

THE PLACE OF TECHNOLOGY ACCEPTANCE MODEL (TAM) IN THE REALITIES OF ICT USE IN BUSINESS EDUCATION IN NIGERIAN TERTIARY INSTITUTIONS

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Abstract

This paper took a look at the extent to which Technology Acceptance Model (TAM) truly explains the link between technology acceptance and technology usage in Business education. The paper is a narrative review that explores literature on the concepts of TAM, business education, information and communication technology, and the use of ICT in education and Business education. The paper shows from existing literature that TAM is used to explain the link between the acceptance of a technology and the use of the technology based on some indices such as the user's perceived ease of use and perceived usefulness of the technology. The paper also examined literature on the concept of business education and how information and communication technology can enhance the overall practice of business education. Furthermore, demonstrated from existing literature that studies in business education where acceptance and use of technology are concerned, the link between these two concepts is not usually as seamless and straight as propounded in the technology acceptance model. The paper shows that while educators may lay claim to accepting a technology based on the perceived usefulness of the technology and the perceived ease of use, other factors may actually prevent educators from actually using such technology. Thus, the position of TAM regarding acceptance and use of technology is not the same as the realities in business education. Consequently, it was recommended that studies dealing on the establishment of acceptance and use of technology should be designed in such a way that if acceptance of a technology does not imply the usage of such technology, then such claim of acceptance should not be recognized.

Introduction

Over the years, literature has shown that almost every facet of knowledge and practice in academic is underpinned by a theory or model. Theories and models have therefore served as veritable instruments for establishing the veracity of a phenomenon as they are used to test the workability of these phenomena against established or hypothesized positions (Müller & Urbach, 2017). This practice has become strongly accepted in academic circles such that research efforts not underpinned by a theory or model is sometimes questioned as lacking depth and rigour. Thus, it has become an acceptable practice to tie the premise of a research effort to a theoretical foundation or a model.

In the area of Information and Communication Technology (ICT), the application of theories and models have gone through series of development. These developments have seen to the proposition of several theories and models in relation to the adoption and use of ICT. While some models and theories were designed mainly as guides to understanding behaviours relating to the design of ICT programmes, others were formulated primarily as guides for understanding the acceptance and use of ICT (Luhmya et al, 2017). In recent times, one of models that is usually adopted in explaining the level of acceptance and use of ICT is the technology acceptance model (TAM) developed by Davis (1986). TAM is a model that is used to explain the theoretical relationship between acceptance and use of

technology. However, the extent to which this model sufficiently explains the reality in the relationship between acceptance and usage of technological concepts remain a question.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is basically an information systems theory developed by Davis (1986) that models how users come to accept and use a given technology. Note that the key concepts in the model are acceptance and usage. This model deals more specifically with the prediction of the acceptability and usage of an information system. In recent times, TAM has come to be recognized as one of the most frequently employed models for research into new information technology acceptance and use (Legris, Ingham, & Colletette, 2003). This model proposes a relationship between users' acceptance of a new technology and the users' perceptions of the ease of use and usefulness of the technology. This brings to the fore, the two guiding principles of the theory, that is, the perceived usefulness and the perceived ease of use of the new technology which determine users' attitudes towards adopting it.

According to Davis (1986), perceived usefulness is defined as being the degree to which a person believes that the use of a technology will improve his performance while perceived ease of use refers to the degree to which a person believes that the use of a system will be effortless. TAM is based on the Theory of Reasoned Action, and as demonstrated in the Theory of Reasoned Action, TAM postulates that the use of an information system is determined by the behavioural intention of the user, but on the other hand, that the behavioural intention of

the user is determined by the person's attitude towards the use of the system and also by his perception of its utility (Algarni, 2020). According to Davis, the use of a system is not only determined by the attitude of an individual, but also by the impact which it may have on his or her performance. To this end, even if an individual does not have a positive attitude towards a particular technology, there is still a strong probability that the individual will use the technology if he perceives that the technology will improve his or her performance at work. Given that the Technology Acceptance Model hypothesizes a direct link between perceived usefulness and perceived ease of use, it follows therefore that when two systems offer the same features, a user will find more useful the one that he finds easier to use which in-turn will determine which to accept between the two (Davis, 1986).

In Davis's (1986) model, perceived ease of use also substantially influences the attitude of an individual through two main mechanisms: self-efficacy and instrumentality. The concept of self-efficacy was developed by Bandura (1997) wherein he explains that the more a system is easy to use, the greater should be the user's sense of efficacy. Furthermore, a tool that is easy to use will make the user feel that he has a control over what he is doing. Perceived ease of use is also a determinant of a user's level of performance since the user will have to deploy less efforts with a tool that is easy to use, he will be able to spare efforts to accomplish other tasks (Davis, 1986). The technology acceptance model as developed by Davis is presented in Figure 1.

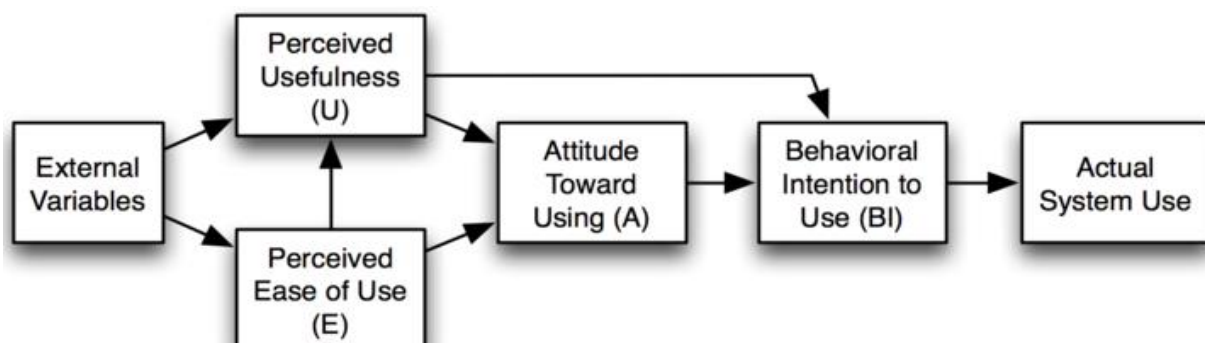


Figure 1: **The technology acceptance model (TAM) (Davis, 1986)**

As depicted in figure 1, TAM posits that acceptance of a new system can be predicted based on users' behavioural intention (BI), attitude towards use (A), and two other internal beliefs: perceived usefulness (U) and perceived ease of use (E). Here, the term perceived usefulness is used to mean the extent to which the user feels that the use of a particular application will probably increase their performance in their organization while perceived ease of use means the extent to the user believes that the system will be easy to put to use (Davis, 1986). According to TAM, the acceptance of a technology is a function of the behavioural intention (BI) of the user. In the same vein, BI is subject jointly to attitude towards use (A) and perceived usefulness (U). Furthermore, perceived ease of use (E) indirectly influences BI. Thus, U and E are determinants of A, while U is a direct function of E. Furthermore, according to TAM, external variables have direct impact on perceived usefulness and perceived ease of use. Thus, U and E mediate the effect of external variables on user's attitude and behavioural intention, and therefore the actual system use (Alharbi & Drew, 2014).

Concept of Business Education

According to the National Universities Commission (NUC, 2022) in its Core Curriculum and Minimum Academic Standards (CCMAS), business education is a specialized profession designed to provide students with knowledge, skills and competence leading to employability and advancement in office occupations, pedagogical skill in teaching business subjects at different levels of education system as well as self-employment or being an employer of labour. Business Education is designed to serve as a link between knowledge and practice by providing students with competence in general education and specialized areas such as accounting, office management, entrepreneurship and marketing.

Business education programme is designed to provide individuals with relevant

knowledge, skills and competencies to be self-reliant and economically self-sufficient for gainful employment, meaningful living, and to contribute to the development of the society. The programme is designed in consonance with the needs of the business community to ensure that education and training offered are consistent with the present and emerging job requirement and opportunities (Ezeani & Ogundola, 2016).

Some of the objectives of business education as indicated in NUC's CCMAS (2022) include:

1. The provision of opportunities for practical job preparation or vocational studies in order to make students render effective and efficient services in office, distributive and service occupations.
2. Prepare students, based on interest and aptitudes needed to enter into a business occupation, advance and profit in it.
3. Develop and improve personal qualities and attitudes of students as required in personal and employment situation
4. Serve as a guide for individual student for suitable placement in business and office employment
5. Enable students to have career consciousness and economic understanding of the free enterprise system (NUC, 2022)

Business education is a part of vocational education programme in tertiary institutions in Nigeria with the philosophy of equipping individuals with skills and competencies that would make them employable and self-reliant thereby reducing unemployment. Business education subject areas include accounting, office information technology, marketing, cooperative education, commerce, stenography/keyboarding, auditing, office administration and management among others. Ezeani and Ogundola (2016) opined that business education as a programme offered at different levels of educational

system such as three-year colleges of education (NCE), two-year ordinary diploma (OND) and higher diploma (HND) in colleges of technology and polytechnics, and in the four-year undergraduate programmes of universities is spiced with a lot of lofty objectives among which are to: (1) stimulate the interest of students by getting them acquainted with business ideas, (2) inculcate the vocational aspects of business desire right from the elementary schools, (3) develop interpersonal relationships and human relation skills, (4) provide students with the orientation and basic skills with which to start a life of work for those which may not undergo further training; (5) impart to the students basic knowledge of the concepts, theories, principles and practice of accounting, marketing/distributive and office technology and management/secretarial skills. In the same vein, Nedum-Ogbede (2013) remarked that the objective of business education programme is to create employment either self- paid for young Nigerians who are roaming the streets, majority of who are into negative influences as a result of lack of jobs and lack of appropriate skills, knowledge and attitude which would enable them secure and progress in a job or be self-employed.

According to Ekpenyong (2008), the objectives of business education are:

- 1 developing individuals who will be properly equipped with the requisite knowledge and skills for productive work life;
- 2 developing individuals who will be capable of meeting the modern technological challenges;
- 3 developing a pool of competent and reliable technical manpower capable of being mobilized in times of national or economic emergency;

Information and Communication Technology in Education and Business Education

As the name implies, Information and Communication Technology (ICT) is a

- 4 developing in the youths the right attitudes and skills towards work;
- 5 equipping the individual with the requisite knowledge and skills for paid or self-employment; and
- 6 enabling the youths to choose and perfect on those areas of business and technical education for which they have interests and aptitudes.

Educators, including business educators who are committed to the teaching profession, are expected to regard the teaching profession as a life career and consider membership in the profession as permanent, committed to the ideal of service to humankind rather than to personal interest, adhere to a code of ethics regarding membership, conduct and practice of the teaching profession, exert every effort to raise teaching profession's standard and continue to learn from multiple sources of knowledge throughout their career/profession (Cox, 2017). In addition, Cox further remarked that professionally committed educators are expected to accomplish teaching job with enthusiasm, enjoy the teaching profession, proud of being in the teaching profession, take the choice of becoming a teacher as the best decision in their life and perceive the values of teaching occupation more important than those of other professional values. One-way management and human resource managers of tertiary institutions in Nigeria encourage and motive the professional commitment and career growth of educators including business educators is through mentoring.

It is evident from the foregoing that if business education is to meet is lofty objectives and contribute to national development, educators must imbibe the changing narrative in technology and key into the use of ICT for a more robust, fruitful and result-oriented programme.

blend of informatics and communication technology. The use of computers and technology today has become fundamental to the operation of organizations and society (Kroeker, 2010; Yonck, 2010). Today, every

facet of human endeavour is experiencing exponential growth in the application of ICT. ICT has become an inalienable concept that determines the smooth operation and by extension, the success of organisations and individual operations. ICT is a set of systems and tools used in facilitating data processing and transfer. The application of ICT in teaching and learning has raised considerable concern among individuals and the government who made it emphatically clear in its NEEDS- 2 programme that Nigeria should not be caught in the web of ignorance as other nations anchor their development programmes and plans on the technologies such as ICT (National Planning Commission, 2004). To this effect, efforts were made by the federal government of Nigeria at different times to promote the provision and utilization of ICT equipment in educational institutions, especially in the universities which are regarded as the highest level of education (Okoli, 2012).

According to UNESCO (2002), ICT permeates the business environment, it underpins the success of modern corporations and it provides governments with an efficient infrastructure. In the same vein, ICT promotes the learning process in educational system through the application of digital pedagogy. ICT is rapidly changing the narratives in the area of teaching and learning as barriers such as space, time, and inadequate physical infrastructures can now be easily overcome through the use of virtual learning platforms. In addition, it has been shown that besides other numerous benefits of ICT in the education system, students' and teachers' performance improve considerably with the use of ICT in the learning process (Lubaale, 2015; Zakaria & Khalid, 2016). This is in addition to other numerous benefits accruable from the use of ICT in the education system such as in the processing of results, facilitating online payment, and fast sharing of information electronically (Nwosu & Ogbomo, 2011)

According to Igberaharha (2009) the application of ICT in Business Education involves the use of networks, expert systems, and artificial intelligence in what is now

known as electronic commerce (e-commerce) or electronic business (e-communication business). In addition, ICT use in business education also revolves around the deployment of smart devices and electronic tools in facilitating the teaching and learning process both in undergraduate and postgraduate programmes. This includes the use of computers, smart phones, projectors, smart interactive boards, virtual classrooms, video conferencing applications and collaborative learning platforms for facilitating digital pedagogy (Tambuwal & Yusuf, 2020; Das, 2021; Owie & Igbinedion, 2022; Owie & Eshemogie, 2023)

Technology Acceptance Model Vis-a-vis use of ICT in Business Education

In practical experience, it is common to find a wide difference between the level of acclaimed acceptance of a concept and the actual usage of the concept. This is especially true in cases where technology is concerned (Chang et al, 2011). Though in theory, acceptance is expected to result directly in usage as espoused in technology acceptance model, however, literature has shown that this is not always so in practice as it has been observed that many cases of acclaimed acceptance of technology do not directly reflect in usage (Skoumpopoulou, 2018). While acceptance of a technology can largely be debated on the basis of lack of proof as acceptance can only be declared by consent, usage becomes the only viable evidence to show that there has been an acceptance. Thus, the proof of acceptance of a technology is in the actual usage of the technology. This position therefore questions the extent to which persons who claims to have accepted some technologies are truly sincere in such claims since it has been observed that in more cases, claims of acceptance do not directly reflect in usage (Skoumpopoulou, 2018).

In the field of education, particularly in Business Education, it is easy for educators to claim acceptance of a technology by merely consenting to questions on whether or not they accept the technology. However, studies have shown that, contrary to wide claims of acceptance, very little deployment

and usage of these technologies in teaching and learning exercise is on ground (Owie & Igbinedion, 2022; Owie & Eshemogie, 2023). This difference between level of acceptance and actual usage therefore challenges the position of Technology Acceptance Model where technology usage based on some indices such as usefulness and ease of use is believed to equate acceptance.

Consequent upon the foregoing premise, acceptance of a technology should be viewed separately from the usage of such technology as there are ample evidences in the literature pointing to the fact that all cases of acclaimed acceptance of a concept, including technology, do not necessarily translate into usage of the concept (Rumanyika & Galan, 2015; Das, 2021).

Conclusion

Drawing from the literature reviewed in this study, especially in relation to the practice of business educators in tertiary institutions in Nigeria, it is therefore concluded that technology acceptance does not automatically translate into technology usage as most claims of technology acceptance among business educators do not reflect in actual usage of the technology.

Recommendation

In the light of the conclusion drawn from this study, it is therefore recommended that, in order to satisfy the technology acceptance model, studies on the acceptance of a concept such as technology should relate such acceptance to usage such that the claim of acceptance should directly imply usage. Otherwise, such acceptance should not be acclaimed.

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