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STUDENTS' INTENTIONS TO USE E-RESOURCES: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOUR.

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Abstract

The Theory of Planned Behaviour (TPB) postulates that behavioural intention (BI) is predicted by attitude towards behaviour (AB), subjective norm (SN) and perceived behavioural control (PBC). However, the theoretical sufficiency and usefulness of this theory is yet to be confirmed in library and information science (LIS). The purpose of this paper is to define a specific target behaviour in library and information science, which is LIS students' use of e-resources, and then use TPB to investigate students' intentions to use these resources. An elicitation study was used to identify the LIS students' salient beliefs and develop the closed – ended questionnaire used for this study. The validity and reliability of the questionnaire was determined using exploratory factor analysis. A total of 120 LIS students participated in the study. The data collected were analyzed using multiple regression analysis for the TPB constructs and regression analysis for the salient beliefs. All the statistics used were computed using SPSS. The results showed that, though the three constructs were found to be predictors of LIS students' intention to use e-resources, attitude was the most significant predictor. The salient beliefs were all significant predictors of the direct measures of behavioural intention or LIS students' intentions. The paper concludes that LIS students' decisions to use e-resources are mostly influenced by attitude which has more support of the perceived behavioural control than the subjective norm.

Keywords: Behavioural intention; attitude; subjective norm; perceived behavioural control; theory of planned behaviour; use of e-resources; LIS students.

1. Introduction

University libraries in Nigeria are greatly under pressure to provide electronic resources to students due to poor funding. However, a number of initiatives are now in place in some universities in Nigeria for the development, training and use of e-resources. These initiatives include the Mortenson Center for International Library Programs acting on behalf of MacArthur Foundation to support some university libraries in Nigeria, the Electronic Information for Libraries' Network (eiFL.Net) and the Universities' Connect MTN Foundation. In 2006, the MTN Foundation built a virtual library for the University of Nigeria, Nsukka and provided

access to a number of full-text online databases for use by both staff and students of the University. To support this initiative, the University Administration provided a ubiquitous wireless internet access on campus. This means that both the virtual library and the wireless internet access on campus are intended to increase students' use of e-resources for digital scholarship.

Investigating the LIS students is critical for some reasons. Firstly, Edegbo (2010) emphasizes the need for LIS education in Nigeria to be restructured to empower LIS graduates by integrating ICT skills component into the LIS curriculum. This assertion underscores the need for the LIS students and graduates to possess analytical, critical and problem solving skills. Secondly, the information environment has increasingly become electronic, and this is rapidly transforming LIS professional activities. This new information environment prefers individuals with library, computer and information skills. According to Abdulrahman (2016) LIS students must have information literacy skills to be able to work effectively in this digital era. Policy and practical interventions for inculcation of these skills in the students must be informed by better understanding of the factors that influence LIS students' intentions or decisions to use e-resources.

2. Problem statement

Advances in information and communication technology (ICT) with the attendant information explosion have implications for library and information science education (LIS). Universities in Nigeria are also confronted with the digital revolution. One of the implications of this phenomenon is the need to integrate ICT skills component into the LIS curriculum. Some LIS researchers have carried out studies to provide support for this need (Edegbo, 2010; Abdulrahman, 2016).

However, a lot has to be done to facilitate the process of integration of ICT skills into LIS curriculum. One of the important considerations is to understand the factors that influence LIS students' use of e-resources. The theory of planned behavior has been found useful and sufficient in predicting behavioural intentions. It has been applied successfully by scholars to study behavioural intentions in different areas of life (Ajzen, 1991; Bidin et al; 2011; Essen and Gundoghdu, 2010). Literature reveals that the usefulness of this theory has not been verified or confirmed in library and information science. This study, therefore, seeks to determine the students' intention to use e-resources at the University of Nigeria, Nsukka.

3. Literature review

3.1. Conceptual framework and development of hypotheses

3.2. Theory of Planned Behaviour(TPB)

This theory was propounded by Icek Ajzen in 1985. It states that intentions predict behaviour. In this study, the target behaviour is the e-resources' use behaviour. The use of e-resources by students is growing rapidly because students are using e-resources for various reasons that cover academic and non-academic purposes. Identifying the determinants of e-resources' use behaviour is now of major concern to LIS professionals because of the relevance of ICT to LIS education in Nigeria (Edegbo, 2011). Intention is the immediate predictor of behaviour (Ajzen, 1991) and, in this study, intention to use e-resources is defined as a student's readiness or

willingness to use these resources. Intention is predicted by three conceptual determinants, namely; attitude, subjective norm and perceived behavioural control.

The TPB is an extension of the Theory of Reasoned Action (TRA). However, one major difference between the two is that TRA has volitional control factors such as attitude and subjective norm. These factors can make an individual decide whether to perform an action or not. Another major difference between TPB and TRA is that the former includes an additional dimension of perceived behavioural control as a predictor of behavioural intention (Zamani – Miandashti, Memarbashi and Khalighzadeh, 2013). According to Lee and Back (2007), perceived behavioural control increases the predictive power of TPB by accounting for intention that is predicted or determined by non-volitional factors. TPB provides detailed information on the individual, social and organizational factors that affect user behavior.

The Theory of Planned Behaviour model assumes that salient beliefs are the antecedents to Attitude toward the behaviour (AB), Subjective norm (SN) and Perceived behavioural control (PBC). This means that each of these three direct determinants of behavioural intention is influenced, in turn, by an indirect determinant (Lee, Cerreto and Lee, 2010). TPB insists that these indirect determinants must be based on a set of salient beliefs including evaluations of these beliefs.

There are three main reasons why this theory was chosen. Firstly, the theory has been found useful in understanding information system related behaviours (Taneja, 2006; Fusilier and Durlabhji, 2005; Zamani – Miandashti, Memarbashi and Khalighzadeh, 2013). Secondly, the present study was intended to identify factors that influence LIS students' intentions to use e-resources which makes TPB the most suitable model. Thirdly, previous empirical studies have shown that TPB has adequate predictive power (see Godin and Kok (1996); Notani (1998); Yayla and Hu (2011); Taylor and Todd, 1995; Yousafzai, Foxall and Pallister (2011); Troung, 2009; Teo and Lee, 2001).

Often behaviours pose difficulties with regard to execution. However, Siragusa and Dixon (2008) maintain that it is useful to consider behavioural control in addition to intention. They further state that depending on how realistic people are in their judgments of the level of difficulty associated with a particular behaviour, a measure of perceived behavioural control can serve as a proxy for actual control and as such can contribute to the prediction of the behaviour in question. When applied to the present study, the Theory of Planned Behaviour (TPB) suggests that intentions to use e-resources by LIS students is influenced by attitude toward using e-resources, perceived social pressure to do so and by perceptions of control the students have over e-resources' use.

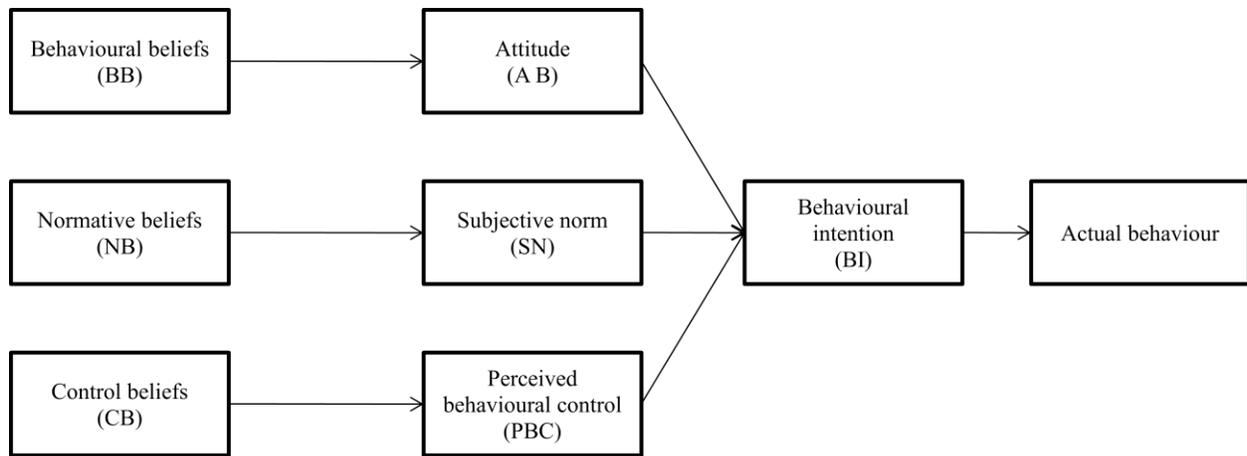


Fig. 1: Theory of Planned Behaviour Model(adapted from Ajzen (1985))

3.3. Attitude towards using e-resources.

Attitude, according to Ajzen (1991), is the first important determinant of behavioural intentions. Kraus (1995) sees attitude as an important psychological construct that influences and predicts much behaviour. Attitude has three aspects, namely: affective aspect, beliefs and values aspect and cognition (Fishbein and Ajzen, 1972; Ajzen, 1991). In the affective aspect, attitude is used to show how an individual favours objects, events or other persons (Ajzen, 1991; Fishbein and Ajzen, 1972). One can evaluate or judge situations and their consequences based on one's cognition (Bandura, 1977; Ajzen, 1991; Fishbein and Ajzen, 1972). Ajzen(1991) affirms that social norms and personal ability play a role in an individual's affection and cognition by helping an individual to decide whether to perform a particular behaviour or not. Beliefs and values are equally important and provide support to an individual's affection and cognition toward determining behavioural intentions (Ajzen, 1991). As a construct of TPB, attitude is defined as, 'the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Ajzen, 1991, p.188). Ajzen further states that the more favourable the attitude toward the behaviour, the stronger will be an individual's intention to perform the behaviour. Applying this to our study, a student's positive attitude toward the use of e-resources would strengthen his or her intentions to use e-resources. Thus, it is hypothesized that:

H₁: There is a significant and positive relationship between attitude toward using e-resources and the intention to use e-resources by LIS students in University of Nigeria, Nsukka.

3.4. Subjective norm

The subjective norm is the second determinant of behavioural intention, and it is defined as 'the perceived social pressure to perform or not to perform the behaviour' (Ajzen, 1991, p.188). Ajzen further states that the role of the social pressure becomes important when the motivation to comply with the pressure is greater. Motivation to comply is the extent to which an individual would want to comply with the wishes of other people (Mathieson, 1991). In the present study, subjective norm is what significant others think one should do, and if they think it is proper to use e-resources, then one's perceived social pressure to use e-resources would increase one's

motivation to comply. Taylor and Todd (1995) maintain that subjective norm plays a role in determining behavioural intention, especially when the actual behavior is defined. Applying Ajzen's (1991) into the present study means that when those who are close to the students think that using e-resources is proper, the students perceived social pressure to use e-resources would increase the students motivation to comply. Therefore:

H₂: There is a significant and positive relationship between subjective norm and intention to use e-resources by LIS students in the University of Nigeria, Nsukka.

3.5. Perceived Behavioural Control

The third determinant of behavioural intention is perceived behavioural control, and it is defined as 'the perceived ease or difficulty of performing the behaviour' (Ajzen, 1991,p.188). Ajzen further states that it is the perception of behavioural control that impacts on the intention to perform a behaviour and on the actual performance of that behaviour. This view seems to be similar to the notion of self- efficacy by Bandura (1982) which is, 'concerned with how well one can execute courses of action required to deal with prospective situation' (p.122). Bandura further states that people's behaviour is strongly affected by their confidence in their ability to perform that behaviour. Ajzen ties this up by stressing that when behaviours are perceived as challenging, or when there are barriers to performance, perceived behavioural control becomes a more important factor predicting behaviour. It can be argued that perceived behavioural control is related to self-efficacy because it reflects the perceived ability to perform a behaviour (Ajzen, 2002). Relating all this to the present study, it means that a student's behavioural intention to use e-resources will be lower, if the required resources are not available to him or her, or he /she lacks the requisite skills to use the e-resources. This student is said to hold a little control over using e-resources. In his study, Mathieson (1991) found that perceived behavioural control has significant effect on behavioural intention. Thus, it is hypothesized that:

H₃: There is a significant and positive relationship between perceived behavioural control and intention to use e-resources by LIS students in the University of Nigeria, Nsukka.

4. Methodology

This study was carried out using a quantitative approach. Data collection was done through a questionnaire developed by the researchers (see appendix 1) based on the guidelines for conducting TPB studies given by Ajzen (2006), Ajzen and Fishbein (1980) and Francis et al. (2004). First, a preliminary, elicitation study was conducted to identify the participants' salient beliefs regarding the use of e-resources. This elicitation study was conducted with 45 LIS students at the University of Nigeria, Nsukka in order to identify their salient beliefs. Second, the results of the elicitation study were then used to develop measures of behavioural, normative and control beliefs that were then included, together with the measures of behavioural intention, subjective norm, and perceived behavioural control, in the construction of a closed- ended questionnaire.

4.1. Research instrument development

The final questionnaire for the study consisted of closed –ended questions. The closed- ended questions were developed based on procedures given by Ajzen (2006) and Francis et al. (2004). The questionnaire contained both direct (behavioural intention, attitude, subjective norm and

perceived behavioural control) and indirect measures (behavioural beliefs, normative beliefs and control beliefs). All questionnaire items used a 7-point Likert scale. As recommended in Ajzen (2006), items for direct measures were constructed with a particular behaviour in mind. For indirect measures, items were constructed for each salient belief.

The questionnaire was piloted with 15 students who came to use e-resources in the university library. The pilot study was done for the purpose of establishing the internal consistency of the research instrument. Items with high internal consistency were selected for the final version of the questionnaire. The reliability of each construct was calculated using Cronbach's alpha procedures and all scales were found to have acceptable internal consistency ($\alpha > 0.6$) based on guidelines provided by Francis et al. (2004). Table 1 indicates that all Cronbach's alpha values for the six constructs exceeded the recommended value of 0.60. Further, the constructs were evaluated for unidimensionality. This is defined as the extent to which the study indicators deviate from their latent variable (Masa'deh, Obeidat and Tarhini, 2016). An examination of the unidimensionality of the research constructs is essential for establishing construct reliability and validity analysis (Chou et al, 2007). As suggested by Byrne (2001), this research evaluated unidimensionality using the factor loading of items of their respective constructs. Table 1 shows solid evidence for the unidimensionality of all the constructs that were specified in the research model. As can be seen from this table, 9 items loaded satisfactory on BB construct, 5 items on NB, 2 items on CB and 2 items each on AB, SN, PBC and BI. All loadings were above 0.50, which is the criterion value recommended by Newkirk and Lederer (2006). This means that items that did not meet this criterion were deleted.

4.2.Participants

The First Year Students of this Department were excluded from this study because at this level of their LIS education they are yet to be exposed to both electronic resources and the skills that are required to exploit these resources. The LIS education at the undergraduate level is a – four year programme. The LIS students from Year 2 to Year 4 participated in this study, and the Department has a total of 126 of these students made up of 45 undergraduate students in Year 2, 46 undergraduate students in Year 3 and 35 undergraduate students in Year 4. The Department has computer lab with few computers and no internet connectivity. Table 2 shows the distribution of the participants in terms of their year of study, gender and age.

4.3.Data collection and analysis

Based on the student population size, 126 copies of the questionnaire were distributed. A total of 120 copies of the questionnaire were returned and used for the study. This is because only six copies of the questionnaire were not returned meaning that six (6) students did not participate in the study. This gives a response rate of 95.24%. Data collected were analyzed using multiple regressions on the direct determinants of attitude, subjective norm, and perceived behavioural control as predictors of intention. Regression analysis was performed with each of the indirect determinants and its associated direct determinant. SPSS was used to compute all statistics chosen for this study. Further statistical analysis was done as recommended by Ajzen (1991) to find out whether the TPB tends to have a good- fit when applied to LIS students' intentions to use e-resources. As suggested by Kenny (2010) and Carmines and McIver (1981), chi – square is

a reasonable measure of fit for models with about 75 – 200 cases. Further, Carmines and McIver (1981) recommend that the ratio of chi-square to degree of freedom needs to be smaller than 5:1 with $p > 0.05$ for a model to be considered as acceptable fit.

Table 1: Properties of the final Questionnaire

	No. of items	Standard loading	SE	Squared multiple correlation	Error variance	Cronbach alpha
Behavioural Beliefs	9					0.79
BB1		0.621	0.124	0.386	0.056	
BB2		0.710	0.131	0.504	0.061	
BB3		0.650	0.220	0.423	0.038	
BB4		0.709	0.161	0.503	0.042	
BB5		0.561	0.122	0.315	0.031	
BB6		0.524	0.111	0.275	0.028	
BB7		0.640	0.122	0.410	0.036	
BB8		0.603	0.116	0.363	0.032	
BB9		0.596	0.114	0.355	0.037	
Normative Beliefs	2					0.76
NB1		0.690	0.126	0.476	0.039	
NB2		0.703	0.161	0.494	0.056	
Control Beliefs	5					0.73
CB1		0.705	0.181	0.497	0.061	
CB2		0.561	0.129	0.315	0.028	
CB3		0.640	0.131	0.410	0.033	
CB4		0.589	0.120	0.347	0.031	
CB5		0.702	0.160	0.493	0.061	
Attitude toward Behaviour	2					0.83
AB1		0.605	0.177	0.366	0.038	
AB2		0.724	0.180	0.524	0.059	
Subjective norm	2					0.77
SN1		0.672	0.161	0.416	0.038	
SN2		0.563	0.210	0.320	0.031	
Perceived Behavioural	2					0.79

Control				
PBC1	0.715	0.181	0.511	0.065
PBC2	0.683	0.126	0.466	0.037
Behavioural Intention				0.75
BI	0.654	0.162	0.376	0.032
BI	0.732	0.170	0.622	0.056

5. Results and discussion

The results of this study are presented here based on the hypotheses that guided the study. The personal characteristics of the students who participated in this study are presented below.

Table 2: Percentage distribution of LIS Students by year of study, gender and age

Variable	N	%	M	SD
Year 2	45	38		
Year 3	40	33		
Year 4	35	29		
Female	68	57		
Male	52	43		
Age			28.37	6.62

Table 2 shows the distribution of the LIS students by year of study, gender and age. This table revealed that slightly above 29% of the students were in their final year of study, whereas almost 71% of the students were in other years of their study, which in the table was distributed as 37.50% and 33.33% for students in their yr.2 and yr. 3 respectively. Whereas more than half of the participants were female (56.67%), the mean age of the participants was 28.37 which is an indication that the participants were mainly young people. However, only six copies of the questionnaire were not returned; so six (6) students did not participate in the study.

5.2. Relationship between TPB constructs and LIS students' intentions

The statistical hypotheses were formulated to test the relationship between the study variables as displayed in Table 3. The study variables are mainly the elements or constructs of the Theory of Planned Behaviour (TPB) and students' behavioural intention.

Table 3: Mean, standard deviations, and correlations between study variables

Study variables	M	SD	1	2	3	4
Intention	5.46	0.75	1			
Attitude	5.03	1.07	0.72*	1		
Subjective norm	4.22	1.03	0.52*	0.51*	1	
Perceived behavioural control	4.54	1.11	0.64*	0.49*	0.58*	1

Note: small effect size: $r > 0.10$; medium effect size: $0.30 < r < 0.50$; large effect size: $r > 0.50$; $*p < 0.05$

Table 3 shows the relationship between the main variables of this study. This relationship was analyzed using Pearson’s correlations along with means and standard deviations. All of the TPB variables were found to have significant positive correlations with LIS students’ intentions to use e-resources. The effect size of each of these correlations was found to be large. The largest effect size was found between intention and attitude towards the intention ($r = 0.72, p < 0.05$).

The relationship between the main variables was further tested for statistical significance using multiple regressions. The essence is to identify the predictors of LIS students’ intention to use e-resources. The intention to use e-resources was regressed on attitude, subjective norm and perceived behavioural control as shown in Table 4 below.

Table 4: Regression analysis: Predicting behavioural intentions (N = 120)

Model*	β	Standard Coefficient t	Sig.	
Constant	0	2.982	0.000	
AB	0.338	1.224	0.047	H1 supported
SN	0.112	1.012	0.032	H2 supported
PBC	0.189	3.261	0.002	H3 supported

*F = 5.68; Adj. R = 0.7452; Adj. R² = 0.555; SE = 20.306

Table 4 shows the test of the hypotheses that guided this study using a multiple regression prediction model following the guidelines by Hair et al. (1998) with the intention to use e-resources as the dependent variable. The significant value of $F = 3.68$ at 0.05 probability level implies that the prediction model was significant and that at least one of the constructs (AB, SN and PBC) predicted students’ intention to use e-resources. The results obtained, as shown in the table, revealed that H1 - H3 were found to be significant in the prediction model. That is, the results provide support to all the hypotheses, which means that significant and positive relationships were found between attitude and the intention to e-resources (Beta = 0.338, $p < 0.05$) and between perceived behavioural control and the intention to use e-resources (Beta = 0.189, $p < 0.05$), and between subjective and intention to e-resources (Beta = 0.112, $p < 0.05$) by LIS students. Attitude was found to have the most substantial impact on LIS students’ intention to use e-resources, producing a change of 0.338 units in behavioural intention for each unit change in attitude. This influence is more than twice that of subjective norm and almost twice that of perceived behavioural control. This finding suggests that LIS students’ decisions to use e-resources are mostly influenced by attitude which has more support of the perceived behavioural control than the subjective norm. Fig.2 represents the pathways, including beta values found in the regression analysis. The beta values from regression model were used to determine the

relative weights of each factor. Further, Table 4 also revealed that the TPB constructs accounted for 56% of the variance in the LIS students' intention to use e-resources.

Table 5: Regression analysis: Predicting TPB constructs using salient beliefs

Salient beliefs	R²	F	β	t	Sig.
BB	0.582	110.310	0.681	2.84	0.004
NB	0.364	69.520	0.610	2.51	0.021
CB	0.421	91.213	0.637	2.65	0.013

Table 5 contains the results when each direct determinant was regressed on its indirect counterpart. The results showed that each of the indirect determinants was a significant predictor. For instance, behavioural beliefs was a significant predictor of attitude toward the intention to use e-resources (Beta = 0.681, $p < 0.05$), accounting for 58.2 percent of its variance. The normative beliefs had a significant influence on subjective norm (Beta = 0.610, $p < 0.05$) and accounted for 36.4 percent of its variance. Also, the control beliefs significantly predicted the perceived behavioural control (Beta = 0.637, $p < 0.05$) and accounted for 42.1 percent of its variance. These results provide support to H4.

Table 6: Measures of model fit

Measure	Recommended value	Model value	Degree of model fit
χ^2	$P > 0.05$	103.620	Fits the model
$\chi^2/d.f.$	< 5	0.864	Fits the model

Table 6 assumes that the theoretical distribution is normal, and with this assumption, the degree of freedom is $n-3$, where 'n' is the number of participants in this study (ie, $n = 120$). The calculated value of chi-square from the empirical distribution is 103.620 and its associated probability value is 0.052 which is greater than the significant level of 0.05 set for this study. It can be deduced from this table that the TPB model is a good fit for predicting the behavioural intentions of LIS students toward e-resources' utilization, especially for academic purposes.

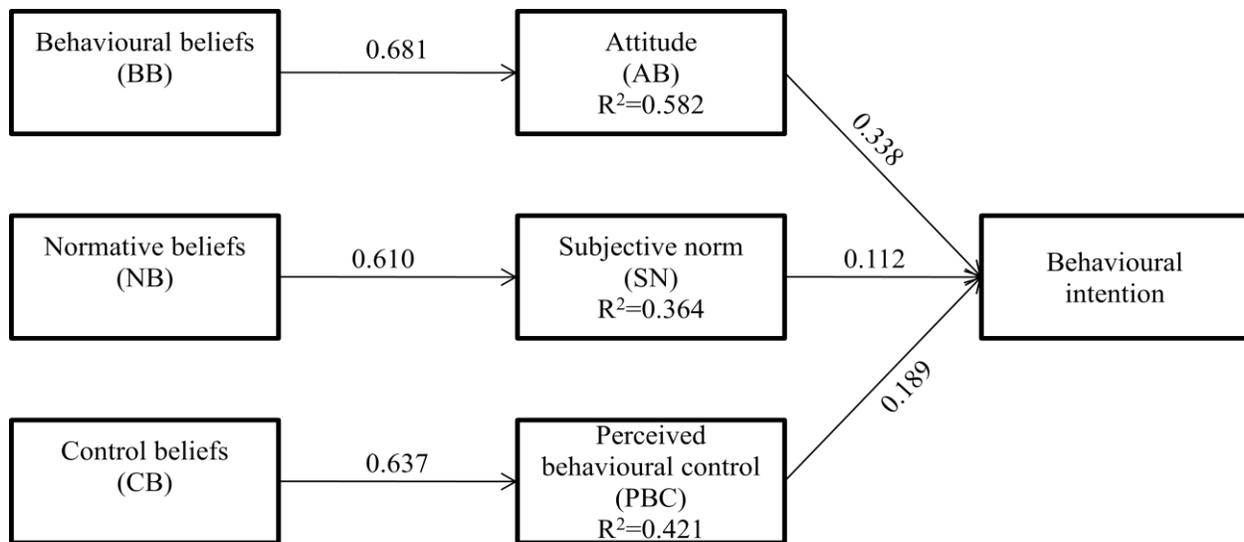


Fig.2: Path diagram of TPB model of LIS students' intention to use e-resource

6. Discussion

This study is an investigation into the application of the Theory of Planned Behaviour to determine the factors that influence students' online resources utilization behaviour. In applying this theory, the researchers tried to determine the success of TPB in predicting students' intentions to use online resources. The TPB was successful at predicting intentions, explaining 56% of the variance.

6.1. The predictors of LIS students' intentions

Attitude towards the intention

The results of this study showed that attitude had a positive association with the LIS students' intention to use e-resources and was the most significant predictor of this intention. This finding agrees with those of Dehghani – Poude et al. (2011) and Fulier and Durhabhji(2008). These authors found a strong association between attitude and students' internet use. This is not surprising because students now need e-resources to complete their academic work. They see e-resources as valuable sources of information and they also believe that their use for academic purposes is worthwhile. Beliefs and values constitute an important aspect of attitude, and they provide support to an individual's affection and cognition toward determining behavioural intentions (Ajzen, 1991). However, this finding is in sharp contrast with Zamani- Miandashti, Memarbashi and Khlinghzadeh's (2013) study that found that attitude did not predict intention, a result which they noted to be inconsistent with TPB model. Further, this study found that behavioural beliefs significantly predicted attitude towards intention. It can be deduced from this that LIS students have a high positive attitude towards e-resources as evident from their mean responses on the attitude scale. This finding also supports Ajzen's (1991) claim that the more favourable the attitude towards the behaviour, the stronger will be an individual's intention to perform the behaviour.

Subjective norm

The subjective norm had a positive association with behavioural intention, which in this study is defined as the LIS students' intention to use e-resources. It was also a significant predictor of intention, and this result is consistent with TPB model. This means that the effect of peer pressure on LIS students' intention was high enough to be a causative factor. Studies carried out on the use of internet resources have reported positive and significant relationship between peer pressure and use of internet resources (Zamani- Miandashti, Memarbashi and Khalinghzadeh; 2013; Bidin et al, 2011; Essen and Gundoghdu, 2010; Karijin et al, 2007; Chung and Henderson, 2001; Lee and Kim, 2009). These studies showed the role of subjective norm in predicting behavioral intentions. Even though subjective norm was found, in the present study, to be a significant predictor, it was the weakest. Further studies are needed to confirm this finding for two reasons. Firstly, there has not been any meta-analysis conducted on the application of TPB model on the use of e-resources by LIS students so as to determine the effect size of the TPB constructs, and secondly, studies that have applied TPB to determine intentions of LIS students toward e-resources' use were either scanty or non-existent. The results of this study also showed that normative beliefs significantly influenced the direct measures of subjective norm in the behavioural prediction model. This means that the perceived social pressure influences the LIS students' motivation to use e-resources.

Perceived behavioural control

The results of the study showed that perceived behavioural control had a positive relationship with behavioural intention, and it was found to predict intention significantly. This finding agrees with Mathieson's (1991) study that found that perceived behavioural control had significant effect on behavioural intention and the study by Zamani-Miandashti, Memarbashi and Khalinghzadeh's (2013) that found perceived behavioural control as a predictor of behavioural intention. The results also revealed that control beliefs had significant impact on the predictive power of perceived behavioural control and accounted for 42.1% of its variance. This finding is consistent with the TPB model, and it means that the impact of control in explaining this variability is not unusual. Eagly and Chaiken (1993) and Bonne and Verbeke (2006) have reported similar findings. Ajzen (1991) stated that control could directly affect behaviour by increasing effort to goal achievement.

6.2.Limitations of the study

A few limitations of this study need to be highlighted. The present study was conducted on LIS students who were all undergraduates. This can limit the generalizability of the findings to other students in the university. Further, some other factors might have influenced the results of this study which should be explored further in future studies using perhaps a decomposed model of TPB. This model may be useful because it can be argued that the use of e-resources cannot be separated from the systems that provide these resources, and 'use' in this context is likely to be influenced by systems quality, service quality and information quality. Finally, we only investigated TPB using multiple regression analysis. Future research in this area should adopt structural equation modeling (SEM) for elaborate simplification of the structure of the research model of this study.

7. Conclusion and implications

The results of this study provided support for the statistical hypotheses that guided the study. The TPB constructs were found to be significant predictors of LIS students' intention to use e-resources. Also, the salient beliefs, which served as the antecedents to the TPB constructs, were all significant predictors of these constructs. These TPB constructs were found to account for 56% variability in the LIS students' behavioural intention to use e-resources. The TPB model was also found to be a good fit for the study of the predictors of behavioural intentions of LIS students toward e-resources' use in a university environment.

This study has both theoretical and practical significance. The study contributes to the literature of TPB studies and to the understanding of the application of social theory to library and information science (LIS) research as well as information systems related behaviour. The three TPB constructs were found to be positively associated with LIS students' intention to use e-resources and were also found to be significant predictors of intention. Moreover, this study focused on the direct and indirect factors determining LIS students' intention to use e-resources. The decision to focus on behavioural intention and not on the behavior itself rests on solid theoretical and empirical grounds. Like many other models of behaviour, TPB postulates that intention predicts behaviour, or that behavioural intention is the immediate antecedent of volitional behaviour. Empirical studies have validated the strength of this intention- behaviour association or link in the TPB model.

This study provides practical information to LIS Department in the University. The information shows where the LIS students are to be strengthened and where they are to be encouraged. For instance, attitude toward behavioural intention was found to have much greater influence on LIS students' intention to use e-resources. This finding signifies that LIS students based their decisions to use e-resources primarily on the evaluation of the benefits of these resources (AB), with less regard for the opinions of others (SN) and concern over internal and external resources (PBC). However, perceived behavioural control (PBC) supported attitude (AB) more than the beliefs or opinions of significant others (SN). There are two practical implications of this finding. Firstly, LIS students' attitudes should be strengthened. This implies that LIS Department is now challenged to develop a critical thinking course with an integrated information literacy component for the students. Further, the lecturers are equally expected to engage the students more with affective and cognitive learning activities which must involve online task completions and assessments. The department should also be better- equipped with modern ICT facilities to promote students' intention to use e-resources in the university environment. Secondly, LIS students should be encouraged and motivated through social pressure formations to raise their intentions to use e-resources. Group assignments can be given to students on the use of e-resources since members of the group can provide the needed social pressure. Finally, a decomposed model of TPB is suggested to be used for further studies in this area to possibly identify other influencing factors.

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