

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### **2.1 Studies on Behavioural Intention**

David (1986) suggested that behavioural intention determines the use of technology. Behaviour Intention is defined as “the strength certainty of the individual’s intention to use the system” (Alshare et. al, 2009). It is considered as one of the most significant indicators of the final “actual behaviour” of the adopter (Davis, 1989). In this study, behaviour intention is hypothesized to be determined by an individual’s attitude towards computerised accounting system and perceived usefulness of the system.

#### **2.2 Studies on Attitude**

There are many factors which influence the use of computer technology in the field of education (Al-Zaidiyeen et. al, 2010). One of the key factors influencing teachers’ use of technology in their teaching and learning process is their attitudes (Al-Zaidiyeen et. al, 2010). According to Kinzie and Decourt (1993), “Attitudes are important for study as they are a reflection of an individual’s perspective and can be strongly predictive of behaviour”. Further, Woodrow (1992) stated in his studies that the importance of attitudes concerning the role of technology in education was already widely acknowledged.

Diverse definitions of attitudes can be observed in the previous studies. As Berkowitz quoted the definition of attitude by Allport (1935) in 1989, "attitude is a mental and neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations in which it is related"(p.247). Meanwhile, according to Oskamp (1991), "an attitude in general can be defined as a readiness to respond in a favourable or unfavourable manner in a particular class or objects"(p.19). This definition was exactly the same as defined by Fishbein in his studies in 1975 in which "attitude is a learned predisposition to respond to an object or class of objects in a consistently favourable or unfavourable way".

Previous research shows that the success of technology use in the educational settings largely depends on teachers attitudes toward technology use (Albirini, 2006; Baylor and Ritchie, 2002). In other words, teachers' attitudes towards technology usage are an essential factor in assisting successful classroom technology integration (Bitner and Bitner, 2002). In fact, positive teacher attitudes toward computers are widely recognized as a necessary condition for effective use of information technology in the classroom (Woodrow, 1992). In 1990, Sheingold and Hadley studied teachers' integration of computer software into their classrooms. Technologies evaluated were word processing tools, instructional software, analytic and information tools, programming and operating systems, games and simulations, and graphics and operating tools. It was discovered that teachers' attitudes toward computers and educational

software can significantly influence their students' attitudes toward the technology if adequate support and time for teachers to learn the technology is provided (Shiengold and Hadley, 1990). Years later, teachers' attitudes are still an important part of technology infusion into the classroom environment (Demetriadis et al., 2003).

As cited by Alzamil (2003), the influence of attitudes in the integration of technology into school classroom was further supported by a study investigating the attitudes of 210 Saudi teachers by Fantookh and Alsultan (2001). The finding of the study revealed that thirty percent of the teachers were resistant to change in their way of teaching inside the classroom. In other words, majority of teachers (seventy percent of the sample) had shown positive attitudes towards the use of technology in the classrooms.

Crawley found "attitude" to be the greatest predictor of science teachers' intention to use inquiry-based teaching methods critical to reform efforts in Texas (Crawley and Koballa, 1992). The findings concurred with the results by Harison et al. (1997) in which attitude was found to be a significant predictor of the intention to adopt information technology among small business executives. Chan Lin (2005) surveyed 363 teachers to assess their perceptions about approaching technology. The study inquired about environmental, personal, social, and curriculum issues relating to technology integration. Results indicated teachers who embrace creative teaching methods tend to have higher positive

attitudes towards technology use in the classroom (ChanLin, 2005). Thus, there exists a direct relationship between attitudes towards and usage of instructional technology. Accordingly, the following hypothesis was proposed:

**H1:** Accounting teachers' attitudes toward using Computerized Accounting System will significantly predict teachers' behavioural intention to accept the system.

### **2.3 Studies on Perceived Usefulness**

Investigations of technology characteristics and their influences on an individual's intention to accept or adopt the technology have been fairly extensive (Chau and Hu, 2002). Therefore, Moore and Benbasat (1991) have suggested that perceived evaluations rather than examining key technology characteristics from a primary or objectively technical perspective are more relevant to an individual's technology acceptance decision making.

Davis (1986) defined perceived usefulness as the degree to which the prospective user believes that using a system will increase his or her job performance. This follows from the definition of the word useful "capable of being used advantageously" (Davis, 1989).

According to Davis, Bagozzi and Warshaw (1989), "the relationship of perceived usefulness and behavioural intention is based on the idea that within

organizational settings, people form intentions toward behaviours they believe will increase their job performance, over and above whatever positive or negative feelings may be evoked toward the behaviour". They cited from the work by Vroom (1930) that the reason was that "enhanced performance is instrumental to achieving various rewards that are extrinsic to the content of the work itself such as pay increases and promotions". Davis et al. (1989) further elaborated that "if affect was not fully activated when deciding whether to use a particular system, one's attitude would not be expected to completely capture the impact of performance considerations on one's intention. Hence, the perceived usefulness and behavioural intention relationship in Technology Acceptance Model represents the resulting direct effect, hypothesizing that people form intentions toward using computer systems based largely on a cognitive appraisal of how it will improve their performance".

The relationship of perceived usefulness and behavioural intention could also be observed in a study by Yuan and Ma (2002). They reported in their research pertaining to teachers' computer acceptance and concluded that teachers who found the technology to be useful would more likely to use it in their classrooms. The finding of their studies revealed that the perceived usefulness (PU) of technology had a significantly positive effect and predicted teachers' intentions to use computers in the classrooms.

In view of the relation between perceived usefulness and attitudes as cited by David and et al. (1989), previous Information Research (IS) indicated the “empirical evidence which was consistent with the link of perceived usefulness to attitude” (Barrett, Thornton and Cabe, 1968; Schultz and Slevin, 1975). According to Noiwan, Piyawat and Norcio (2005), when users perceived the usefulness of computers and felt confident in using it, this would lead to more positive attitudes, and thus led them to use computer more. Similarly, Gao (2005) also found that perceived usefulness was positively correlated with attitudes. Accordingly, the following hypotheses were tested:

- H2:** The level of usefulness of Computerized Accounting System as perceived by teachers will significantly predict their behavioural intention to accept the system.
- H3:** The level of usefulness of Computerized Accounting System as perceived by teachers will positively affect their attitudes toward accepting the system.

#### **2.4 Studies on Perceived Ease of Use**

Even though potential users of computerised accounting system believe that the system is useful, they may at the same time believe that the system is too hard to use (Davis, 1989). Therefore, perceived ease of use is regarded as one of the most important determinants in influencing their attitudes in the usage

of the system (Davis, 1989). Davis (1989) pointed out in his studies that the importance of perceived ease of use was in fact supported by Bandura's (1982) extensive research on self-efficacy which indeed had similar definitions to perceived ease of use.

The definition of perceived ease of use as described by Davis was the degree to which the prospective user expects the target system to be free of effort (Davis et. al, 1989). This follows from the definition of "ease": freedom from difficulty or great effort (Davis, 1989). Meanwhile, effort is "a finite resource that a person may allocate to the various activities for which he or she is responsible" (Radner and Rothschild, 1975). In view of this, Davis (1989) claimed in his studies that "all else being equal, an application perceived to be easier to use than another is more likely to be accepted by users".

In relation of perceived ease of use to a user's attitude and perceived usefulness , there were some studies stated that perceived ease of use (EOU) had a direct impact on attitudes towards using the technology and indirect impact via Perceived Usefulness (PU) (Davis et al., 1989; Fagan et al., 2008). The easier the system is to use, the more likely it to be perceived as useful. In the case of two computerised accounting systems that offer the same functionality for example, the users will identify the system perceived to be easier to use and to be more useful. The initial perception of these two is important as it can influence whether the users will actually want to use the system in the future

(Morris et al., 1997). Therefore, end-users who perceive system as easy to use and beneficial to them in their work will most likely develop positive attitudes towards using the system which then influence their intention to use it. Furthermore, as reported by other studies, individual users have exhibited a tendency toward considering a technology to be more useful when it is perceived as ease of use (Chau, 1996; Igbaria et al., 1997). Besides, Schneberger et. al (2008) found in their studies that perceived usefulness was strongly correlated with perceived ease of use. Based on the above discussion, the following hypotheses were tested:

**H4:** The level of ease of use of Computerized Accounting System as perceived by teachers will positively affect their attitudes toward accepting the system.

**H5:** The level of ease of use of Computerized Accounting System as perceived by teachers will positively affect their perceived usefulness of the system.

## **2.5 Studies on Technology Acceptance Model (TAM)**

Technology Acceptance Model was the idea of Davis introduced in 1986 to explain the technology adoption. The original idea behind this model was first applied in Fishbein and Ajzen's (1975) Theory of Reasoned Action (Davis et. al, 1989). Davis extended the original Theory of Reason Action by including two new



constructs to establish the technology acceptance model (Davis et. al, 1989). One of the constructs was Perceived Usefulness and the other was Perceived Ease of Use.

Although the TAM was originally proposed for Information Technology, it is useful in explaining the adoption of other technologies such as word processors, e-mail or Hospital Information Systems (Lee et. al, 2003). Chau and Hu (2002) for example have applied the TAM in their research pertaining to the acceptance of telemedicine technology among physicians. Benamati and Rajkumar (2002) utilised the TAM to explain the outsourcing decision of information systems. Schaik et al. (2002) also examined the perceived usefulness and perceived ease of use can predict the acceptance of new physiotherapy equipment. Besides, Wang et al. (2005) used the TAM to evaluate the consumer adoption of internet application.

In the technology acceptance model as illustrated in the following theoretical framework in Figure 1 therefore, the Behavioural Intention (BI) is determined by a person's attitudes towards the use of the technology and perceived usefulness. The Attitude (A) is jointly determined by perceived usefulness (PU) and perceived ease of use (PEOU). Finally, perceived ease of use is a direct determinant of perceived usefulness.

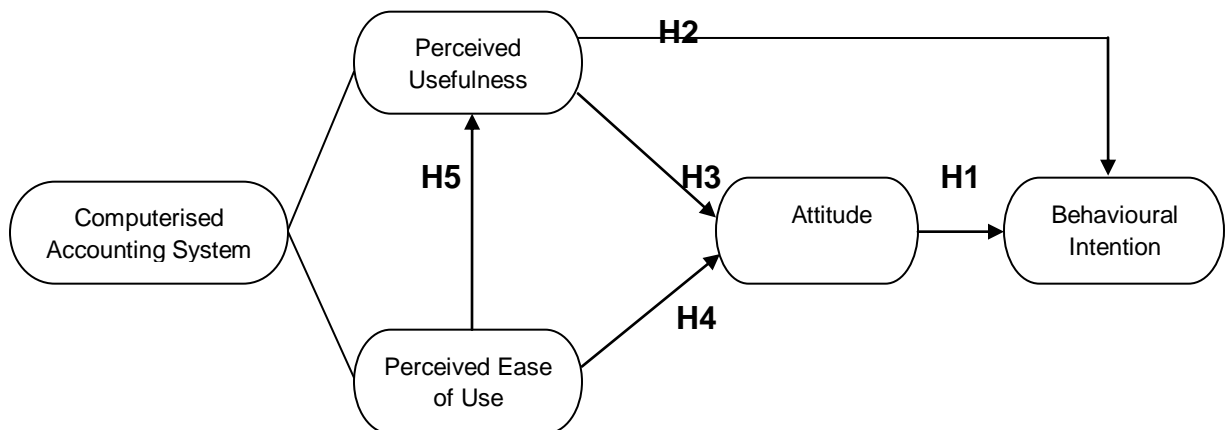
Stated formally, the equations as suggested by Davis et al. (1989) in the technology acceptance model were:

$$(1) \quad A + PU = BI$$

$$(2) \quad PU + PEOU = A$$

$$(3) \quad PEOU = PU$$

**Figure 1: Theoretical Framework for Technology Acceptance Model (TAM)**



## **2.6 Research Questions**

The study attempted to assess the level of accounting teachers' acceptance towards the implementation of computerised accounting system. The study therefore would investigate and specifically determine if teachers' perceptions of the system in the aspect of its usefulness and ease of use could influence their attitudes in predicting their intention to use the system. Based on the theoretical framework, the study would focus on the following research questions:

1. How well do accounting teachers' attitudes and perceived usefulness predict their intentions to use the system in the learning process?
2. What will be the impact of Perceived Usefulness (U) and Perceived Ease of Use (EOU) on accounting teachers' attitudes towards using computerised accounting system?
3. To what extent the impact of the system for its Perceived Ease of Use has on Perceived Usefulness?

## **2.7 Summary**

A review of the literature basically revealed numerous studies pertaining to the suggested variables not only in predicting behavioural intention to use or adopt new technology but also in knowing the impact of one variable on another. All the variables namely perceived ease of use, perceived usefulness, attitudes

and behavioural intention were primarily adapted from Technology Acceptance Model developed by Davis in 1986. Based on the model, three equations were formulated. The first equation consisted of Attitudes and Perceived Usefulness which were a function of Behavioural Intention. The second equation was comprised of Perceived Usefulness and Perceived Ease of use which determined Attitudes. The third equation stated that Perceived Ease of Use was a direct determinant of Perceived Usefulness. After reviewing the literature, the following five hypotheses were to be tested:

- H1:** Accounting teachers' attitudes toward using Computerized Accounting System will significantly predict teachers' behavioural intention to accept the system.
- H2:** The level of usefulness of Computerized Accounting System as perceived by teachers will significantly predict their behavioural intention to accept the system.
- H3:** The level of usefulness of Computerized Accounting System as perceived by teachers will positively affect their attitudes toward accepting the system.
- H4:** The level of ease of use of Computerized Accounting System as perceived by teachers will positively affect their attitudes toward accepting the system.
- H5:** The level of ease of use of Computerized Accounting System as perceived by teachers will positively affect their perceived usefulness of the system.