out of university, this has implications for attrition rates in accounting courses also. The authors contest that addressing the mismatch of course delivery and economic constraints of students may assist in reducing the longer term barriers to accounting students. This will aid in meeting the demand for good Australian accounting graduates.

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