



Determining higher education student attitudes towards engaging with online academic writing skills programs

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The Learning Centre at Curtin University has recently released its academic writing skills programs in an online format which in 2010 had attracted over 3000 hits from students. In order to determine the effectiveness of these online programs and to predict when students are likely to engage with them, a questionnaire containing quantitative and qualitative items was added at the end of these online programs. The Theory of Planned Behaviour was used as a framework in order to determine students' attitudes and planned use of such online academic writing skills programs. The collected data revealed that, while students felt anxious with starting such programs, the instructional design process employed in the development of these resources made them intuitive, interesting and useful to the vast majority of participants. Circumstances in which students are likely to engage with such online programs in the future were also identified.

Keywords: Online learning, academic writing program, engage, student attitudes.

Introduction

The Learning Centre (TLC) at Curtin University provides academic support programs aimed at improving students' academic writing skills. The three PowerPlus Writing Programs, Better Sentences, Essay and Grammar, covers areas of academic writing which students tend to have most difficulties with including sentence structure, punctuation, grammar and essay construction. These programs have been traditionally delivered in face-to-face seminars which were only convenient for students able to attend the Bentley campus. In a move to provide equitable access to these programs for all students, TLC has recently made the three PowerPlus Writing Programs available in an interactive online format to all Curtin enrolled students and staff. During 2010, over 3000 students had accessed these non-compulsory online programs. This paper focuses on examining the students' perceived attitudes towards this online resource for predicting when they are most likely to seek such assistance with improving their academic writing skills. The findings from this study will also inform practitioners, wishing to implement voluntary online learning programs, of several issues encountered by students using similar online learning systems.

Background

Australian universities are currently under pressure to admit increasing numbers of students from a wider variety of backgrounds into their courses, which has led to growing concern over the quality and standards of students' academic discourse and writing abilities (Devereux, Macken-Horarik, Trimmingham-Jack, & Wilson, 2006). Other factors such as students' changing expectations of higher education have also created increasing numbers of students who are less willing to engage fully with university life and academic discourse while taking on long hours of part-time employment (James, 2001). In some cases, while attempting to overcome these obstacles or to simply spend less time on an assignment, students may intentionally choose to carry out pre-meditated academic dishonesty by committing plagiarism (Park, 2003). However, in many other cases, what appears to be straightforward premeditated plagiarism may, in fact, be a symptom of students' difficulty with developing and engaging in appropriate academic discourse and writing (Dawson, 2004; Park, 2003).

This symptom has brought on increasing pressures for academic staff responsible for assisting students to complete the course requirements including the writing of assignments. The view that students are seen as customers creates a tension between accommodating their expectations and, hence, lowering academic challenges, while at the same time attempting to raise their academic abilities (Devereux et al., 2006). In order to improve students' academic abilities, universities typically provide resources for students including a central support area dedicated towards helping students develop their academic writing skills. 'The Learning Centre' within Curtin University provides such support for students through the delivery of freely available face-to-face workshops. A major drawback to the face-to-face workshops, however, has been with not being able to provide access to all Curtin enrolled students, particularly those unable to personally attend the Bentley campus. Demand for academic writing support has been increasing in recent years from all areas of the university including students studying undergraduate, graduate and postgraduate courses. Hence, an online version of these workshops, referred to as the online PowerPlus Writing Programs, was developed and released in an attempt to provide equitable access to the learning resources within the program for all students unable to attend the face-to-face workshops. The face-to-face workshops ran at specific times throughout the year; whereas, the online version was made continuously available to students to complete at anytime of their choosing. These online programs utilise web-based technologies, including elements such as Flash animations, which allow for interactive self-paced learning. The instructional design process that was employed with the design and development of these online programs will be the topic of another paper.

With the launch of the online PowerPlus Writing Programs, a concern for the facilitators and developers have been with how well students will perceive the effectiveness of these programs. Questions were also raised concerning what attitudes students will demonstrate towards using the online PowerPlus Writing Programs' interactive technologies and what circumstances students will be in when they are most likely to engage with these programs. To assist with providing answers to these questions, an online survey was administered that included elements of the Theory of Planned Behaviour (TPB), which has been used in other studies to investigate people's use of technologies.

Theory of Planned Behaviour

In an attempt to understand and predict people's uptake of new technologies introduced into workplace organisations and institutions, investigators have employed The Theory of Planned Behaviour (TPB) as a theoretical framework, which is an extension of Fishbein and Ajzen's (1975, 2010) Theory of Reasoned Action (TRA) model. The TPB, proposed by Ajzen (1991) and further developed by Ajzen and Fishbein (2005), has been applied to a number of studies in an attempt to understand and predict people's behaviour including Internet purchasing, participation in Web-based surveys and use of technology-based support systems (Bosnjak, Tuten, & Wittmann, 2005; George, 2004; Workman, 2005). These studies investigated relationships between attitudes towards the behaviour, subjective norms, perceived behavioural control, intention and actual behaviour, while acknowledging the importance of influences coming from cultural, personal and situational factors (Ajzen & Fishbein, 2005).

Several other researchers have employed Davis' (1986) Technology Acceptance Model (TAM), an adaptation of Fishbein and Ajzen's (1975) TRA model, to determine perceived technology usefulness and usage intentions by

taking into account social influence and cognitive processes (Siragusa & Dixon, 2009). While the TPB and the TAM model share similar components (attitude toward behaviour, subjective norm, and behavioural intentions), the TPB has a stronger emphasis on behavioural control as well as providing more detailed information regarding each of its components relating to specific samples of people (Mathieson, 1991). Siragusa and Dixon (2008, 2009) provided more detailed descriptions of the differences between the TPB, TRA and the TAM model and the relationships between the components of the TPB. As this study is concerned with behavioural control factors for a specific group of students, the TPB was considered to be well suited for this investigation.

Studies that have utilised the TPB revealed that there are significant links between attitudes and beliefs and links between attitudes and behaviours, and that attitudes form the foundations of one's beliefs which influence one's behaviours (refer to Siragusa & Dixon, 2009 for further details regarding this link as well as application and limitations of the TPB). Workman (2005), for example, employed the TPB in an empirical study that investigated the use, disuse and misuse of an expert computer system designed to provide recommended courses of actions to the user. The study used the TBP in order to examine attitudes, perceptions, and social influences, which are seen as influencing factors on technology adaption. Workman asserted that when people have favourable attitudes towards a particular technology, those people are more likely to use that technology. He also argued that people are also influenced by subjective norms; that is, one's perception of significant others' like or dislike towards a particular technology which is likely to encourage or discourage one from using that technology. People's perception regarding their control or ability in the use of technology influences their perceived ease of technology use; that is, as one's perception of control increases, one's use of technology also increases accordingly (Workman, 2005). In their examination of people's intention to participate in Web-based surveys, Bosnjak et al. (2005) agreed with Workman by asserting that the more favourable the attitude and subjective norm regarding a particular behaviour, and the greater the perception of behavioural control, the higher the likelihood of a person's intention to carrying out that behaviour will be. Similarly, George (2004) maintained that one's particular behaviour is influenced by his or her intent to perform that behaviour; the intent is informed by one's attitudes towards that behaviour, subjective norms and one's perceived ability to successfully engage in the behaviour. Hence, this study presupposes that the likelihood of students willing to engage with the interactive online PowerPlus Writing Programs will be influence by their attitudes towards using online resources, their significant others' likes or dislikes towards these resources (subjective norms), and their perceived ability (behavioural control) in being able to engage with the online resources.

This study utilises the TPB in order to explore students' intentions to engage and interact with the interactive online PowerPlus Writing Programs by exploring their attitudes towards using such online programs, their perceived social pressure to do so, and by their perceptions of control with using these resources. Figure 1 summarises the main components of the TPB including the background factors which may also influence students' willingness to engage, as described by Ajzen and Fishbein (2005). The development of the survey described in the next section includes all the main components from this TPB framework as well as some of the background factors relevant to the student sample.

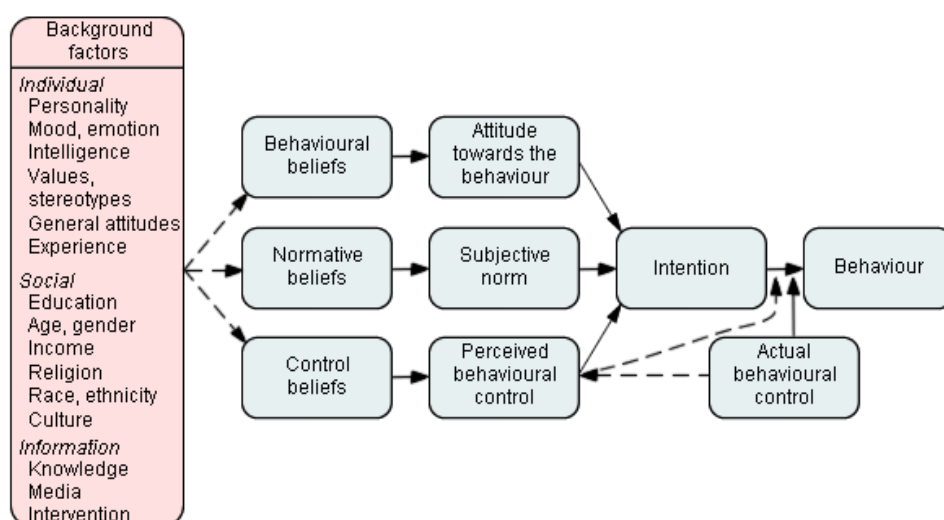


Figure 1: Theories of reasoned action and planned behaviour (Ajzen & Fishbein, 2005)

Methodology

This study employs a mixed methods approach, combining quantitative and qualitative methods. This triangulation combines the strengths of both methods while obtaining different perspectives of the same phenomenon through the collection, analyses and combination of collected quantitative and qualitative data within a single study (Creswell & Plano Clark, 2007; Greene, Kreider, & Mayer, 2005; Siragusa & Dixon, 2008). Data collection in this study involved asking students who accessed the online PowerPlus Writing Programs to complete an online questionnaire which appears as the last page at the end of the program. As participation of the online programs is voluntary to all Curtin students, the sample is made up of those students who chose to complete the online PowerPlus Writing Programs and then complete the online questionnaire. The questionnaire contained 40 items: 29 quantitative items and 11 qualitative items. The first section of the questionnaire collected the students' background information including age, gender and the country they reside in. The second section asked students to indicate their perception of the instructional effectiveness of the online PowerPlus Writing Programs including content presentation, relevance and appropriateness of level, at what level engaging with the programs had improved their writing skills, and how they believed the programs could be improved. The third section asked questions relating to each component of the TPB including the samples' behavioural beliefs and attitudes towards the behaviour, normative beliefs and subjective norms, control beliefs and perceived behavioural control, intentions to carry out the behaviour and the actual behaviour carried out (refer to Siragusa & Dixon, 2008, 2009 for further details regarding the development of survey instruments). The items in the survey were designed to be completed after students had completed the online programs to assist with predicting students' intentions to engage in similar programs or to refer back to the PowerPlus Writing Programs; if students encountered either a positive or negative experience with the programs they had just completed, then they may be encouraged or discouraged, respectively, to complete similar online programs. Upon completion of the online questionnaire, the respondents clicked on a 'Submit' button which sent their responses to the researcher via email; the following reports on the analysis of this collected data.

Quantitative Data Analysis

From February through to December 2011, 3172 individual students accessed at least one of the components of online PowerPlus Writing Programs (the online system was unable to record the amount of time they spent on each component). The sample for this study consisted of 52 students who completed at least one of these components as well as the online questionnaire. The first section collected student background information: 87% were female; 90% resided in Australia; 81% spoke English at home; and 60% were studying through the Perth based campus, 40% were studying through OUA (Open University Australia); 37% were between the ages of 15 and 29 years, 37% were between the ages of 30 and 39 years, 15% were between the ages of 40 and 49 years, 10% were between the ages of 50 and 59 years, and 2% were 60 years or over.

Section Two: Instructional effectiveness of the online PowerPlus Writing Programs

Table 1 shows the statistical summary of the items in the second section of the questionnaire relating to the online PowerPlus Writing Programs' content relevance, appropriateness of content level and presentation, and effectiveness towards improving writing skills (q9, q10, q11, q12 respectively). The items in this section were presented in a Likert-type format (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The majority of participants responded positively to these items; one respondent answered 1 (strongly disagree) and another respondent answered 2 (disagree) to all items, a further six respondents answered 3 (neutral) to at least one of these items, the remaining 44 respondents answered either 4 or 5 (agree, strongly agree). Table 2, presents the response percentages for each of these items.

Table 1: Statistical summary of the responses to quantitative items in the second section

Items	Range of items means		Summary Statistics					
	Lowest item mean	Highest item mean	Mean	Mode	Median	S.D.	Kurtosis	Skewness

Content relevance	2.00	5.00	4.35	5.00	4.50	0.84	4.46	-1.78
Content at appropriate level	2.00	5.00	4.38	5.00	5.00	0.82	5.36	-1.94
Content appropriately presented	2.00	5.00	4.42	5.00	5.00	0.82	5.58	-2.03
Program improves writing skills	2.00	5.00	4.17	5.00	4.00	0.96	1.21	-1.18
Student n=52								

Table 2: Response percentages for each item in the second section

Item	Statement	1	2	3	4	5	pol.	mean	s.d.	cor.
q9	The content was relevant to my needs	2%	2%	6%	40%	50%	+	4.35	0.83	0.91
q10	The content was pitched at an appropriate level	2%	2%	4%	40%	52%	+	4.38	0.81	0.85
q11	The content was appropriately presented	2%	2%	4%	37%	56%	+	4.42	0.82	0.83
q12	Engaging with this program has improved my writing skills	2%	4%	15%	33%	46%	+	4.17	0.96	0.85

(N=52. 1 = Strongly disagree; 5 = Strongly agree)

The vast majority of the sample responded positively to these items, which would indicate that the majority of respondents were generally satisfied with the way in which the content was presented and had met their needs.

Section Three: Component of the Theory of Planned Behaviour

Table 3 presents a scale analysis summary of the dimensions for responses to the items relating to the TPB in the third section of the questionnaire. With each of the dimensions, seven-point bipolar adjective scales (1 = extremely unlikely, 4 = uncertain or indifferent, 7 = extremely likely) were used to assess the participants' perceptions of the item statements presented in the questionnaire. Table 3 also reports the mean (the calculated average of the mean scores for each item within each scale), mode and median scores for each of the scales.

Tables 4 through to 7 shows the statements and response rates for each item relating to the TPB. For the purposes of this study, the following is based upon item-by-item analysis as the number of items in each dimension was too small to permit reliable scale analysis; this may be noted as a limitation of this study.

Table 3: Statistical summary of the responses to quantitative items in the second section

Scale	No. of items	Range of items means		Summary Statistics					
		Lowest item mean	Highest item mean	Mean	Mode	Median	S.D.	Kurtosis	Skewness
Theory of Planned Behaviour									
Behavioural Beliefs	5	4.00	7.00	5.75	5.80	5.80	0.84	-0.18	-0.44
Attitude Towards Behaviour	2	2.50	7.00	5.55	6.00	6.00	1.24	-0.41	-0.69
Normative Beliefs	2	1.00	7.00	3.86	4.00	4.00	1.79	-0.68	-0.31
Subjective Norms	2	1.00	7.00	4.56	4.00	5.00	1.78	-1.03	-0.63
Control Beliefs	2	2.00	7.00	5.10	4.00	5.00	1.50	-1.03	-0.19
Perceived Behavioural Control	2	3.00	7.00	5.71	6.00	6.00	1.04	-0.24	-0.63
Intentions	2	3.00	7.00	6.11	7.00	6.50	1.06	0.13	-1.03
Student n=52									

The response percentages for the questionnaire items relating to the TPB are presented in the following tables. Four of the 7-point bipolar adjective items (q18, q19, q21 and q33) have been negatively polarised; the negatively polarised scores have been reversed so that they are scored and displayed as positive statements. Reverse scoring has been done for these items which have been interpreted as being negative statements regarding the participants' perceptions of their attitudes and beliefs concerning the online PowerPlus Writing Programs. For example, item q18 is worded as a negative statement: "Engaging with online learning programs makes me feel angry". However, as it is reverse-scored, the mean score of 6.31 indicates that more participants disagreed with this statement from those which agreed.

Behavioural Beliefs and Attitudes

The response rates to the behavioural beliefs (the respondents' beliefs regarding their engagement with the

online programs) and attitudes (their positive or negative evaluation of interaction with the programs) scales are show in Table 4. The responses were generally very positive. The highest score was for item q18 (91% – the sum of 1, 2 and 3 responses) which was reverse-scored indicating that the majority did not feel angry when engaging with the online programs; the lowest was for item q21 (60% – sum of 1, 2 and 3 responses) which was also reverse-scored indicating that more than half did not feel apprehensive engaging with the online programs. The majority of participants indicated that interacting with the programs was pleasant (85%) and helpful (76%).

Table 4: Response percentages for Behavioural Beliefs and Attitudes items

Item	Statement	1	2	3	4	5	6	7	other	pol.	mean	s.d.	cor.
Behavioural Beliefs													
q17	Engaging with online learning programs make me feel a sense of competence				13%	33%	27%	27%		+	5.67	1.01	0.45
q18	Engaging with online learning programs make me feel angry	60%	27%	4%	6%	2%	2%			-	6.31	1.12	0.63
q19	Engaging with online learning programs make me feel frustrated	42%	37%	4%	10%	6%			2%	-	5.98	1.20	0.65
q20	Engaging with online learning programs make me feel a sense of achievement		2%		10%	23%	35%	31%		+	5.81	1.09	0.27
q21	Engaging with online learning programs make me feel apprehensive	31%	23%	6%	13%	13%	8%	6%		-	4.98	1.94	0.15
Attitudes													
q23	Interacting with the online PowerPlus Writing Program is extremely pleasant	2%		2%	10%	25%	37%	23%	2%	+	5.60	1.20	0.50
q24	Interacting with the online PowerPlus Writing Program is extremely helpful	4%	4%	4%	8%	10%	33%	33%	6%	+	5.50	1.62	0.50

(N=52. 1 = Extremely unlikely; 7 = Extremely likely; other = null response)

Normative Beliefs and Subjective Norms

Table 5 displays the response rates to the normative belief (the participants' perception about engaging with the online programs, which is influenced by significant others) and subjective norms (their perception of relevant others' beliefs about demonstrating effective writing skills and engaging with the programs) scales. Only 27% (sum of 5, 6 and 7 responses) were influenced by friends and/or family, while 61% were influenced by their teacher/lecturer/tutor. Two-thirds (67%) indicated that relevant others believed that they should demonstrate effective writing skills, while 37% believed that relevant others think that they should complete the online programs.

Table 5: Response percentages for Normative Beliefs and Subjective Norms items

Item	Statement	1	2	3	4	5	6	7	other	pol.	mean	s.d.	cor.
Normative Beliefs													
q26	My friends and/or family encourage me to use the online PowerPlus Writing Programs	38%	13%	6%	13%	13%	4%	10%	2%	+	3.02	2.06	0.35
q27	My teacher/lecturer/tutor encourage me to use the online PowerPlus Writing Programs	21%	2%	2%	10%	13%	19%	29%	4%	+	4.69	2.24	0.35
Subjective Norms													
q29	People who are important to me believe that I should demonstrate effective writing skills	12%		4%	15%	15%	27%	25%	2%	+	5.06	1.85	-0.64
q30	People who are important to me think that I should complete the online PowerPlus Writing Programs	19%	6%	8%	29%	10%	8%	19%	2%	+	4.06	2.04	0.64

(N=52. 1 = Extremely unlikely; 7 = Extremely likely; other = null response)

Control Beliefs and Perceived Behavioural Control

The response rates to the control beliefs (the respondents' beliefs about factors which may facilitate or impede their performance while engaging with the online programs) and perceived behavioural control (their perceived ease of difficulty of successfully engaging in the programs) scales are show in Table 6. The majority (86%) of participants believed that they had sufficient computing knowledge to engage in successful online learning, while 42% mildly or strongly believed that it took a great deal of effort to engage in online learning. Most of the respondents (85%) perceived that engaging with the online programs gave them a sense of being in control of their learning, while 72% perceived that they could interact successfully with ICT in general at all levels. This high level of control beliefs and perceived behavioural control may be partially explained by the fact that 40% of the respondents indicated that they were studying through OUA and that all of them chose to complete this program online.

Table 6: Response percentages for Control Beliefs and Perceived Behavioural Control items

Item	Statement	1	2	3	4	5	6	7	other	pol.	mean	s.d.	cor.
Control Beliefs													
q32	How likely is it that you have sufficient computing knowledge to engage in successful online learning?		2%	4%	8%	23%	25%	38%		+	5.81	1.24	0.54
q33	How likely is it that it takes a great deal of effort for you to engage in online learning programs?	23%	19%	8%	6%	17%	15%	10%	2%	-	4.38	2.10	0.54
Perceived Behavioural Control													
35	Engaging with the online PowerPlus Writing Programs gave me a sense of being in control of my learning		2%	2%	12%	10%	38%	37%		+	5.90	1.18	0.43
36	If I want to I can interact successfully with ICT in general at all levels			6%	19%	12%	33%	27%	4%	+	5.52	1.26	0.43

(N=52. 1 = Extremely unlikely; 7 = Extremely likely; other = null response)

Intentions

Table 7 displays the response rates for the behavioural intentions (the respondents' readiness to intent to engage in the online programs). The vast majority of the respondents indicated that they intend to refer back to the online programs that they have already completed (90%) and intend to complete other similar online programs in the future (90%).

Table 7: Response percentages for Intentions items

Item	Statement	1	2	3	4	5	6	7	other	pol.	mean	s.d.	cor.
Intentions													
38	In the future, I intend to refer back to the online PowerPlus Writing Programs I have completed	2%			6%	21%	21%	48%	2%	+	6.02	1.22	0.77
39	In the future, I intend to complete other similar online PowerPlus Writing Programs				8%	15%	21%	54%	2%	+	6.19	1.02	0.77

(N=52. 1 = Extremely unlikely; 7 = Extremely likely; other = null response)

Quantitative Data Analysis Summary

The participants provided rather encouraging responses to the quantitative items. Nearly all the respondents either agreed or strongly agreed that the content was relevant, pitched at an appropriate level, appropriately presented and led to improvements to their writing skills. This might indicate that the main objective of the online program was achieved; that is, make improvements to the participants' writing skills. For the items relating to the TPB, the respondents' overall responses were rather positive. Their overall attitudes and beliefs about their behaviour when working with the online programs was positive; however, nearly half indicated that online learning programs made them feel apprehensive. The respondents were more influenced by instructors rather than by family or friends to use the online programs; for the majority of the respondents, however, people who are important to them believed that they should demonstrate effective writing skills. While the majority of the respondents perceived that they had control over their learning and had the computing knowledge needed to successfully complete the online programs, nearly half indicated that it took some level of effort to engage in the online programs. Nearly all the participants intend to refer back to the online programs they had already completed and intend to complete similar programs.

Qualitative Data Analysis

The third section of the questionnaire contained seven items that allowed for open-ended responses. The following provides a summary of the responses to these items as they relate to each component of the TPB. To assist with the reading of these findings, the frequencies of the most common responses to each item have been included.

Section Three: Component of the Theory of Planned Behaviour

Behavioural Beliefs and Attitudes

To determine the respondents' behavioural beliefs towards the online programs, they were asked to identify five or six adjectives that would accurately describe how they felt when they were interacting with the online

PowerPlus Writing Programs (q22). The respondents to this question (n=40) put forward 78 adjectives that represented positive experiences with the online PowerPlus Writing Programs, which included 'intelligent' (f=14; 14 respondents indicated 'intelligent'), 'interested' (f=7), 'happy' (f=7), 'competent' (f=6), 'confident' (f=5), 'informed' (f=4), 'excited' (f=4), 'useful' (f=3), 'satisfied' (f=3), 'helped' (f=3), 'relieved' (f=3), 'motivated' (f=2), 'learning' (f=2), and 'empowered' (f=2). They also indicated 9 adjectives that represented negative experiences with the program including 'frustrated' (f=1), 'unsure' (f=1), 'stressed' (f=1), and 'overloaded' (f=1).

In order to determine the samples attitudes towards the online programs, they were asked to indicate how they felt when they first started the programs and to indicate if and how their attitudes changes as they progressed through each program (q25). A total of 38 students responded to this question; 19 of these respondents indicated that they began the programs feeling 'anxious', 'not sure of its benefits', thinking that it might be 'difficult', 'boring' and 'a waste of time', but as they progressed through the program they felt that the programs were 'interesting', 'pleasant', 'useful', 'easy' and 'familiar'. Another 16 respondents to this question indicated that they were consistently 'content', 'happy to learn', 'encouraged to learn more', 'open to new information' and found that the programs provided 'good practical application of the knowledge' and confirmed that they were doing the right thing. Two respondents felt 'great' at first, although as they progressed they felt 'frustrated and 'overwhelmed with all the information given'; one student experienced technical problems.

Normative Beliefs and Subjective Norms

The sample were asked to describe a situation where a person (or people) important to them had encouraged them to complete the online PowerPlus Writing Programs (q28); 22 students responded to this question. Seven of these respondents indicated that they did not experience a significant other encouraging them to complete the online programs. A least 10 of the respondents were encouraged by their lecturer or tutor through either an on online discussion board, in class, or in their unit outlines. Three respondents were encouraged by friends through either an online discussion board or in class. A further two respondents were encouraged by family members.

The students were asked to describe a situation in which they felt a need to complete the online PowerPlus Writing Programs because that is what people significant to them would want them to do (q31); 20 students provided a response to this question. At least 11 respondents perceived that they needed to improve their writing skills and were not influenced by what significant others wanted from them. Five respondents had family members who wanted to see them improve their writing skills and they desired family members to be proud of them. Four respondents indicated that their lecturer or tutor wanted them to complete the online programs.

Control Beliefs and Perceived Behavioural Control

The participants were asked to describe factors that may facilitate or impede their ability to engage in online learning programs (q32). A total of 30 students responded to this question. At least 10 students indicated factors that would facilitate their ability to engage in online learning including being computer literate and being familiar with the online environment, as well as good design of the online programs in order to facilitate ease of access and to make it easy to follow. At least 22 of the respondents indicated factors that would impede their ability to engage online including unfamiliarity with navigating online, slow computers, restricted access to computers, difficulties with balancing study, work and family commitments, and disabilities which impede reading from the screen or hearing sound from video clips.

The respondents were asked to describe their feelings of control (or not) over what they were doing during their interaction with the online PowerPlus Writing Programs (q37); 21 students responded to this question. While two of these respondents were not able to describe their feelings of control, 18 respondents indicated that they were in control of their learning online, were able to work at their own pace and were excited with learning new writing skills. One respondent felt annoyed with not being able to successfully complete the online activities.

Intentions

The students were asked to describe a situation in which they might refer back to the online PowerPlus Writing Programs, or where they might seek further assistance with their writing through similar programs (q40); 31 students provided a response to this question. A total of 24 of these students indicated that they would refer back to the online programs when writing future essays, assignments or theses. Four respondents indicated that they would refer back to the programs when they have more time or have access to the Internet. Two respondents intend to refer back to the programs for future proof-readings, and one respondent intends to refer back during future employment.

Qualitative Data Analysis Summary

The vast majority of the respondents to these items indicated very positive attitudes towards the online PowerPlus Writing Programs. Many of the students felt apprehensive and anxious before they started, thinking that the programs would be difficult, boring or of no value to them; as they progressed, however, they found the programs to be interesting, useful and easy to use. Only a small number of respondents continued to feel frustrated and overwhelmed. While some respondents were not influenced by significant others to complete the online programs, other respondents were encouragement by significant others including their lecturers/tutors, their peers, and/or their family members; many of these significant others indicated to the students that they would like to see them improve their writing skills. A few of the respondents indicated that they wanted their significant others to feel proud of their successful academic achievements. Some of the respondents indicated that having computer literacy, familiarity with navigating websites and appropriately designed online learning environments facilitated their ability to engage with online learning; other respondents indicated that inadequate computing and Internet access facilities, balancing work, study and family commitments, and hearing and visual disabilities impeded engagement with online learning. Many of the respondents felt that they were in control of their online learning experiences. A large number of the respondents indicated that they would refer back to the online programs when writing future essays or assignments, had more time, better computing access and/or in their future profession.

Discussion

As mentioned earlier, the TPB asserts that people's attitudes towards a particular behaviour, subjective norms, and perceived behavioural control are likely to influence their intention to carry out that particular behaviour. This study examined factors that were likely to influence students' intention to participate in the online PowerPlus Writing Programs; the administered questionnaire, therefore, was designed to elicit information from the participants regarding these factors. Table 8 provides a summary of the findings from the quantitative and qualitative items from the questionnaire.

Table 8: Summary of the findings from the quantitative and qualitative questionnaire items

Behavioural beliefs and attitudes	Normative and subjective beliefs	Control beliefs and perceived behavioural control	Intentions
Many respondents indicated that they felt apprehensive and anxious before starting the online programs, but their attitudes became more positive as they progressed when they realised that the programs were intuitive, interesting and useful to them. However, a small number remained feeling frustrated and overwhelmed with the information presented	A large number of the respondents were influenced by their significant others which included their lecturer/tutor and, to a lesser extent, their peers and family members; many of whom indicated that they would like to see them improve their writing skills. Some respondents wanted their significant others to be proud of their successful academic achievement.	The majority of the respondents believed that they had control over their online learning which was facilitated by adequate computing literacy and appropriately designed online learning environments. Nearly all respondents agreed that the content was relevant, suited to their level of learning, appropriately presented and led to improved writing skills. Impediments to their online learning included inadequate computing access and facilities, balancing work, study and family commitments, and challenges with hearing and seeing particular elements within the online programs.	The vast majority of the respondents indicated that they would refer back to the online programs in the future when needing further help with their academic writing activities during their academic studies and professional careers. The majority also indicated that they would seek out other similar online programs as needed.

While it appears that the online PowerPlus Writing Programs have been beneficial to many of the students who have engaged with this resource, there appears to be a need to further examine ways in which students' anxieties towards getting started and engaging with such online programs may be eased. Students' significant others appear to play an important role in encouraging them to engage with such resources which should also be explored. The factors that can impede online learning and cause feelings of frustration and being overwhelmed

need to be further explored and addressed in the ongoing development and revision of these resources.

Conclusion

This paper examined students' perceived attitudes towards the online PowerPlus Writing Programs in order to predict when students are likely to engage in such programs to improving their academic writing skills. The TPB provides a useful framework which highlighted certain conditions in which students are likely to work through resources that will potentially improve their academic writing skills. As the online PowerPlus Writing Program is still a relatively new resource being offered by The Learning Centre, more data will be collect in relation to the effectiveness of this resource and factors that will influence students to engage with these online programs more willingly. This study has provided useful data that will require further investigation which will ultimately be fed back into the ongoing development of the online PowerPlus Writing Programs. The information collected through ongoing investigations into predicting circumstances in which students will engage with online learning programs, particularly when participation with such programs is voluntary, will undoubtedly have benefits for the development and delivery of other online learning programs.

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