TECHNOLOGY USAGE CONSIDERATIONS: NOT ALL ORGANISATIONS OR WORKERS MAY BE THE SAME.

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ABSTRACT

The Technology Acceptance Model (TAM) is widely accepted by researchers in the IT field as a reliable tool able to predict acceptance of new technology by individual employees. The majority of these studies have used participants (both students and non-students) from within traditional businesses functions, e.g., accounting and finance. During the past decade there has been an increasing interest in research into Not for Profit (NFP) organisations. This paper considers whether persons likely to work in NFP firms have different perceptions in relation to technology as such whether these differences may affect the measures typically used within models such as TAM. A survey of business and social science undergraduate students indicated there were differing attitudes to technology between the two different groups. These differences could impact on the interpretation of models such as TAM.

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1 INTRODUCTION

The Technology Acceptance Model (TAM) (Davis, 1989, Davis et al., 1989) has been and still is used extensively to predict acceptance of new technology by individuals (e.g., Benamati and Rajkumar, 2008; Premkumar and Bhattacherjee, 2008; Khalifa and Ning Shen, 2008). TAM theorizes that two beliefs, perceived usefulness and perceived ease of use, determine an individual's behavioural intention to use a system. Furthermore, perceived usefulness and perceived ease of use mediate the effects of external variables on intention to use. The model assumes a user's intention to use technology is formed in relation to just that artefact. A user's intention to use a particular technological artefact can also be affected by prior experiences with technology. These prior experiences can occur much earlier in life and may even inform a person's technology related decisions including career choice.

Consider the following anecdote. A colleague, during an interview with a student, asked why they were interested in studying Human Services. The student responded, "Because I don't want to have to use a computer like I would if I worked in the business sector". The colleague informed the student of the realities of the Human Services sector and the extensive use of technology. This anecdote led to the researchers to question whether user's form views of technology, prior to entering the work environment and then bring these values into the workplace.

Organisations change and evolve over time. One driver of this evolutionary change is and has been technology (Venkatesh et al., 2003). As organisations adapt and evolve into new technology-rich workplaces they evolve to a higher level of collective understanding (Senge et al., 2001). People joining an organisation, however, choose a career for their future

not necessarily based on this collective understanding. Thus, this paper investigates whether different subgroups of people that are likely to enter vastly different careers have different issues in relation to technology and whether these differences, in turn, affect the variables contained in the use of models such as TAM.

2 BACKGROUND LITERATURE

2.1 TAM – a model of Technology Acceptance

There have been numerous models developed to understand the process of acceptance by an individual of a new technology (e.g., Fishbein and Ajzen, 1975; Ajzen, 1985, 1991; Davis, 1989; Davis et al., 1989; Thompson and Higgins, 1991; Davis et al., 1992; Taylor and Todd, 1995; Compeau and Higgins, 1995). Many of these models focus on an individual's ability to accept the technology within specific circumstances. Of the Intention Models, or Behavioural Decision theories, the most popular and well supported are the Theory of Planned Behaviour (Ajzen, 1985, 1991) and the Technology Acceptance Model (Davis et al., 1989)[1].

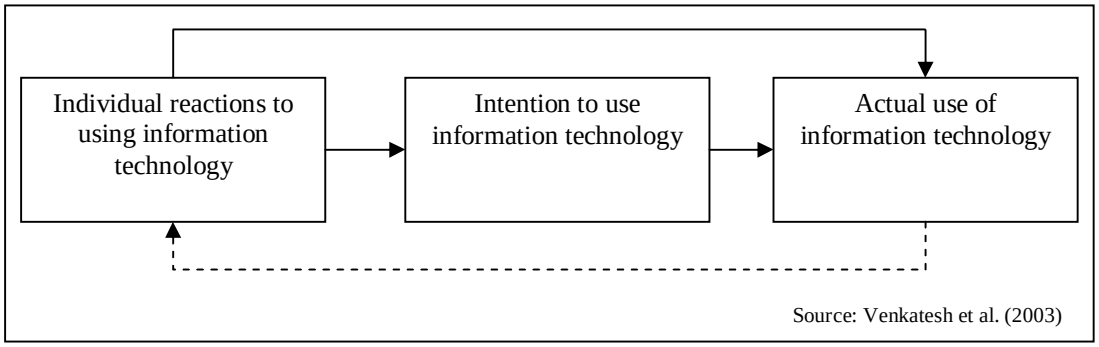

Figure 1. Basic Concept of User Acceptance models

Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), has been used to explain a wide range of behaviours and was applied to the information systems environment by Davis et al. (1989). The Technology Acceptance Model (TAM) developed by Davis et al.

[1] TAM is widely cited in MIS literature, e.g., Business Source Premier recorded Davis (1989) as cited 601 times in its database.

(1989) extended TRA by applying an internal cost-benefit analysis to evaluate the technology's usefulness. Ajzen (1991) further extended TAM to include a perceived ease or difficulty of performing the behaviour as an additional determinant of intention and behaviour, 'perceived behavioural control' (Ajzen, 1991. p10). The basic conceptual framework of TAM is that intention to use technology leads to actual usage (see Figure 1). Researchers have extensively tested TAM and proven it to predict acceptance of new technology by individual employees via explaining a high proportion of the variance in usage intention (Venkatesh and Davis, 2000).

Table 1 - Review of Studies using TAM

Country researched	
USA	63%
Asia	17%
Europe	12%
Middle East	3%
Australia/New Zealand	3%
Other	1%
N/A	1%
Participants	
Student	41%
Non Student	59%

Source: Yousafzai et al. (2007)

Researchers have however questioned the generalisability of TAM. McCoy et al. (2007) found that TAM does not hold across all cultural groups, thus questioning the universality of TAM as a predictor of intention to use in all environments and calling for further research to test TAM across a wider variety of situations. This limitation of past research is further supported when comparing TAM research published since 1989 (Yousafzai et al., 2007) (see Table 1). While 63% of the studies based their research on participants in the USA, less than 3% were Australian/New Zealand. The majority (59%) of the studies have used non-students and 41 percent students. In considering the work of Venkatesh et al., (2003) (see Table 2) it can be seen that the focus of the testing of research

based on the TAM constructs has been in the business or for-profit sector and using employees from within traditional business functions.

There is, however, another business sector, the not-for-profit (NFP) sector. Differences exist between for-profit and NFP organisations (Damanpour, 1991). Exemplifying firm type differences are environmental demands, managerial roles, managerial perceptions of external control, and work related attitudes among employees (Damanpour, 1991). The differences between the two sectors provide a lens for comparing technology acceptance in the different environments.

Table 2 - Industry and Functional Areas for Prior Research

Industry	Functional area	Context of study	Participants
Entertainment	Product development	Online meeting manager that could be used to conduct Web-enabled video or audio conferences in lieu of face-to-face or traditional phone conferences	54
Telecomm Services	Sales	Database application that could be used to access industry standards for particular products in lieu of other resources (e.g., technical manuals, Web sites)	65
Banking	Business account management	Portfolio analyser that analysts were required to use in evaluating existing and potential accounts	58
Public Administration	Accounting	Proprietary accounting systems on a PC platform that accountants were required to use for organisational bookkeeping.	38
Financial Services	Research	This software application was one of the resources available to analysts to conduct research on financial investment opportunities and IPO's	80
Retail Electronics	Customer service	Application that customer service representatives were required to use to document and manage service contracts	53

Source: Venkatesh et al., 2003

Table 3 presents key differences between organisations in these sectors. In general, not-for-profit organisations are non-incorporated entities relying on multiple sources of funds to operate. One of these sources of funds is the government. Recent reports reveal that, within the NFP sector, real funding by government has decreased, forcing organisations to

reduce services. In addition, demand for NFP services is stretching their resources (Saidel and Cour, 2003). Therefore, allocating NFP funds for service delivery becomes more important than the need for new technology.

Table 3 - Comparison of For-profit and Not-for-profit organisations

Attribute	For-profit	Not-for-profit
Owned by	Owner/shareholders	Member ownership
Structure	Owner operator Limited liability company Incorporated company	Non-Incorporated organisation Incorporated organisation
Regulation	Indirect government control through regulation	Indirect government control through regulation and funding
Profit	Profit distributed to owner/shareholders	Profit returned to community
Commitment equals	Salary, bonuses and incentives	Entire or some voluntary work performed
Sources of funds	Personal Financial institutions Shareholders	Government funding Donations from individuals and companies Revenue from various fundraising events and other sources
Employees	43.9 % female Career driven	83.8% female High level of tertiary education Community driven

Source: ABS., (1999); Cunningham et al., (2004); Saidel and Cour, (2003)

2.2 Career Choices

Our choice of a career is often not something that most people would consider we make early in our life. Adya and Kaiser (2005) argue that career orientated decisions may be made by a young person at ages 11-17. Furthermore, choices made by a young person or their family in the selection of school or subjects and/or access to personal or school technology may affect a person's future career orientation.

Career choices by university students have been a concern of professional organisations in the accounting discipline around the world for a number of years (Felton et al., 1994; Jackling and Calero, 2006; Nira and Yoram, 2006). Students choose a particular career for a variety of reasons e.g., students considering non-accounting occupations base their decision

on the intrinsic attributes of a job and the high initial earnings to choose a career whereas accounting students looked at the long-term earnings and promising job-market opportunities (Felton et al., 1994). Furthermore, elements beyond a person's control, e.g., environment, cultural expectations, social class, family background, socioeconomic factors, race, and gender, influence a person's vocational decision (Osipow, 1973). The anecdote in the introduction demonstrates some students form a value system that affects their career choice prior to university. Thus, career choice may be influenced by more than monetary gain.

2.3 TAM and Career Choice

TAM focuses on the individual's ability to accept technology within specific circumstances. This research follows a generalist rather than system-specific view on IS acceptance and utilization. Hasan, (2006) states a generalist view refers to a user's perception of their ability to use a computer in general (without regard to a particular to a particular computing task, application, or environment). This research though proposes applying TAM and specifically perceived ease of use and perceived usefulness to abstract computer usage i.e. technology acceptance more generally and in this case a persons future career and not in relation to a specific artefact.

An attitude is defined as 'a learned predisposition to respond to an object ... in a consistently favourable or unfavourable way' (Kothandapani, 1971, p321). Attitude can be classified broadly into three categories: affective, cognitive, and behavioural/conative (Crites et al., 1994). This tripartite theory of attitudes has a long history of support of the notion that they can reflect evaluative judgements (e.g., Brecker, 1984; Kothandapani, 1971). Researchers have applied the tripartite theory to measure respondents attitude to specific objects e.g. snakes, pizza, television, cows (Crites et al, 1994; Brecker, 1984). This research has been extended considering the attitude of information technology users to a specific IT

object (Yang and Yoo, 2003). Yang and Yoo (2003) describe affective attitude as focusing on how much the person 'likes' the object of thought, while the cognitive dimension refers to an individuals 'specific beliefs' related to the object.

Yang and Yoo (2003) as well as previous researchers used business students majoring in MIS as their sample. However, Saidel and Cour, 2003 state that workers in the social studies discipline area have a specific attitude to their work. They are committed to the public good of an organisation's mission, seek more work-related challenges, look for job and task variety, autonomy and collegiality, and place a high value on non-monetary compensation. This difference becomes extremely important as more and more research is being done in areas such as not for profit organisations whose staff are often working for non profit motivated, social reasons and as such may be less likely to see the advantages of technology within their chosen work field. Thus, it is proposed that a person choosing a business career and those choosing a social science based career will differ in their perceptions about the usefulness of technology, ease of use of technology, and their attitude towards technology for their chosen career.

3 RESEARCH METHODOLOGY

This research examines the different TAM constructs and attitude via a questionnaire administered to undergraduate business and social studies students. Prior research has indicated that students have the same basic beliefs and values as workers (Voich, 1995). Within this research students are also considered as the future workers within the specific areas of business or social studies.

3.1 Participants

A total of 355 undergraduate students participated in the research. Of the 216 business students enrolled 181 (84%) responded and 174 (87%) of the 200 social studies students. The participants were enrolled in their respective first year introductory course. The questionnaire was administered the second week of semester during lectures and all students were invited to participate. Of the total respondents, five were removed due to incompleteness, i.e., responding to less than 66% of questions. Participation was voluntary with no identifying details collected.

3.2 Measures

Respondents were required to complete two parts to the survey. Most questions required responses via Likert and semantic differential scales. The first section of the survey required respondents to provide basic demographic information about their use of computers including the amount and occurrence of computer usage. Based on previous studies (Igbaria et al., 1995; Winter et al., 1998) two indicators of computer usage were used (1) perceived daily use (2) perceived frequency of use. Courneya and McAuley (2005) state that the use of a continuous-closed method where, a respondent is presented with several frequency categories from which to choose (e.g., less than once a month, more than five times a week), would perform better than itemized rating scales (e.g., Likert scale) that focus on whether an individual intends to engage in an activity under scrutiny. Therefore, individuals were asked to indicate the amount of time spent on an average day on the computer, ranging from "Almost never" to "More than 3 hours" on a six point scale. Frequency of use was measured also on a six point scale ranging from 'Less than once a month" to "Several times a day". Participants were also required to indicate whether they shared the computer and their level of satisfaction with their current computer system. Additionally, participants indicated

whether they share a computer with others (1 = Never Share; 7 = Extensively Share) and their satisfaction with their current computer (1 = Very Satisfied; 7 = Very Unsatisfied).

The second section of the questionnaire required respondents to indicate their agreement or disagreement with a series of statements concerning computer usage based on future career choices or work environments. This section measured the constructs of perceived usefulness, perceived ease of use, attitude, and volitional control.

Perceived usefulness (Pu) is defined by Venkatesh and Davis (2000, p187) as the "extent to which a person believes that using the system will enhance his or her job performance" was measured. This construct based on prior research (Igbaria et al., 1995) was measured using modified items to make them specifically relevant to the future careers of the respondent. Each respondent was asked to indicate their agreement or disagreement with five statements using a seven point Likert-type scale.

Perceived ease of use (Peu) refers to the "extent to which a person believes that using the system will be free of effort" Venkatesh and Davis (2000, p187). This construct based on prior research (Igbaria et al., 1995) was measured using modified items to make them specifically relevant to the future careers of the respondent. To measure this construct the respondent was asked to indicate their agreement or disagreement with five statements using a seven point Likert-type scale.

Attitude (Att) is defined as 'a learned predisposition to respond to an object ... in a consistently favourable or unfavourable way' (Kothandapani, 1971, p321). Four statements assessed attitude using a seven point Likert-type scale indicating agreement or disagreement with the statements. This construct based on prior research was measured using modified items to make them specifically relevant to the future work of the respondent.

Volitional control (Vc) is the ability of people to act in a manner that is consistent with their attitudes (Winter et al., 1998). This was measured with two statements using a seven

point Likert-type scale by indicating agreement or disagreement. This measure was included for completeness and as a control to ensure that the two groups of participants had no significant differences in the manner in which they acted in relation to their attitudes.

3.3 Data Analysis

Coding of the data was carried out by one of the researchers to provide consistency, with results analysed by all researchers and the data analysed using SPSS R15. Two questions (In my future work I would avoid the computer at all possible cost; If it were possible in my future work, I would prefer to delegate computer tasks to someone else) were recoded.

4 RESULTS

4.1 Demographics

The average age of respondents was 19 years for the business students (ages ranged from 16 to 36, with 81.6% between 17 and 20) and 2.6 years for the social studies students (ages ranged from 17 and 59, with 78% aged between 17 and 20) (see Table 4). Only 43.2% of the business students were female whereas 70.1% of the social studies students were female. These proportions compare favourably with the proportions in the Australian workforce, i.e., 83.8% female in the social studies workforce (Australian Bureau of Statistics, 2003; Australian Institute of Health and Welfare, 2003). The majority of the respondents were also in their first year of study (Business 76.7% and Social Studies 90.8%).

Details of the participant's computer usage revealed that on average business students spend a significantly greater amount of time per day on a computer (mean business = 4.38,

std dev business = 1.18; mean social studies = 3.81[2], std dev social studies = 1.31, t = 4.28, p = <.05). (see Table 5). 49.5% of business students spend more than 2 hours compared to 26.4% of social studies students.

Table 4 - Participant Demographics

	Percent	
	Business	**Social Studies**
Gender		
Male	49.4	27.6
Female	43.2	70.1
Year of study		
1st	76.7	90.8
2nd	11.9	5.7
3rd	0.6	0.6
4th	1.7	0
Over 4 years	0.6	0
Age		
Under 20	81.6	78
Over 20	18.4	22

Business students also used their computers significantly more often per day however, both groups tended to still use them (business mean = 5.24, business std dev = .848, social studies mean = 4.93[3], social studies std dev = .867, t = 4.28, p = <.05). Significantly more social studies students though shared the computer with others when compared with business students (business mean = 3.08, business std dev = 1.90; social studies mean = 3.74, social studies std dev = 2.09, t(348) = 4.28, p = <.05). Both groups were equally satisfied with their current computer with the difference being not statistically significantly different.

[2] The value 4.38 indicates that business students on average used their computer for between 1 to 3 hours per day whereas the value 3.81 for social studies students indicates that on average they used their computer between 30 mins and 2 hours per day.

[3] The value 5.24 indicates that business students on average used their computer once or more per day whereas the value 4.93 for social studies students indicates that on average they used their computer between a few times per week and daily.

Table 5 - Computer Usage for Participants

	Percent	
	Business	**Social Studies**
Average computer use per day		
Almost never	0	4.0
Less than ½ hour	5.7	8.6
From ½ hour to 1 hour	20.5	31.0
1-2 hours	24.4	29.9
2-3 hours	29.0	11.5
More than 3 hours	20.5	14.9
How often used		
Less than once a month	0.6	0.6
Once a month	0	0.6
A few times a month	1.7	1.7
A few times a week	15.9	27.0
About once a day	36.4	43.1
Several times a day	45.5	27.0

4.2 Constructs Examination

Two sets of data analysis initially occurred. Two sets of factor analyses (principal components analysis using varimax rotation) were performed. The first was conducted using all respondents (see Table 6) and the second was performed for business and social studies independently (see Table 7).

All Participants

Table 6 presents the Rotated Component Matrix for all participants. On inspection, the three factors fall across all of the original constructs. The questions for Volitional control (Vc), Perceived usefulness (Pu) and one of the Attitude (Att) questions formed component one. Considering the wording of the specific questions, the words - use, used, and using are all part of the sentences structure. These words imply action or doing something with technology therefore, component one was named ‘usage’. The questions for Perceived ease of use (Peu) loaded on component two. Finally, component three contains the other three

questions for Attitude (Att). The wording of these questions is quite specific and strongly worded. . These are the negative questions concerning computer usage 'would you avoid' and 'I would prefer to delegate'. These words imply a value placed on the use of technology in the workplace by the individual and so was named 'value'.

Table 6 - Rotated Component Matrix for all participants.

Item	Component		
	1	2	3
If it were possible in future work, I would computerise most of my tasks. (Att)	.488		
When considering computers in the workplace, I see them as a tool to be used at my convenience. (Vc)	.536		
In my future career I would consider my job is to use a computer. (Vc)	.645		
I believe computers will be useful in my future career. (Pu)	.754		
Using computers will increase my productivity in my future career. (Pu)	.844		
Using computers will enhance my effectiveness in my future career. (Pu)	.864		
Using computers will improve my future career performance. (Pu)	.867		
Using computers provides me with information that would lead to better decisions. (Pu)	.738		
Learning to use computers is easy for me. (Peu)		.898	
I find it easy to get computers to do what I want to do. (Peu)		.878	
It would be easy for me to become skilful at using computers. (Peu)		.842	
I find computers easy to use. (Peu)		.793	
In my future work I would avoid the computer at all possible cost. (Att)			.757
If I could choose, in my future work I would prefer to use the computer. (Att)			.450
If it were possible in my future work, I would prefer to delegate computer tasks to someone else. (Att)			.807
Eigenvalues	7.16	1.89	1.20
Cumulative % of explained variance	47.7	60.3	68.3

4.3 Business students versus Social Studies students

The following section examines the two subgroups of students separately. Table 7 presents the Rotated Component Matrix for the business and social studies students. First, the results for the business students are presented and then the results for the social studies students.

Business Students

On inspection, the three factors again fall across all of the original constructs for the business students. Though for most the loadings and distribution of the components is similar it is the questions for attitude that is different. The negative questions concerning computer usage 'would you avoid' and 'I would prefer to delegate' still form the factor 'value'. However, the attitude questions (1) If I could choose, in my future work I would prefer to use the computer; (2) If it were possible in my future work, I would computerise most of my tasks, were split between component two and one respectively. The business students put (2) into the usage factor tending to indicate their predisposition that computerisation was both necessary and useful.

Table 7 - Component Matrix for Students by Grouping

Item	Component					
	Business			Social Studies		
	1	2	3	1	2	3
When considering computers in the workplace, I see them as a tool to be used at my convenience. (Vc)	.558			.516		
In my future career I would consider my job is to use a computer. (Vc)	.580			.623		
I believe computers will be useful in my future career. (Pu)	.712			.775		
Using computers will increase my productivity in my future career. (Pu)	.814			.867		
Using computers will enhance my effectiveness in my future career. (Pu)	.849			.865		
Using computers will improve my future career performance. (Pu)	.889			.841		
Using computers provides me with information that would lead to better decisions. (Pu)	.722			.724		
Learning to use computers is easy for me. (Peu)		.871			.905	
I find it easy to get computers to do what I want to do. (Peu)		.872			.878	
It would be easy for me to become skilful at using computers. (Peu)		.843			.831	
I find computers easy to use. (Peu)		.733			.839	
In my future work I would avoid the computer at all possible cost. (Att)			.727			.765
If I could choose, in my future work I would prefer to use the computer. (Att)		.528				.747
If it were possible in future work, I would computerise most of my tasks. (Att)	.546					.600
If it were possible in my future work, I would prefer to delegate computer tasks to someone else. (Att)			.869			.689
Eigenvalues	7.37	1.60	1.22	6.75	2.24	1.30
Cumulative % of explained variance	49.2	59.8	68.0	45.0	60.0	68.6

Social Studies students

On inspection, the three factors fall across the entire original constructs for the social studies students. Though for most the loadings and distribution of the components is similar it is the questions for attitude that are different. The negative questions concerning computer usage 'would you avoid' and 'I would prefer to delegate' still form the factor 'value'. However, the attitude questions (1) If I could choose, in my future work I would prefer to use the computer; (2) If it were possible in my future work, I would prefer to delegate computer tasks to someone else, also formed this component. Thus, the questions on attitude form a single factor tending to indicate students in the Social Studies area see computerisation as a necessary evil.

4.4 MANOVA

A one-way between-groups multivariate analysis of variance (MANOVA) was performed to investigate group differences. Four dependent variables were used: perceived usefulness (PU), perceived ease of use (PEU), attitude (ATT), and volitional control (VC). Summated scores were used to allow for generalisation of results. The independent variable was area of study e.g. business or social studies. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted.

There was a statistically significant difference between business and social studies students on the combined dependent variables ($F(4, 331) = 6.10$, $p = 0.000$ (see table 8)). When the results for the dependent variables were considered separately, using a Bonferroni adjusted alpha level of 0.0125, the difference between business and social studies was significant for three of the four dependent variables. Comparing the business group with the social studies group, MANOVA results, reported in Table 8, indicate that perceived ease of use of technology was significantly associated with the area of study ($F(1, 331) = 8.14$, $p =$

0.004). The means for both groups indicate that business students perceived technology easier to use than the social studies students.

Comparing the business students with social studies group, MANOVA results, reported in Table 8, indicate that perceived usefulness of technology was significantly associated with the area of study (F (1, 331) = 23.85, p = 0.000). The means for both groups indicate that business students perceived technology more useful than the social studies students.

Comparing the business students with social studies group, MANOVA results, reported in Table 8, indicate that attitude to technology was not significantly associated with the area of study (F (1, 331) = 5.29, p = 0.022).

Table 8 – Effect of group on the overall model and each DV[4]

Source	R^2	Df	Mean Squared	F value	Pr > F*	Business Mean@	Social studies Mean@
Combined DV		4		6.10	0.000		
PU	.065	1	691.09	23.85	.000	11.247	14.133
PEU	.022	1	202.05	8.51	.004	9.849	11.410
Att	.013	1	104.21	5.29	.022	10.988	12.108
VC	.026	1	54.90	9.96	.002	5.235	6.048

* Significance is measured by using a Bonferroni adjusted alpha level of .0125
@ 1 = Strongly agree; Strongly disagree

Comparing the business students with social studies group, MANOVA results, reported in Table 8, indicate that volitional control was significantly associated with the are of study (F (1, 331) = 9.96, p = 0.002). The means for both groups indicate that business

[4] Each row of the table represents the results for each separate dependent variable. For example, the PU row indicates the R-squared, the F Value and the p Value for the results when PU errors

students accept that technology is a basic requirement for their chosen career whereas the social studies students consider it a distraction to their everyday work.

5 CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

The research presented in this paper provides some insight into the relationship between technological related factors and a student's chosen area of study. The results indicated that social studies students (and thus those more likely to enter careers within not-for profits organisations) perceived technology to be less useful, not as easy to use, and while they did not differ significantly in their attitude to the role for technology in their future careers, where more likely to differ in their acceptance of technology within their field. The findings have potential implications for researchers using models such as TAM. This finding may have the affect on the relationship between the intention to use technology and actual use of technology.

Furthermore, researchers may not be able to consider an organisation as a single entity. The business students consider that their work environment will include technology and workers are expected to use technology in their day-to-day work. For the social studies students the findings could be a flow on of the anecdote at the start of this paper. Technology is not seen as a given in the sector, however, in difference to their beliefs many of these students will find themselves working with it.

An additional implication for this research is that as organisations are implementing technology they need to consider users not as a homogeneous group. It is the sum of its parts. Attitude as described by Kothandapani (1971) is a learned predisposition that can be either positive or negative; thus it can either benefit or not the organisation. Therefore, organisations need to tailor the implementation of technology to suit the differing attitude of its workers. Groupings within organisations may also need to be considered e.g. accounting,

marketing, and sales, and social roles, differently when it comes to the use of models for acceptance of technology. Implementing new technology in an accounting firm may need to be handled differently to the same technology rollout in a community centre. Furthermore, implementing new technology in a community centre for their accountants may need to be handled differently to a technology rollout in a community centre for their social workers.

The usual caveats associated with survey-based research apply. More specifically this study does not specify whether the person's attitude is positive or negative. Furthermore, the research only considers business students and their social studies counterparts as a single grouping in themselves and opposed to their various sub-disciplines e.g., information systems, accounting, economics etc. While recognizing these limitations the researchers believe that the results of the study suggest some useful understanding of the differences in attitude towards technology in future users.

The results of the study suggest a number of opportunities for future research. First, further research with a larger sample size potentially involving a broader range of disciplines is required to verify the reliability of these findings. Second, the link between the various constructs needs to be examined in more detail to determine the affect that the differing perceptions and volitional control have on a persons intention to use technology and also their ultimate usage. Third, with increasing globalisation, the combinations of aspects such as culture and career orientations need to be considered jointly when examining the issues of technology acceptance.

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