# RESEARCHING TAX USING TECHNOLOGY: A SURVEY OF STUDENT ATTITUDES

# JENNIFER BUTLER Central Queensland University

#### **Abstract**

Technology and the Internet play an ever-increasing role in tax research and the current practice of tax. Hard-copy resources are becoming less common and increasingly information is being provided in electronic form and/or available on the Internet. This change has important ramifications for the way tax research is conducted. A primary source of information in the tax arena is the Australian Taxation Office website. This site contains a vast amount of information, which by necessity makes navigation of the site complex. However, this is an important resource which is freely available to the public so the importance of learning to navigate this resource so as to fully utilise the information available cannot be understated. This paper explores the attitudes of tax students towards the Internet generally, and the Australian Taxation Office website specifically, to determine whether students need further assistance in accepting the use of technology as the medium for tax research.

# I Introduction

The study of tax has rapidly progressed from being based in textbooks and hard-copy loose leaf services to an activity that is more usually conducted in front of a computer. We are moving away from the 'olden days' where research was conducted crosslegged in the aisles of the library flipping through a loose-leaf service prior to hours at a photocopier copying the material that was considered important. These days one is more likely to be slouched at a computer for hours in pursuit of the information required to conduct research, particularly of the doctrinal kind. Information that was once found in massive leather-bound volumes is now contained, for the large part, in massive computer databases. This change in technology and information sourcing is of no less importance to practitioners than accounting students. Students studying taxation law have an inordinate amount of information and technology at their disposal. However, this volume of information does not necessarily make the study of taxation law a simple task. In an effort to make the taxation laws more accessible, the Australian Taxation Office has put all legislation and a raft of additional interpretative materials on their website, free of charge. While this makes the material readily available for public use, the site is necessarily complex and can be Students therefore need to be able to readily access the site to difficult to use. enhance their research capabilities. To assist students in gaining these skills a CD-ROM has been developed entitled 'Navigating the ATO'. In an effort to determine how the users of this technology accept and use this technology a study was conducted of third year accounting students studying taxation law. The study finds that while students accept the use of the Internet there is still some work to be done to make the ATO websites into resources that are easily utilised.

# II BACKGROUND TO THE PROJECT

This project involves students studying taxation law at Central Queensland University (CQU). The majority of these students (95%) are completing a degree in accounting and are generally in the final stages of their degree. Anecdotally, a large proportion of these students will go on to become accountants and tax agents while others will work in areas of accounting where tax is more of a peripheral issue. Many of these students are already working in accounting firms while completing their degrees. Thus, the students involved in this project came from a variety of different backgrounds and had differing levels of existing skill and expertise both in the area of tax and in the area of computer literacy.

Upon entering the workforce it is expected that these students will be able to make an immediate contribution in the area in which they work. The intention of the project is to enable these students to extend the generic skill of information literacy and engage in some more specific skills in tax research. With the higher reliance on technology in tax research it is imperative that students further develop their skills in information literacy and tax-specific research skills. Success in the tax workforce will be affected to some extent by the level of information literacy that a student has obtained. It would seem that those with a higher level of information literacy have an

advantage in that they are better equipped to deal with the demands of researching tax in an environment that is almost completely electronic. Admittedly, information literacy also entails another component which relates to what a person does with the information once they have obtained it. This project does not deal with that component of information literacy.

One might wonder why specific skills in tax research are required when information literacy is a widely taught generic skill and one that is generally covered in some depth in a business/accounting course. Shouldn't these skills translate to allow students to engage in computer-based tax research? What about legal research skills? Aren't they also enough to allow a student studying tax to engage in tax research without requiring additional skills to be taught? One might argue that these issues are not issues at all. One might argue that the skills taught in other areas are indeed sufficient to allow those engaging in tax research to be successful without learning any additional skills. However, it might also be recognised that the types of resources available to tax students are in many ways different to those that are available in other accounting areas and even other areas of law. Taxation law is contained in legislation and interpreted in cases, as is other law, but there is a whole range of additional extrinsic materials that may affect interpretation of this law. These materials include Public and Private Rulings, Practice Statements, Taxpayer Alerts, Interpretative Decisions and other publications which are made available by the ATO to disseminate information. Rulings, in particular, have acquired something akin to legal status in that they are binding on the Commissioner where the outcome is favourable to the taxpayer, although it is arguable whether or not this should be the case. It is therefore vital that those engaging in the practice of tax, and those intending to do so, are able to access these materials if they are to utilise them effectively in their research. It is also vital that we gain some understanding into the factors that affect the use of technology by those engaging in tax research, given that technology now plays such a large role in the delivery of information required.

Commercially, these materials are contained in databases available from publishing companies such as CCH. There are also databases that are available without cost, which contain some or all of these sources of taxation law. Legislation is available from the Australian Government Attorney-General's Department COMLAW site.<sup>3</sup> The Australasian Legal Information Institute (AustLII) site<sup>4</sup> contains case law from most jurisdictions in Australia and New Zealand in addition to legislation. The other major source of information in taxation law, and the one which is utilised in this project, is the Australian Taxation Office (ATO) site. The ATO have their information divided into two sites. One of these is the Legal Database<sup>5</sup> which contains legislation, cases, rulings and a range of other extrinsic materials that guide interpretation of tax. The other site<sup>6</sup> contains media releases, fact sheets and

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<sup>&</sup>lt;sup>1</sup> Income Tax Assessment Act 1936 (Cth) s170BA(3).

<sup>&</sup>lt;sup>2</sup> Bellinz Pty Ltd v FCT (1998) 98 ATC 4399, 4417.

<sup>&</sup>lt;sup>3</sup> Australian Government Attorney-General's Department ComLaw (Commonwealth Law incorporating the Federal Register of Legislative Instruments (FRLI))

<sup>&</sup>lt; http://www.comlaw.gov.au/comlaw/comlaw.nsf/homepage? OpenForm&Expand = 1.1 > at~28~November~2005.

<sup>&</sup>lt;sup>4</sup> Australasian Legal Information Institute <a href="http://www.austlii.edu.au/">http://www.austlii.edu.au/</a> at 15 November 2005.

<sup>&</sup>lt;sup>5</sup> Australian Government Australian Taxation Office <a href="http://law.ato.gov.au/atolaw/index.htm">http://law.ato.gov.au/atolaw/index.htm</a> at 15 November 2005.

<sup>&</sup>lt;sup>6</sup> Australian Government Australian Taxation Office <a href="http://www.ato.gov.au">http://www.ato.gov.au</a> at 15 November 2005.

numerous other sources of information which are aimed at disseminating tax information to the public to encourage increased compliance, rather than dissemination of the laws themselves.

While teaching third year taxation law students it became apparent that the students lacked knowledge about the specialist tax resources available to them. It also seemed that the students lacked the necessary knowledge and skills to enable them to access and use this information. Observation of their work indicated that they were not using the specific resources available despite the fact that there were references to these resources in course materials. Special classes were started dealing with information literacy and tax-specific materials but the use of these materials in assessment items still did not reach a noticeable level. Even when ATO sites were discussed in class and information was given as to the location of the sites, it was rare to see information from the sites used in answers to assessment. As it is difficult to measure uptake of such resources the only real measure available was to look for changes in references to such materials in assessment items and this was not occurring.

In an attempt to fill the gaps that seemed to exist in the knowledge that students had about available resources, a CD-ROM was developed in collaboration with CQU's Multimedia Design Centre. The CD-ROM is entitled 'Navigating the ATO' and contains a tutorial that guides students around the ATO websites. The tutorial also allows students to work on the Internet while the tutorial is running to conduct the searches concurrently. This allows students to learn by doing, which in most cases will allow students to learn the skills taught in the tutorial in the shortest amount of time. The design of the CD-ROM is meant to give students an idea of the variety of materials that they can find on the ATO sites. This is done by looking at some different examples of material to illustrate to students that there are a number of types of information available. The types of materials that the tutorial guides students to are general information pages, publications, forms and areas within the Legal Database. The areas within the Legal Database that the students are introduced to are legislation, rulings, updates, and case judgements. The intention is that students will then be aware of the range of different materials available on the sites. To make this information relevant to what the students are studying the topics that are used as examples are carefully chosen. This is to ensure that the information used in the examples covers areas that students are often personally interested in at the time that they complete the tutorial. An example of this is the use of 'working while studying' as the topic used to illustrate the general principles of searching via the left-hand frame on the home page of the ATO site. Another example of this is the use of Taxation Ruling TR 98/17, which looks at residency, as the ruling illustrating how to find a taxation ruling. This topic is of interest to students in the early stages of a taxation law course as it is one of the first topics covered in the course. The use of topics that are either personally relevant or directly relevant to the material in the course serves to spark student interest in the material being covered as they can immediately see how this information can be useful to them. This should then have the effect of encouraging use of the site both in their studies and in the workforce as it reinforces the value of being able to find such information.

In a further effort to give information literacy in this context some immediate value, a short online quiz has been designed. The quiz is worth 10% of the total marks for the course. This quiz requires students to navigate to various areas of the ATO sites to

find the answers to the questions posed. The questions relate to documents contained on the ATO sites. Prior to the introduction of the quiz, the CD-ROM was available without a summative assessment component attached. Anecdotal evidence showed a minor increase in references to the ATO sites in assessment items during this time. However, it was thought that students were more likely to attach greater value to the skills being taught if some form of summative assessment was required.

The strong push towards technology in tax research and the consequent encouragement of students to take up this technology assumes that these students have the skills and ability to use the technology. This may not always be an assumption that is true. While it may be a fair assumption for those who have come straight from school and have high levels of computer literacy taught to them in school, it may not be a fair assumption for other students in the course. There are a large percentage of students in Universities now who have not entered University until some years after school. There students are less likely to have the same level of computer literacy as those who have just left school. There are also a lot of students who come into University with an education background based in another country. The computer skills of those students may depend on the courses previously studied and the country in which they studied. It is important to determine whether the students utilising technology to obtain tax information have the skills and abilities to do so. If not, it may turn out that we are setting these students an impossible task.

While we are giving the students in this course an opportunity to become familiar with the premier source of tax information it may be that there are factors which affect whether or not these students choose to use this information. It may well be that even when given the opportunity to use the ATO sites that students will still choose not to do so. Some of the factors that may affect whether students use the ATO sites could be the perceived usefulness of the sites, perceived ease of use of the sites, availability of support, social pressure, through to personal traits such as innovativeness, gender, prior experience or educational level.

This study considers the factors that may affect the use of the ATO sites on two levels. Firstly, it looks at perceived usefulness and perceived ease of use of the Internet. Consideration is also given to whether innovativeness impacts on these factors. The study then goes on to consider whether perceived usefulness and perceived ease of use of the Internet are related to perceived usefulness and perceived ease of use of the ATO websites. It is important that these factors be considered in light of the special requirements that tax students have for information and the fact that this information is largely available via technology.

# III FACTORS AFFECTING THE ADOPTION AND USAGE OF NEW TECHNOLOGY

The variables that were tested are based on the Technology Acceptance Model  $(TAM)^7$  and the concept of innate innovativeness.

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<sup>&</sup>lt;sup>7</sup> Fred Davis, 'Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology' (1989) 13 *MIS Quarterly* 319.

In the time since Davis developed the TAM there has been much written in this area that helps to explain why individuals will more readily accept some technological applications over others. TAM is used to predict and explain the acceptance of information technology using perceived usefulness and perceived ease of use as determinants of behaviour.

Perceived usefulness is defined as 'the degree to which a person believes that using a particular system would enhance his or her job performance'. 8 Perceived ease of use is defined as 'the degree to which a person believes that using a particular system would be free of effort'. Variables that have a similar meaning to perceived usefulness and perceived ease of use were used to determine these constructs as variables that would determine system usage in Davis' original study. 10 These concepts are derived from work in management information systems, humancomputer interaction, and marketing. Specific theories utilised in developing the model were expectancy theory, self-efficacy theory, behavioural decision theory, and diffusion of innovations theory. Davis adapted concepts from these areas to derive perceived usefulness and perceived ease of use as factors that would affect the adoption of particular technology by users. Perceived ease of use and perceived usefulness have been found to be significantly correlated with self-reported indicators of system usage. However, perceived usefulness shows the strongest correlation with usage. This makes sense in that while 'difficulty of use can discourage early adoption of an otherwise useful system, no amount of ease of use can compensate for a system that does not perform a useful function'11. The accuracy of these variables as determinants of system usage has been described in numerous further studies that have specifically targeted technology in management education, 12 gender, 13 Universities <sup>14</sup> and numerous other applications. <sup>15</sup>

Ease of learning has been found to be strongly related to ease of use, <sup>16</sup> to the extent that the two factors are indeed congruent. <sup>17</sup> Therefore, in the TAM ease of learning is

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education: an empirical investigation from a student's perspective' (2005) 36 British Journal of Educational Technology 237.

<sup>&</sup>lt;sup>8</sup> Ibid 320.

<sup>&</sup>lt;sup>9</sup> Ibid.

<sup>&</sup>lt;sup>10</sup> Ibid 323.

<sup>&</sup>lt;sup>11</sup> Ibid 334.

<sup>&</sup>lt;sup>12</sup> Judy Drennan, Jessica Kennedy, and Anne Pisarski, 'Factors Affecting Student Attitudes Toward Flexible Online Learning in Management Education' (2005) 98 *The Journal of Educational Research* 331.

 <sup>&</sup>lt;sup>13</sup> David Gefen and Detmar Straub, 'Gender Differences in the Perception and Use of E-Mail: An Extension to the Technology Acceptance Model' (1997) 21 MIS Quarterly 389; Viswanath Venkatesh and Michael G. Morris, 'Why Don't Men Ever Stop To Ask For Directions? Gender, Social Influence, And Their Role In Technology Acceptance And Usage Behaviour' (2000) 24 MIS Quarterly 115.
 <sup>14</sup> Waiman Cheung and Wayne Huang, 'Proposing a framework to assess Internet usage in university

<sup>&</sup>lt;sup>15</sup> Dennis Adams, Ryan Nelson and Peter Todd, 'Perceived Usefulness, Ease of Use, and Usage of Technology: A Replication' (1992) 16 *MIS Quarterly* 227; Xiadong Deng et al, 'A multi-group analysis of structural invariance: an illustration using the technology acceptance model' (2005) 42. *Information and Management* 745; Leroy Robinson Jr., Greg Marshall, Miriam Stamps, 'An empirical investigation of technology acceptance in a field sales force setting' (2005) 34 *Industrial Marketing Management* 407.

<sup>&</sup>lt;sup>16</sup> T L Roberts and T P Moran, 'The Evaluation of Text Editors: Methodology and Empirical Results' 1983 26 *Communications of the ACM* 265.

<sup>&</sup>lt;sup>17</sup> J Whiteside, S Jones, P S Levy and D Wixon, 'User Performance with Command, Menu, and Iconic Interfaces' (Paper presented at the CHI Conference, San Francisco, April 14 – 18 1985).

treated as part of the determinant of ease of use rather than a factor in itself.<sup>18</sup> In this study ease of learning is also used, and treated as part of the factor of perceived ease of use rather than as a distinct factor.

Perceived usefulness can be described as an extrinsic motivator while perceived ease of use can be described as an intrinsic motivator. External factors which affect these motivators are not considered in TAM although Igbaria<sup>19</sup> suggests that external factors such as organisational context would be of benefit to the model.

In relation to technology use in Universities, specifically use of the Internet, it has been found that the motivators perceived usefulness and perceived ease of use can be used to promote Internet use in university study. <sup>20</sup> Another motivator considered in this study by Cheung and Huang<sup>21</sup> is that of social pressure, which was also found to positively relate to Internet usage. Interestingly, this study also looked at the IT Diffusion Process Model, <sup>22</sup> considering the impact of Internet usage as an additional set of variables. This step is of interest to us in our context because it considers the impact of the Internet on learning and on job prospects. Of specific interest is the finding that students perceive that Internet usage provides them with better job prospects. <sup>23</sup> They also perceive that Internet usage assists their learning in the areas of general learning, distance learning and constructive learning. The study<sup>24</sup> suggests that:

Internet use may help students heighten their constructive learning by enhancing their constructive learning motive and strategy. Constructive learning motive and strategy refers to forms of learning behaviour such as 'while I am studying, I often think of real life situations where the material I am learning would be useful', which are generally considered to indicate a higher level of learning.<sup>25</sup> Hence, constructive learning can help universities and instructors to bridge the gap between university education and the needs of business organisations. This gap has become a key issue in university education because universities have sometimes been criticised for failing to meet the requirements and needs of the business world.

While it is outside the scope of the current study to consider these additions to the TAM they are factors that are worthy of consideration in future research.

Another variable that has been found to be of predictive use in studies in the uptake of technology is that of innovativeness.<sup>26</sup> Innovative attitude has been shown to be

<sup>22</sup> Detmar Straub, 'The effect of culture on IT diffusion: e-mail and fax in Japan and the US' 5 *Information Systems Research* 23.

<sup>&</sup>lt;sup>18</sup> Fred Davis, above n 7, 325.

<sup>&</sup>lt;sup>19</sup> M Igbaria, S Parasuraman and J J Baroudi, 'A motivational model of microcomputer usage' (1996) *13 Journal of Management Information Systems* 127.

<sup>&</sup>lt;sup>20</sup> Waiman Cheung and Wayne Huang, above n 14.

<sup>&</sup>lt;sup>21</sup> Ibid.

<sup>&</sup>lt;sup>23</sup>Waiman Cheung and Wayne Huang, above n 14, 247.

<sup>24</sup> Ihid

<sup>&</sup>lt;sup>25</sup> J B Biggs, Student Approaches to Learning (1987).

<sup>&</sup>lt;sup>26</sup> Judy Drennan and Jessica Kennedy, 'Small firm Internet uptake: How important is an innovative attitude?' (Paper presented at the Conference Proceedings of ANZMAC 2000, Gold Coast, December 6-9 2000); G Foxall and S Bhate, 'Computer use innovativeness: Cognition and context' (1999) 17 *International Journal of Technology Management* 157.

related to computer use<sup>27</sup> generally and to early adoption of innovations in information technology.<sup>28</sup> It has also been shown that innovative attitude has a positive effect on the determinant of perceived usefulness in the TAM.<sup>29</sup> The concept of innovativeness refers to the willingness of an individual to try something new. It has been suggested by Agarwal and Day<sup>30</sup> that in the context of innovation in information technology this would mean that innovation refers to an individual's propensity to have positive beliefs about technology and its use. In this study we are looking at the willingness of the student to use the Internet generally and the ATO websites specifically.

# IV Hypotheses

Using the constructs provided by TAM it would seem that in order to determine whether students use or intend to use the ATO websites we first need to determine their attitudes towards the Internet generally. If students do not use the Internet then it is unlikely that they will choose to use sites located on the Internet. As innovativeness has been positively linked to usage of technology, innovativeness has been chosen as a factor to study to determine whether those who possess this trait also perceive the Internet to be useful or perceive that the Internet is easy to use. The second stage of the study looks at perceived usefulness of the Internet and perceived ease of use of the Internet to see whether these factors have a positive relationship with perceived usefulness and perceived ease of use of the ATO.

Therefore, the hypotheses that are proposed in relation to this study are as follows:

H1: Innovativeness will be positively related to perceived usefulness of the Internet.

H2: Innovativeness will be positively related to perceived ease of use of the Internet.

H3: Perceived ease of use of the Internet will be positively related to perceived ease of use of the ATO.

H4: Perceived usefulness of the Internet will be positively related to perceived usefulness of the ATO.

H5: Perceived usefulness of the ATO and will be positively related to perceived ease of use of the ATO.

# V METHOD

#### A Survey Instrument

The survey instrument was administered in Week Nine of the term. This was after the students had used the CD-ROM 'Navigating the ATO' and completed the online quiz in relation to this. Therefore it is assumed that students had reached some level of familiarity with the ATO websites. This survey is designed to measure perceived

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<sup>&</sup>lt;sup>27</sup> G Foxall, and S Bhate, above n 26.

<sup>&</sup>lt;sup>28</sup> Ritu Agarwal, and A E Day, 'The impact of the Internet on economic education' (1998) 29 *Journal of Economic Education* 99.

<sup>&</sup>lt;sup>29</sup> Judy Drennan, Jessica Kennedy and Anne Pisarski, above n 12.

<sup>&</sup>lt;sup>30</sup> Ritu Agarwal and A E Day, above n 28.

usefulness and perceived ease of use of the Internet and the innate innovativeness of the respondents. Further factors that the survey is designed to measure are the perceived usefulness and perceived ease of use of the ATO websites. It also collects information on various personal and situational variables that may influence perceptions such as use of the Internet, Internet enjoyment and Internet access.

# B Participants

Participants in the study were students in a third year course in taxation. There were 594 students enrolled in the course, however they were not all present at the lectures at which the survey was conducted. Of these, 148 students responded to the survey, giving a response rate of 25% of the total student enrolment in the course. There were 51 male respondents (35%) and 96 female respondents (65%). One student did not nominate gender.

#### C Procedure

Lecturers asked all students present at lectures in Week Nine to self-complete the survey questionnaire. The questionnaire was accompanied by a consent form and information sheet and respondents were assured that their results would remain confidential and that participation was entirely voluntary. Students studying by flexible mode received the survey questionnaire in the mail. Students were given 15 minutes to complete the survey. Responses were returned to the lecturer at that time, although any student who chose to complete the survey at home and return it later was given the option to do so.

# VI MEASURES

All of the variables below except hours of Internet use were measured using 5-point Likert scales.

A *Innate innovativeness*: was measured using 11 items derived from the Ettlie and O'Keefe<sup>31</sup> 20-item Innovative Attitude Scale. Reliability analysis indicated a Cronbach's alpha of ??? on the 11 items.

B *Perceived Ease of Use of the Internet*: there were six ease of use items derived from Davis<sup>32</sup> original six-item scale. These items include statements relating to ease of learning to use the Internet as ease of learning is considered to be a substratum of ease of use rather than a separate construct.<sup>33</sup> These items showed a Cronbach's alpha of ??? when tested for reliability.

C *Perceived Usefulness of the Internet*: These six items were designed specifically for this questionnaire to determine the perceived usefulness of the Internet for study, work and research. Reliability analysis performed on these items indicated a Cronbach's alpha of 0.68.

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<sup>&</sup>lt;sup>31</sup> J Ettlie and R D O'Keefe, 'Innovative Attitudes, Values, and Intentions in Organizations' (1982) 19 *The Journal of Management Studies* 163.

<sup>&</sup>lt;sup>32</sup> Fred Davis, above n 7.

<sup>&</sup>lt;sup>33</sup> Ibid 325.

D *Perceived Ease of Use of the ATO*: Four original items were used to determine student's attitudes regarding how easy the ATO websites are to use. These items showed a Cronbach's alpha of 0.815.

E *Perceived Usefulness of the ATO*: To determine student's attitudes towards the usefulness of the ATO websites there were four items loosely based on the six-item scale by Davis.<sup>34</sup> The Cronbach's alpha of these items was 0.925.

A number of questions were asked to obtain background information. The first of these is a standard question to determine how many hours the participants use the Internet. There were five response groups as indicated in Table 1. Two of the questions used a 5-point Likert scale and were used to determine whether the respondent likes playing with the Internet and whether they find the Internet easy to navigate.

F *Hours of Internet use*: Students were asked to nominate the range of hours that they used the Internet weekly.

G *Internet enjoyment*: Students were asked for the level of agreement with the statement "I enjoy playing around with the Internet".

H *Ease of navigation of the Internet*: Students were asked to respond to the statement "I find it easy to navigate the Internet" by indicating agreement on the scale from strongly agree to strongly disagree.

In addition, students were asked about their age, number of hours worked outside study, their source of Internet access and reliability of Internet access as background questions to get some insight into the situational variables that may affect the uptake of this technology.

# VII DATA ANALYSIS

Responses to the background questions tell us that 86% of the respondents in this study are aged between 18 and 30. 95% of these are studying in a Bachelor of Accounting degree at Central Queensland University. Half of the students (54%) work less than 20 hours per week, while a significant number (29%) do not have any paid employment. A small number of students reported working full-time (5%) with 15% reporting over 30 hours of work per week.

In relation to Internet access most of the respondents have Internet access which they consider to be generally reliable (84%). There is some concern, from a teaching perspective though about the finding that there are 8% of students who say that they only have occasional access (7%) or no access at all to the Internet. This is a concern given that these students are third year accounting students who rely heavily on computers to complete their studies. Given that this course requires Internet use as part of the course assessment all students should have Internet access. This result is not reflected in course performance however, where students have the option to obtain

<sup>&</sup>lt;sup>34</sup> Ibid.

alternative assessment where Internet access is not available. No students chose to avail themselves of this option.

The question about location of access yielded the result that a large majority (75%) access the Internet at home or work rather than at University.

*Table 1 – Background information relating to employment and Internet access* 

Background information	
Location of access	
At home	72%
At work	3%
At University	24%
Other	1%
Access to the Internet	
Generally reliable	84%
Minor problems with access	8%
Can occasionally get access	7%
No access	1%
Hours worked outside study	
None	29%
< 10 hours	7%
11-20 hours	47%
21-30 hours	2%
31 – 40 hours	10%
More than 40 hours	5%

Internet usage of less than 10 hours per week was reported by more than half (62%) of respondents. A small percentage (16%) reported high-level Internet usage of more than 21 hours per week. Interestingly, when these results were broken down by gender the majority of female respondents reported Internet usage of less than 10 hours per week (71%) while less than half (45%) of male respondents reported that level of usage. High-level Internet usage of over 21 hours showed a corresponding difference with only 14% of female students reporting this level of usage and 22% of males. This difference in response contrasts with responses to the statement "I like playing around with the Internet" which has an almost identical response rate for both male and female respondents. The overall response rate to this question indicates that only 22% of students do not like playing around on the Internet.

Table 2: Hours of Internet use per week

Hours used per week	Male	Female	Total
Less than 5	14.3%	32.3%	26%
6 – 10 hours	30.6%	38.5%	36%
11 – 15 hours	22.4%	11.5%	15%

16 – 20 hours	10.2%	4.2%	7%
More than 20 hours	22.4%	13.5%	16%

A Pearson correlation matrix was used to test the first two hypotheses. The Pearson correlation matrix for hypotheses 1 and 2 is shown at Table 3. The first hypothesis that innovativeness will be positively related to perceived usefulness of the Internet has been supported. Perceived usefulness has been shown to be a strong predictor of Internet use. This result would be expected as results in prior studies have shown that there is a positive relationship between innovativeness and perceived usefulness.<sup>35</sup>

The second hypothesis that innovativeness will be positively related to perceived ease of use of the Internet is also supported. This shows that those who consider themselves to be innovative in attitude also perceive that the Internet is easy to use.

Table 3: Pearson Correlation Matrix for Internet

Variable	Perceived	Perceived Ease of	Innovativeness
	Usefulness Internet	Use Internet	
Perceived Usefulness			
Internet			
Perceived Ease of Use	.156		
Internet			
Innovativeness	.494**	.367**	

<sup>\*</sup>Correlation is significant at the 0.01 level (2 tailed)

The study is completed in two stages and the second stage looks at whether there is a relationship between perceptions of the Internet and perceptions of the ATO websites. Therefore, to complete this stage it was necessary to focus on those responses from students who had actually used the ATO websites. Responses indicating prior use of the ATO websites numbered 117 and these were the responses chosen for use in this part of the study.

The second stage of the study considers the final three hypotheses. A Pearson correlation matrix is used to test the hypotheses. The Pearson correlation matrix for hypotheses 3 - 5 is shown at Table 4. Hypothesis three that perceived ease of use of the Internet will be positively related to perceived ease of use of the ATO is not supported. This is a surprising finding.

Table 4: Correlation Matrix for ATO

Variable	Perceived Usefulness ATO	Perceived Usefulness Internet	Perceived Ease of Use ATO	Perceived Ease of Use Internet
Perceived Usefulness				

<sup>&</sup>lt;sup>35</sup> Judy Drennan and Jessica Kennedy, above n 26.

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<sup>\*\*</sup> Correlation is significant at the 0.05 level (2 tailed)

ATO				
Perceived	.465**			
Usefulness				
Internet				
Perceived Ease	.312**	.181		
of Use ATO				
Perceived Ease	.334**	.178	.076	
of Use Internet				

Hypothesis four that perceived usefulness of the Internet will be positively related to perceived usefulness of the ATO has been supported. Those who find the Internet to be useful also find the ATO websites to be useful. Interestingly, while perceived ease of use of the Internet was not positively related to perceived ease of use of the ATO it was positively related to perceived usefulness of the ATO. Therefore, even though students did not find the ATO sites easy to use they still found the sites to be useful.

Hypothesis five states that perceived usefulness of the ATO and perceived ease of use of the ATO will be positively related. This hypothesis is supported. This finding is similar to earlier findings using TAM<sup>36</sup> where these two factors have shown a significant positive relationship.

Table 5: Summary of Results

Hypothesis	Statement of Relationship	Result
H1	Innovativeness will be positively related to the perceived	Supported
	usefulness of the Internet	
H2	Innovativeness will be positively related to perceived ease	Supported
	of use of the Internet	
Н3	Perceived ease of use of the Internet will be positively	Not
	related to perceived ease of use of the ATO	supported
H4	Perceived usefulness of the Internet will be positively	Supported
	related to perceived usefulness of the ATO	
H5	Perceived usefulness of the ATO and perceived	Supported
	usefulness of the ATO will be positively related	

<sup>&</sup>lt;sup>36</sup> Ibid.

# VIII DISCUSSION

Innovativeness has been shown to be positively related to Internet usage in previous studies. In this study, innovativeness is positively related to the factors that have been shown to determine Internet usage, perceived ease of use and perceived usefulness. As innovativeness has been shown to have a positive relationship to Internet usage it is therefore not surprising that it is also positively related to factors which have also been positively related to Internet usage. This indicates that those students who believe that they are highly innovative individuals believe that the Internet is easy to use and that it is a useful tool to them. This should be taken into account by those teaching subjects requiring use of the Internet as it should be recognised that those students who possess an innovative attitude will more readily recognise the usefulness of the Internet while those who do not possess an innovative attitude may not. As innovative attitude is a trait that is inherent in an individual it is not something that is easily changed. In order to recognise that these differences are inherent in our students we may need to accept that some students will more readily accept the use of the Internet as a course tool while others may be more difficult to persuade. It may take more work to convince those students who do not possess an innovative attitude that the benefits of using the Internet as a tool for study are worth the effort it takes to learn to use it.

This exploratory analysis of the relationship between the factors that have been found to relate to technology usage shows that those who believe that the Internet is easy to use do not believe that the ATO websites are also easy to use. This may be due to the implicit complexity of the ATO websites. The complexity of the sites is caused by the fact that they contain a large amount of information and this information is updated constantly. This leads to a number of different navigational paths to search for any piece of information. While this complexity is almost necessary given the amount of information that is contained on the sites it seems that this is making the sites difficult to use. It may also be that that the students have not yet spent enough time on the sites to find their way around with ease. Those who have spent a little time on the sites but have not used them a lot may perceive the sites to be difficult to use. When they have spent further time on the sites and become more familiar with the use of the sites the perception that they are difficult to use may change. Research on technology generally has shown that as time passes ease of use has a less significant impact on usage as the technology becomes more familiar to users.<sup>37</sup> Further research needs to be done to determine whether perceptions of ease of use of the ATO websites will change once the students have used the CD-ROM and completed the online quiz associated with that. Students who complete the quiz should have a better perception of the ease of use of the ATO websites as that is specifically what the quiz is designed to test. This finding would indicate that assistance should be offered to students to assist them in navigating the ATO websites. In any course where research in tax is required and use of the ATO websites is required there would be a benefit in offering assistance to students in navigating the ATO websites so that they are better able to conduct this research.

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<sup>&</sup>lt;sup>37</sup> Fred Davis, above n 7.

The positive relationship between perceived usefulness of the Internet and perceived usefulness of the ATO shows that there would be some benefit in ensuring that students are familiar with the Internet prior to studying tax. This is so, particularly given that perceived ease of use of the Internet is also related positively to perceived usefulness of the ATO. If students are shown that the Internet is a useful tool for research in earlier subjects then they will be more likely to perceive that tax sites located on the Internet will also be useful. Use of the Internet as a research tool will clearly illustrate to students that the Internet is useful. Using the Internet while there is some supervision will also give lecturers the ability to illustrate the difference between information found on the Internet that has a valid source and information which does not have a valid source. This has important consequences for those wishing to go into practice following study as they will be well on the way to developing a skill that is readily able to be utilised in an accounting workplace.

This study shows that students who are innovative find the Internet useful and they find it easy to use. However, while the benefits of the ATO websites can be seen by these students the sites are not easy to use. The ATO sites are the primary source of freely available tax information. It is therefore imperative that students are given assistance in using these sites so that these valuable sources of tax information can be effectively utilised both for study and for work.

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