

December 2005

# Students' perceptions of using an Accounting Information System: Does IT matter?

Alex Richardson  
*Australian National University*

Rebecca Tan  
*Australian National University*

Follow this and additional works at: <http://aisel.aisnet.org/acis2005>

---

## Recommended Citation

Richardson, Alex and Tan, Rebecca, "Students' perceptions of using an Accounting Information System: Does IT matter?" (2005).  
*ACIS 2005 Proceedings*. 84.  
<http://aisel.aisnet.org/acis2005/84>

This material is brought to you by the Australasian (ACIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ACIS 2005 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

## Students' perceptions of using an Accounting Information System:

### Does IT matter?

Rebecca Tan  
Alex Richardson  
The Australian National University

School of Business and Information Management  
The Australian National University  
Canberra, Australian Capital Territory  
Email: rebecca.tan@anu.edu.au  
Email: alex.richardson@anu.edu.au

### Abstract

*Information Technology is pervasive in many facets of a student's educational and working life. Also, the level of individual computer experience within a classroom differs significantly from a decade ago. Computerised accounting packages are used as instructional tools due to widespread industry adoption and the desire to prepare graduates for employment. Questions arise as to whether such software meets the needs and expectations of the students sufficiently. Computer experience, in particular the number of computer courses previously studied, was found to influence both perceived ease of use and perceived usefulness of MYOB when used in a first year accounting course.*

### Keywords

perceived usefulness; perceived ease of use; computer experience; education

### INTRODUCTION

There is growing expectation that university graduates are skilled in technology-based applications in addition to having thorough understanding of key business skills and knowledge (Holcomb and Michaelsen 1996, Havelka 2003). Furthermore, one of the most highly recommended skills for an entry level accountant is the ability to use accounting systems (Heagy and Gallun 1994). Boyce (1999) and Arquero Montano et al. (2001) urge universities to consider workplace requirements when designing accounting course curricula and Collins (1996) promoted authenticity when designing such educational environments. ICT in education studies by Bransford et al. (1990) and Martens et al. (2005) highlighted the need to create learning environments that accurately reflect the potential uses of knowledge that students are expected to acquire from learning processes.

The continual change in university students' demographics coupled with a higher level of computer pervasiveness has resulted in students having relatively higher level of *general* computer experience as compared to those from ten years ago, when experience was often a measure of programming ability (van Braak 2004). Consequently, accounting instructors now have to teach students to use computers and software in addition to teaching basic accounting principles (Togo and McNamee 1995, Meade 2002). However, the level of prior computing experience is often not uniform due to the diverse characteristics of students and there exists a need to ensure a balanced level of resulting computer competency.

This paper investigates students' perceptions in relation to the integration of Mind Your Own Business (MYOB) into a teaching case for a first year accounting course that allows cross discipline enrolments and requires no formal computer qualifications. The findings of this study provide insights to questions regarding the appropriateness of using computerised Accounting Information System (AIS) software as courseware. The perceived ease of use and perceived usefulness of MYOB in assisting students to acquire accounting knowledge and skills in the use of this widely accepted commercial accounting package was measured, with a focus on investigating influences of the level of computer experience. With the substantial increase in the number of educational technology articles in accounting (Watson et al. 2003), this study is timely and addresses an issue that is increasingly more prevalent in the move towards computer-based instruction and assessments.

It is important to stress that this study is not a critique of MYOB's interface design or ease/difficulty of performing a task with it. The focus of this study is on students' opinions of the perceived value obtained from using a "tool" like MYOB, dependent upon level of computer experience, not whether the tool itself is being used correctly by the students. The widespread adoption of MYOB and numerous educational resources available

for it make for a convincing argument, provided there is an appropriate application in the learning environment. Whether this application is, or can be appropriate, forms the justification for this study.

## **THE USE OF INFORMATION SYSTEMS IN ACCOUNTING CURRICULUM**

Over the last decade, paradigms for teaching accounting had evolved at a rapid pace and the Accounting Education Change Commission was at the forefront in calling for changes (Saunders and Christopher 2003). There had been increased attention directed towards the inclusion of computers and software into accounting education (Bean and Medewitz 1987) and education in general (Collins 1996). Educational studies show realistic learning environments are generally more beneficial for retaining knowledge. Therefore, it is crucial for educators to know whether the adoption of computer technology provides students who have varied levels of computer experience with skills using and understanding the application's role in business practice.

There is little research into the use or perceived usefulness of commercial accounting software packages in developing the learning skills of accounting students (Birt 2001). Beaman et al. (2003) found that the use of commercial software in the accounting curriculum did not significantly enhance students' understanding of accounting principles. Furthermore, authors like Rebele et al. (1998) and Apostolou et al. (2001) called for research into addressing whether inclusion of technological applications made courses more interesting or informative and whether its use resulted in more effective learning. The degree to which a student finds an application interesting or informative is influenced by factors such as vocational choice and intrinsic motivation (Boekaerts and Boscolo 2002). More importantly, when considering effectiveness of learning, the perceived ease of use and perceived usefulness of the software application are strong deciding factors for the attitude a user forms towards its adoption (Davis 1989). By developing a better understanding of the effect of computer experience on the perceived ability to find MYOB easy to use and useful, attempts can be made to determine the effect experience has on the effectiveness of learning for different psychological attributes and learning styles.

In addition, Hackney et al. (2003) stated that cases are commonly used as a teaching tool in IS education due to the opportunity they present to reduce the divide between teaching and practice. Lightner and Hartman (1989) also identified the abundance variety of teaching resources including computer-assisted instructional materials such as practice sets available for educators. Therefore, in keeping with past literature, over the last five years, as a compulsory part of the assessment (10% of final grade) for the first year accounting course, students were required to utilise commercially used accounting software, MYOB, for the accounting of a fictitious small business (practice set example). No formal training was provided in the use of MYOB other than a brief compulsory lecture that provided an intro to MYOB; the teaching case, a reduced version of the Tan and Birt (2005) accounting practice set, contained all the required technical instructions that students needed. The objective of the software-based case study was to develop the technological skills of the students in the usage of a widely available accounting software package (MYOB) that is the most popular accounting package among small and medium sized businesses in Australia (Neiger 2002).

## **PERCEIVED EASE OF USE AND PERCEIVED USEFULNESS**

In this study, the concepts of perceived ease of use (PEoU) and perceived usefulness (PU) from the Technology Acceptance Model (Davis et al. 1986) are used to assess the ability of MYOB to equip students with essential technology based skills. PEoU is defined by Davis (1989) as the degree to which a person believes that using a particular system is free of effort. This concept provides a measure of how easy or difficult it was for a student to overcome the technical hurdles of learning to use the software, so that the learning focus can shift towards accounting concepts. Conversely, PU is the extent to which a person believes that using a particular system will enhance his or her performance (Davis 1989). With the increased adoption of computer technology in a learning environment, the adoption of such technology has to be considered to maximise effectiveness of acceptance. The student's perceived performance level provides a partial measure of the attitude towards the usage of MYOB as a learning tool and in turn, the formation of an opinion about how informative MYOB is for accounting concepts. The PEoU measure was customised as per Igbaria et al. (1997) to make it specifically relevant to the MYOB case. In addition, the Davis (1989) PU measure is appropriately modified to the usefulness of the MYOB case in improving students understanding of accounting concepts and its application in the real world (see Table 2 and 7, respectively for the modified measures of PU and PEoU).

## **COMPUTER EXPERIENCE**

Taylor and Todd (1995) argued that prior computer experience is integral to the concepts of PEoU and PU. Together these three constructs are determinants for user acceptance of information technology (attitude) and allow for feedback on user acceptance of MYOB within the course. Due to the diversity of available computer experience measures, the lack of a single consolidated measure and the antiquity of others (Dey and Mand 1986, Greer 1986), four newer measures of computer experience were included in the questionnaire. Three of the

experience measures are modified from Havelka (2003), with the fourth is a measure for frequency of use from van Braak (2004). It is duly noted that experience is hard to quantify as a computer is a tool to be utilised for many varying tasks. Venkatash and Morris (2000) noted that someone who solely uses a word processing application has a very distinct and different experience from someone who has experience in programming (the historical approach of measuring computer experience). Therefore, it is appropriate, if not necessary, for the use of multiple measures in this study. Table 1 below lists the extant measures considered in the literature review.

Table 1: Literature review on computer experience measures

Study	Measure description	Comments
Fan and Li (2005)	1) Number of programming courses taken 2) Number of computer courses taken	Administered to CS students and specifically asked questions about programming related course content.
Havelka (2003)	1) Number of years of computer use 2) Number of computer courses taken 3) Number of software packages or computer languages learned	Issues: 1) over 83% of population fell into the one "5+ years" group. 2) sig. diff. only between 0-3 and 3+ "courses studied"/"applications learned" groups.
Von Braak (2004)	1) Experience of computing, expressed in time (months) 2) Intensity of computer use (hours per week)	List of 16 known computer applications incorporated into the 3 <sup>rd</sup> measure from Havelka (2003).
Wilfong (2004)	Participant expertise in the specific domains of word processing, spreadsheet, programming, operating systems, graphical editing software, gaming and Internet browser familiarity, were rated on a 5-point scale (0 – no experience... 4 – expert experience)	Based on Hasan (2003) using a 10-point mastery scale of eight specific computer domains. Six domains in Wilfong (2004) were included when measuring regular use of application software packages.

## HYPOTHESES

Harrison and Rainer (1992) found that people with more computer experience had high levels of computer skills while Taylor and Todd (1995) determined that past experience with technology had an influence on perceived ease of use and perceived usefulness. In this study, four common measures of computer experience were used, each focusing on differing aspects of computer experience: 1) number of years using computers, 2) number of computer courses studied, 3) frequency of computer use and 4) number of software applications regularly used.

### The Effect of Computer Experience on Perceived Ease of Use (PEoU)

The level of computer experience (as measured in four ways) is expected to influence the student's perception of how easy MYOB is to use due to their past experience (or lack thereof) with similar interfaces, applications and/or tasks. It is expected that a student who has performed more computer-related tasks would perceive future tasks to be easier, provided there is some similarity between tasks.

It is also expected that the more years a student had used computers; he or she may have an increased level of skill in using computers as a result of the learning process. Given the increase in skill, it is also postulated that the more highly skilled students may need to spend less time learning the interface when being requested to learn a new application. Conversely, new users may need to spend more time to learn MYOB and thus, may feel differently about the ease of use of the software. Therefore, the first hypothesis for this study is:

*H1a: There is an association between the PEoU of MYOB and the length of time using computers*

As a student undertakes more computer courses, their exposure to different aspects of computing theory and practice may broaden their understanding of how to use computers. This in turn may influence how easy they perceive computers to be to use and, in turn, MYOB. The second hypothesis is:

*H1b: There is an association between the PEoU of MYOB and the numbers of computer courses studied*

The frequency of computer use as a measure of experience was included in order to determine if everyday users of computers differed from occasional (not everyday) users. Instead of just looking at the length of time of usage, this study explores the effect of frequency of use as another measure of experience. It is postulated that a frequent user would often be performing repetitive tasks (on a daily basis), which subsequently may reinforce the skills previously learnt and increase the ease of applying those skills in new applications such as MYOB.

*H1c: There is an association between the PEoU of MYOB and the frequency of computer use*

Finally, it is also postulated that the greater the number of different applications that a student regularly uses, the more exposure the student would have to the various functions and interfaces for the unique tasks each application is designed for. Each new exposure would add to the student's skills set and in turn may make learning to use a new application, such as MYOB, easier as there is an increased chance of familiarity.

*H1d: There is an association between the PEoU of MYOB and number of computer applications regularly used*

## **The Effect of Computer Experience on Perceived Usefulness (PU)**

The level of computer experience a student possesses is expected to have an effect on how useful they perceive a particular application to be. The more skilled they are at using computers, then the more informed they would be on the mechanics of computer applications and what computers (and softwares) are capable of.

A student that uses a computer for the first time will have certain preconceived expectations of what a computer can be used for. As the student use computers for more years, those expectations may become more refined as to what they perceive to be the 'truth' about a computer's, and therefore MYOB's, usefulness.

*H2a: There is an association between the PU of MYOB and the length of time using computers*

The understanding of how computers can be used is derived from education, both formal (classroom) and informal (interaction with fellow users). Formal computer courses would introduce students to the different types of applications and the theory surrounding their design. These courses will equip students with such knowledge which may influence what they determine to be useful aspects of MYOB in performing tasks they understand.

*H2b: There is an association between the PU of MYOB and the numbers of computer courses studied*

Students who use computers more frequently are argued to be more likely to have specific needs for that use, possibly accompanied by a psychological attachment. This need to use computers will be somewhat related to their perception of usefulness given their thoughts on and exposure to what functionality computer applications can provide and how. It is expected that MYOB's usefulness may be similarly affected.

*H2c: There is an association between the PU of MYOB and the frequency of computer use*

As a student is exposed to a greater range of applications, their perceived usefulness for each new application could be affected by previously used applications (and vice versa). This knowledge database built from past computer experience may influence the perceived usefulness of MYOB. The last hypothesis tested is:

*H2d: There is an association between the PU of MYOB and the number of computer applications regularly used*

## **METHOD**

### **Questionnaire development**

Due to the exploratory nature of this study, key pre-validated measures from seminal literature were reviewed and only suitable ones selected for use. Davis (1989) was drawn upon for both the measures of PU and PEoU. The PEoU measure was customised as per Igbaria et al. (1997) to make it specifically relevant to the MYOB case. In addition, the Davis (1989) PU measure was appropriately modified to the usefulness of the MYOB case in improving students understanding of accounting concepts and its application in the real world. Both measures used 5-point Likert scales upon which respondents recorded their level of agreement with each statement.

In addition to these variables, four measures of computer experience from Havelka (2003) and (von Braak 2004) (measures 1 to 3 from the former and 4 from the latter) were also included in the questionnaire: (1) the number of years using computers, (2) number of computer courses studied, (3) number of software applications regularly used (list of 16) and (4) frequency of computer use (less than once a day, once a day or more than once a day). The fourth measure was included to provide a more precise measure for "years using computers" as there are expected differences in usage patterns due to computers becoming a requirement of university study.

### **Sample**

The university at which the questionnaire was administered has a foundation accounting course as a compulsory core unit for commerce students and an elective for others, resulting in a mix of commerce, IT, IS, psychology, science, arts and students from other disciplines. The participants were from a random selection of tutorial classes held two weeks after the completion of a MYOB assignment in Semester 1 2004, but before result announcement (so actual grades would not influence opinions). From this, 155 completed questionnaires containing demographic data, such as gender, previous computer experience, extent of information technology use, age, and program/major being studied, were collected. This sample consisted of 86 males (55.5%) and 69 females (44.5%), with 45 (29%) of the 155 participants having studied accounting previously (there were no significant between group differences). The average age of the students that responded was 19.5 years (sd = 2.4).

### **Data analysis**

Responses to the surveys are first coded into numbers (responses of strongly disagree, disagree, neutral, agree, and strongly agree are replaced with the values 1, 2, 3, 4 and 5 respectively) to quantify the strength of agreement for the respective question. An analysis of variance (ANOVA) was performed to test for differences in PU and

PEoU within the different computer experience groups given that the variables in this study are categorical in nature. ANOVA is an extension of the two-sample t-test used to compare the means of two or more variables to establish whether the observed differences are the product of chance or a systematic occurrence (Shavelson, 1996). In other words, it tests the hypothesis that several means are equal (Cavana, et. al., 2001). Results of these analyses are detailed in the next section.

## RESULTS AND DISCUSSION

### Perceived ease of use

The PEoU of MYOB is measured using four questions as shown in Table 2. Results showed varied responses among students with average responses between 3.45 (neutral) and 4.05 (Agree). Examination of the descriptive statistics indicated that 85.1% of students agreed that MYOB was easy to use and 70.0% agreed it was easy to become skilled in its use.

Table 2: Students' perception on the ease (PEoU) of using MYOB

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
	1	2	3	4	5		
It was easy to learn to use the MYOB software	2 (1.3%)	3 (1.9%)	18 (11.6%)	94 (60.6%)	38 (24.5%)	4.05	.745
It was easy to get MYOB to do what I want it to do	3 (1.9%)	9 (5.8%)	44 (28.4%)	76 (49.0%)	23 (14.8%)	3.69	.865
It was easy for me to become skilled at using MYOB	1 (0.6%)	6 (3.9%)	38 (24.5%)	88 (56.8%)	22 (14.2%)	3.80	.751
The MYOB software was always easy for me to use	2 (1.3%)	20 (12.9%)	57 (36.8%)	58 (37.4%)	18 (11.6%)	3.45	.906

Overall mean = 3.75 (sd =.673)

The lower level of agreement (mean = 3.45) for MYOB being always easy to use is probably due to some students who faced a steeper learning curve or had to overcome some other barrier sometime during their use of MYOB. A longitudinal study would better capture student perceptions as their knowledge of MYOB progresses, which is unfortunately outside of the scope of this study. Table 3 showed the correlations matrix that confirmed the high correlation between these four measures derived from the PEoU literature. Therefore, for the purposes of further analyses on the possible influence of computer experience, an overall measure of PEoU was derived from the average score for these four questions.

Table 3: Correlations between the four measures of PEoU

	2	3	4
1. It was easy to learn to use the MYOB software	.589**	.587**	.494**
2. It was easy to get MYOB to do what I want it to do		.604**	.627**
3. It was easy for me to become skilled at using MYOB			.525**
4. The MYOB software was always easy for me to use			

\*\* Significant at the 0.01 level

Each of the four hypotheses was tested using a one-way ANOVA. The inclusion of four different measures of computer experience showed that not all aspects of computer experience affect the PEoU. Table 4 revealed that number of years using computers and the number of computer courses studied were statistically significant ( $p < 0.05$ ) predictors of PEoU of MYOB.

Table 4: ANOVA Results for the effect of computer experience on the PEoU of MYOB

Hypothesis	Computer Experience Measure	Significance	Level of support
H1a	number of years using computers	.038	Supported
H1b	number of computer courses studied	.050	Supported
H1c	frequency of computer use	.188	Not Supported
H1d	number of software applications regularly used	.343	Not Supported

Although results showed significant difference between groups (i.e. support for H1a), the descriptives do not conclusively show students who have used computers for more years perceive MYOB to be easier (Table 5). It does suggest that after about nine years, students' perception on the ease of use of MYOB tend to be higher than those students with less than nine years computer using experience. The reason for this is unclear; it could possibly be due to initial computer exposure at earlier stages (for example in late primary and early secondary schooling as 90.2% of the students were aged between 18 and 21 years old). Havelka's (2003) treated five or more years of computer experience as one subgroup. In this study, 70% of the sample lies between 5 and 12 years of use, again possibly corresponding with the use of computers since primary school, whether at school or at home. The 8.4% that had less than 5 years experience were treated as a subgroup due to low numbers.

Table 5: The average response on PEOU for years of computer use

Years using computers	N	Mean	Std. Deviation
<6	23	3.5761	.58112
6	15	3.5833	.58757
7	7	3.2500	.52042
8	17	3.5735	.55737
9	3	3.8333	1.25831
10	45	3.9889	.64613
11	8	4.1875	.62321
12	12	3.6458	.44541
13	5	3.6000	.65192
14	3	3.8333	.14434
15	7	3.9643	.63621
>15	8	3.8750	.80178
Total	153	3.7647	.63946

Similarly, H1b was also supported, but once again not conclusively apparent from the descriptives (see Table 6). It does appear that with two or more computer courses completed, there is an increase in the perception that MYOB is easy to use. The questionnaire was administered to a predominantly first semester first year accounting course, so many students would only have studied a basic compulsory IS foundation course, if at all. If the accounting course was a student's elective choice, then it would be possible for the student to have completed more IS/IT courses prior, whereas accounting students have little choice due to prerequisite requirements. Future studies with third year students would yield more conclusive results for this measure of computer experience.

Table 6: The average response on PEOU for number of computer courses studied

Number of Computers Courses	N	Mean	Std. Deviation
0	59	3.7034	.58809
1	31	3.5726	.67142
2	27	3.9259	.55390
>2	36	3.9375	.69533
Total	153	3.7647	.63946

Both H1c and H1d were not supported. Perhaps a larger sample size or the use of more accurate and appropriate grouping of computer usage will provide better indication of possible influence of the extent of computer use. In relation to H1d, the lack of support is hard to explain without collecting exact details of the software used. The questionnaire included basic applications found in Jackson and Cherrington (2002) plus some updates. It could also be argued that maybe it isn't the quantity but their quality of understanding of different applications that influences students' ability to adapt to new applications that may or may not have familiar interfaces.

### Perceived usefulness

Table 7 depicts the descriptive statistics for perceived usefulness of MYOB. Average responses to each statement ranged from 3.34 to 3.88 (opinion of between neutral and agree with the usefulness of MYOB). On average, students perceived MYOB to improve the relevance of the first year accounting course and make the course more interesting. Students often found accounting boring due to various reasons, for example, the instructional techniques used (Solomon 1995, Holcomb and Michaelsen 1996), so any increase in level of interest should theoretically have a positive influence on students' attitude. It seems that students were relatively neutral towards the usefulness of MYOB for increasing their speed of learning accounting and improving their technology skills, which is understandable if they were already comfortable with those abilities.

The nine measures of PU derived and adapted from PU literature were all highly correlated (see Table 8). Similar to the derivation of a single measure for PEOU, these nine variables were averaged to result in an overall PU score. Subsequently, this new average overall measure of PU was used for further analyses on the possible influence of computer experience.

As shown in Table 9, only the number of computer course studied was statistically influential. This probably means the exposure to those computer courses has influenced the students' perceived usefulness of MYOB. As mentioned previously, many of the students would be first year students with only basic IS foundation course knowledge. The content of such a course would cover the theory of IS itself and the relationship with Accounting IS. The effects of this experience could explain the reason H2b was supported. However, the affect is not conclusive according to the descriptive statistics laid out in Table 10. Students who haven't studied any computer courses previously had an average perception of 3.63, higher than those who have studied one computer course.

This could be a function of the actual ease of use of the MYOB software and its interfaces (Neiger, 2002) or perhaps it is an indication that formal education of computer software may not be as effective.

The remaining three hypotheses were not supported. Perhaps the specific nature and interface of MYOB may negate the effect of computer experience when measured by years using computers, frequency of computer use and number of applications used. Users with computer experience which spans the different generations of user interfaces may be biased towards whatever past experience has shown them to work best for them.

Table 7: Perceived usefulness (PU) of MYOB in learning accounting (n=155)

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev.
The MYOB assignment helped me understand accounting concepts	4 (2.6%)	9 (5.8%)	42 (27.1%)	85 (54.8%)	15 (9.7%)	3.63	.838
The MYOB assignment has improved my accounting skills	4 (2.6%)	13 (8.4%)	37 (23.9%)	86 (55.5%)	15 (9.7%)	3.61	.871
The MYOB assignment helped me better understand the role of information systems in accounting	4 (2.6%)	6 (3.9%)	35 (22.6%)	87 (56.1%)	23 (14.8%)	3.77	.844
The MYOB assignment helped me understand accounting in the business world	2 (1.3%)	8 (5.2%)	40 (25.8%)	86 (55.5%)	19 (12.3%)	3.72	.794
The inclusion of MYOB assignment improves the relevance of the course	3 (1.9%)	4 (2.6%)	31 (20.0%)	88 (56.8%)	29 (18.7%)	3.88	.809
Using MYOB increases my learning speed of accounting concepts	1 (0.6%)	19 (12.3%)	71 (45.8%)	55 (35.5%)	9 (5.8%)	3.34	.792
Using MYOB enhances the value of my learning of accounting concepts	2 (1.3%)	15 (9.7%)	50 (32.3%)	76 (49.0%)	12 (7.7%)	3.52	.824
The MYOB assignment made the course more interesting	1 (0.6%)	10 (6.5%)	30 (19.5%)	86 (55.8%)	27 (17.5%)	3.83	.815
The MYOB assignment has improved my technology skills	6 (3.9%)	16 (10.3%)	52 (33.5%)	67 (43.2%)	14 (9.0%)	3.43	.933

Overall mean = 3.64 (sd=.621)

Table 8: Correlations between the nine measures of PU

	2	3	4	5	6	7	8	9
1. The MYOB assignment helped me understand accounting concepts	.747**	.522**	.510**	.528**	.471**	.496**	.472**	.529**
2. The MYOB assignment has improved my accounting skills		.531**	.595**	.532**	.397**	.474**	.522**	.543**
3. The MYOB assignment helped me better understand the role of information systems in accounting			.524**	.520**	.331**	.372**	.378**	.475**
4. The MYOB assignment helped me understand accounting in the business world				.483**	.304**	.352**	.400**	.321**
5. The inclusion of MYOB assignment improves the relevance of the course					.339**	.594**	.562**	.441**
6. Using MYOB increases my learning speed of accounting concepts						.685**	.553**	.470**
7. Using MYOB enhances the value of my learning of accounting concepts							.618**	.549**
8. The MYOB assignment made the course more interesting								.548**
9. The MYOB assignment has improved my technology skills								

\*\* Significant at the 0.01 level

Table 9: Results on the effect of computer experience on the PU of MYOB

Hypothesis	Computer Experience Measure	Significance	Level of support
H2a	number of years using computers	.700	Not Supported
H2b	number of computer courses studied	.010	Supported
H2c	frequency of computer use	.903	Not Supported
H2d	number of software applications regularly used	.913	Not Supported



Table 10: The average response on PU for number of computer courses studied

Number of Computers Courses	N	Mean	Std. Deviation
0	59	3.6271	.58750
1	31	3.4516	.51154
2	27	3.9506	.47475
>2	36	3.6857	.62476
Total	152	3.6623	.57952

### Summary

These findings show that certain measures of a student's level of computer experience are related to the perceived usefulness and perceived ease of use of MYOB. Past research found that computer experience plays an important role in PEOU and PU but the findings of this paper suggest the choice of computer experience measure itself is a confounding variable in itself. It appears that different measures may actually measure different facets of computer experience that are not quantifiable by the use of just one.

## CONCLUSIONS AND IMPLICATIONS

This paper investigated students' perceptions in relation to the integration of a MYOB teaching case into a first year accounting course which has diverse disciplinary enrolment and computer experience backgrounds. To do this, the effects of four different measures for computer experience on perceived ease of use and perceived usefulness of MYOB were examined when used in a learning environment. Not all of the experience measures significantly influenced PEOU and PU. This is interesting in itself as, according to past literature, a complete measure for computer experience should show a positive relationship (all other things being equal). The reasons for these inconsistent findings need to be investigated further.

It appears that the number of computer courses has the most influence on both students' perceived ease of use and perceived usefulness of MYOB. In the absence of information on the actual computer courses studied and the contents of that study, it is theorised that educational degree structure could possibly be influential. However, for many of the commerce students undertaking the accounting course, many also choose to do the foundation IS course as part of their degree (normally in the same semester). Within the course syllabus of that IS course, students are exposed to the theory of computer hardware, software, telecommunications, IS fundamentals, system design and other related topics. There is a possibility that exposure to this IS course have had some involvement in students' beliefs on the value of MYOB, though this theory needs to be further tested for validity. With the recent fall in IT/IS university enrolments, the marketability of these disciplines requires renewed attention when student course selections are dependent upon industry demand. As found in this study, if students undertaking computer courses does in fact lead to a measurable difference in their attitude towards the use of courseware, an opportunity may exist for the IT/IS disciplines. Foundation IT/IS courses could become compulsory first-year courses for the many different disciplines which have adopted computer technology as playing a major role in the educational environment.

## LIMITATIONS AND FUTURE RESEARCH

The questionnaire was designed to serve various purposes and also included measures for self-efficacy, anxiety, demographics and technology adoption/use. Many of these measures are not reviewed in this paper and could possibly shed extra light on the current findings. This is a preliminary study designed to identify possible issues for future research, not a comprehensive study that takings into consideration all possible factors (within reason). Follow up studies of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> years students in other courses which use computer-based assessment are needed to test whether the findings are consistent or change over the university life of a student. Another issue that appears worthy of further investigation is that the choice of measure for computer experience can lead to different findings. Until a unified measure of computer experience is developed, researchers need to be aware of this when developing their own studies and interpreting findings of other studies.

Only approximately 30% of the students in the course completed the survey. Any generalisation of this evidence to all students in the course should be taken cautiously. Also, the students had to learn to use the MYOB software outside of scheduled classes, except for one lecture about the basics of using MYOB. Thus, PEOU and PU could have been affected by the actual computer that students accessed to use the MYOB software. Through the use of a controlled computing environment, this could be controlled for; possibly by limiting use to MYOB to computer labs located on campus.

The concepts of PEOU and PU are founded in IS literature and is usually linked to IT adoption and user acceptance of IT. Furthermore, the statements that were included to measure PEOU and PU were adapted for the focus of this study from various established instruments and may have resulted in not entirely 'accurate'

measures. The reduced three factor model for usefulness, effectiveness and ease of use (Segars and Grover 1993) could also have been included in the study. Alternatively, the use of the Unified Theory of Acceptance and Use of Technology model from Venkatesh et al. (2003) also warrants attention. In addition, the assessment weighting of the MYOB teaching case was 10%, which in turn may bias students towards perceiving MYOB to be less usefulness, when overshadowed by the 80% weightings of exams (tutorials being the remaining 10%).

## REFERENCES

- Apostolou, B.A., Watson, S.F., Hassall, T. and Webber, S.A. (2001) Accounting Education Literature Review, *Journal of Accounting Education*, 19, 1-61.
- Arquero Montano, J.L., Donoso Anes, J.A., Hassall, T. and Joyce, J. (2001) Vocational skills in the accounting professional profile: the Chartered Institute of Management Accountants (CIMA) employers' opinion, *Accounting Education*, 10(3) 299-313
- Beaman, I.R., De Lange, P. A., O'Connell, B. T. and Smyrniotis, K. X. (2003) An Experiment to Assess the Learning Benefits of Employing Accounting Software in the Classroom, *Review of Business Information Systems*, 7, 49-57.
- Bean, V.L. and Medewitz, J.N. (1987) Computer Education: A Survey of Accounting Graduates, *Journal of Accounting Education*, 5, 243-258.
- Birt, J.L. (2001) The MYOB Experience in a First-year Accounting Unit: Issues for the Accounting Educator, Working Paper
- Bransford, J.D., Sherwood, R.D., Hasselbring, T.S., Kinzer, C.K. and Williams, S.M. (1990) Anchored instruction: why we need it and how technology can help. In D. Nix and R. Spiro (Eds.), *Cognition, education multimedia. Exploring ideas in high technology* (pp. 115-141). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Boyce, G. (1999) Computer-assisted teaching and learning in accounting: pedagogy or product?, *Journal of Accounting Education*, 17, 191-220
- Cavana, R.Y., Delahaye, B.L. and Sekaran, U. (2001) *Applied Business Research: Qualitative and Quantitative Methods*, Milton, Queensland: John Wiley and Sons Australia.
- Collins, A. (1996) Design issues for learning environments. In S. Vosniadou(Ed.), *International Perspectives on the design of technology-supported learning environments* (pp. 347-361). Mahwah, NJ
- Davis, F.D. (1986) A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results, *Doctorial dissertation*, MIT Sloan School of Management, Cambridge
- Davis, F.D. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, 13(3), 319-339.
- Dey, S. and Mand, L.R. (1986) Effects of mathematics preparation and prior language exposure on perceived performance in introductory computer science courses, *SIGSCE Bulletin*, 18(1), 144-148
- Fan, T.-S. and Li, Y.-C. (2005) Gender issues and computers: college computer science education in Taiwan, *Computers & Education*, 22, 285-300
- Greer, J. (1986) High school experience and university achievement in computer science, *AEDS Journal*, 19(2-3), 216-225
- Hackney, R., McMaster, T. and Harris, A. (2003) Using Cases as a Teaching Tool in IS Education, *Journal of Information Systems Education*, 14, 229-234.
- Havelka, D. (2003) Predicting Software Self Efficacy among Business Students: A Preliminary Assessment, *Journal of Information Systems Education*, 14(2), 145-150.
- Harrison, A.W. and Rainer, R.K. Jr. (1992) The influence of individual differences on skill in end-user computing, *Journal of Management Information Systems*, 9(1), 93-111.
- Heagy, C.A. and Gallun, R.A. (1994) Recommended Microcomputer knowledge for Accounting Graduates: A Survey, *Journal of Accounting Education*, 15, 205-210.
- Holcomb, T. and Michaelsen, R. (1996) A Strategic Plan for Educational Technology in Accounting, *Journal of Accounting Education*, 14, 277-292.
- Igbaria, M., Zinatelli, N., Cragg, P. and Cavaye, A.L. (1997) Personal Computing Acceptance Factors in Small Firms: A structural Equation Model, *MIS Quarterly*, 21(3), 279-305.

- Jackson, R.B. and Cherrington, J.O. (2002) IT Instruction Methodology and Minimum Competency for Accounting Students, *Journal of Information Systems Education*, 12(4), 213-221.
- Lightner, S. and Hartman, M. (1989) Inventory of Computer Software Designed for Use in the Accounting Curriculum: Student Materials and Test Banks, *Journal of Accounting Education*, 3(1), 15-35.
- Martens, R.L., Gulikers, J. and Bastiaens, T. (2005) The impact of intrinsic motivation on e-learning in authentic computer tasks, *Journal of Computer Assisted Learning*, 20, 368-376
- Meade, J.A. (2002) Changes in the learning environment of tax education, *The Tax Adviser*, 33(2), 130-134.
- Neiger, D. (2002) Software Shootout: Quickbooks Pro 2002 v MYOB Premier 6, *Australian CPA*, 72(6), 58-60.
- Rebele, J.E., Apostolou, B.A., Buckless, F.A. Hassell, J.M., Paquette, L.R. and Stout, D.E. (1998) Accounting Education Literature Review (1991-1997), Part II: Students, Educational Technology, Assessment, and Faculty Issues, *Journal of Accounting Education*, 16(2), 179-245.
- Saunders, G. and Christopher, J.E.R. (2003) Teaching Outside the Box: A Look at the Use of Some Nontraditional Teaching Models in Accounting Principles Courses, *Journal of American Academy of Business*, 3, 162-165.
- Segars, A.H. and Grover, V. (1993) Re-Examining Perceived Ease of Use and Usefulness: A Confirmatory Factor Analysis, *MIS Quarterly*, 17(4), 517-525.
- Shavelson, R.J. (1996) *Statistical reasoning for the behavioral sciences* (3rd ed.), Needham Heights, Mass: Allyn & Bacon.
- Solomon, L. (1975) Improving Student Attitudes in the Beginning Accounting Course, *The Accounting Review*, 50(3), 601-605.
- Tan, R. and Birt, J. (2005) *Goode Grooming: MYOB Version 14 Accounting Practice Set*, Pearson Education Australia, Sydney NSW.
- Taylor, S. and Todd, P. (1995) Assessing IT Usage: The Role of Prior Experience, *MIS Quarterly*, 19(4), 561-570.
- Togo, D.F. and McNamee, A.H. (1995) Computer Integration into the Accounting Curriculum: Learning Benefits, Problems, and Guidelines, *Journal of Accounting Education*, 13, 149-158.
- van Braak, J.P. (2004) Domains and determinants of university students' self-perceived computer competence, *Computers & Education*, 43, 299-312
- Venkatesh, V. and Morris, M.G. (2000) Why don't men ever stop to ask for directions. Gender, social influence, and their role in technology acceptance and usage behaviour, *MIS Quarterly*, 24(1) 115-139.
- Venkatesh, V., Morris, M.G., Davis, G.B., and Davis, F.D. (2003). User acceptance of information technology: Toward a unified view, *MIS Quarterly*, 27(3) 425-478.
- Watson, S.F., Apostolou, B., Hassell, J.M. and Webber, S.A. (2003) Accounting education literature review (2000-2002), *Journal of Accounting Education*, 21, 267-325.

## ACKNOWLEDGEMENTS

The authors of this paper wish to thank the ACIS 2005 reviewers for their dedication and supportive comments.

## COPYRIGHT

Rebecca Tan & Alex Richardson © 2005. The authors assign to ACIS and educational and non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.