

AN E-PORTFOLIO ACCEPTANCE MODEL FROM LECTURERS
PERSPECTIVE IN TAIF UNIVERSITY

MOHAMMED ALI R ALZHRANI

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*My beloved mother, father, darling wife, lovely three sons Feras, Layth and Ali,
brothers and sisters, and to all whom were beside me.*

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ABSTRACT

E-portfolio has received a great deal of attention in the past ten years. E-portfolio is an effective tool for teaching and learning involving students and lecturers supported by the faculty's feedback. In line with this attention, the integrated components making connections between students and lecturers result further improvement on academic E-portfolio perspective. Lecturers' performance has the capability of being evaluated and monitored across multi disciplines. However, in higher education a number of issues may arise with the usage of E-portfolio such as the resistance of technology acceptance and adoption. The main objective of this research is to investigate the lecturers' E-portfolio acceptance in higher education. An E-portfolio acceptance model was proposed which adopts a combination of Technology Acceptance Model (TAM) and Diffusion of Innovation Theory (DoI). The reliability and validity of data analysis were established through experts' validation and RASCH Model while the research hypotheses were tested using the Structural Equation Modeling (SEM). The research involved a preliminary data collection as a first survey and finally followed by the final data collection to verify the reliability and validity of the instruments and proposed model. The latter survey was conducted using questionnaires and interviews where samples were collected from 286 lecturers working in 12 faculties in a newly established public university namely the Taif University in Saudi Arabia as a case study. Interviews were held to explain further on the quantitative findings. The findings suggest that by combining the TAM with the DoI is significant to assess the lecturers' acceptance of E-portfolio system in higher education. Further result revealed that there is a positive effect on E-portfolio acceptance factors in terms of actual use and intention to use through the system usefulness, easy to use, observability and trialability.

ABSTRAK

E-Portfolio telah menerima banyak perhatian dalam tempoh sepuluh tahun yang lalu. E-Portfolio adalah alat yang berkesan untuk pengajaran dan pembelajaran yang melibatkan pelajar dan pensyarah serta disokong oleh maklumbalas fakulti. Selaras dengan perhatian ini, komponen yang bersepadu ini menjadikan hubungan antara pelajar dan pensyarah meningkat dari segi perspektif E-portfolio akademik. Prestasi pensyarah mempunyai keupayaan yang boleh dinilai dan dipantau merentasi pelbagai disiplin. Bagaimanapun dalam pendidikan tinggi terdapat beberapa isu yang mungkin timbul berikutan penggunaan E-portfolio seperti penolakan terhadap penerimaan dan menerima pakai teknologi. Objektif utama kajian ini adalah untuk menyiasat penerimaan E-portfolio oleh para pensyarah di peringkat pendidikan tinggi. Model penerimaan E-portfolio dicadangkan dengan menerima pakai kombinasi Model Penerimaan Teknologi (TAM) dan Teori Inovasi Resapan (DoI). Kebolehpercayaan dan kesahihan data analisis telah diwujudkan melalui pengesahan pakar dan Model RASCH manakala hipotesis kajian telah diuji menggunakan Persamaan Permodelan Struktur (SEM). Kajian ini melibatkan koleksi data awalan pada peringkat kaji selidik pertama dan akhirnya diikuti oleh koleksi data akhiran untuk memastikan keboleharapan dan kesahihan terhadap instrumentasi dan model yang dicadangkan. Kaji selidik susulan dilakukan dengan menggunakan soal selidik dan temubual di mana sampel dikumpulkan daripada 286 pensyarah dari 12 fakulti di sebuah universiti awam yang baru berkembang iaitu Universiti Taif di Arab Saudi sebagai kajian kes. Temubual dijalankan untuk menerangkan dengan lebih lanjut dapatan kuantitatif. Hasil dapatan kajian mencadangkan dengan penggabungan (TAM) dengan (DoI) adalah signifikan untuk menilai penerimaan pensyarah terhadap sistem E-portfolio di pusat pengajian tinggi. Hasil lanjutan mendapati terdapat kesan yang positif ke atas faktor penerimaan E-portfolio dari segi penggunaan sebenar dan niat untuk menggunakan melalui kegunaan sistem, mudah untuk digunakan, keteramatan dan keupayaan percubaan.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Research

In the past ten to fifteen years, a substantial attention has been given to E-portfolio. Such attention has been seen by a change in technologies that contribute to fast changes in electronic portfolio development. E-portfolio has an outstanding capability to assess lecturers and students, especially for reflective teaching. In addition, E-portfolio development has witnessed continuous changing technologies that provide multiple options for creating E-portfolio through teaching experience and capabilities. One of the leading figures in electronic portfolio development in education, Helen Barrett, indicates that the portfolio has gathered, shown, chosen, as well as introduced to demonstrate development and modification over time (Barrett, 2005).

E-portfolio is an electronic collection of artifacts that represent the accomplishments of an individual, group, or institution over time. This collection can include text, graphics, or multimedia (video, audio) files that have been stored and organized electronically (Villano, 2006). In comparison to traditional paper portfolios, previously made available by human transportation and shared in person, E-portfolios provide a Web or compact disc or digital video disk (CD or DVD) presence.

E-portfolio reflects an effective mechanism for lecturer self-reflection and faculty feedback, allowing for the enhancement of working style of all faculty members. With this comes integrated learning, which results from faculty members and students making connections. Student progress has the capability of being evaluated and monitored across disciplines, which is highly desirable at a liberal arts institution. Moreover, E-portfolios can measure overall program assessment (Villano, 2006).

In the educational context an E-portfolio may represent personal achievement and educational accomplishments. It may be defined as a complex courseware which includes assessment, reproduction, periodical and collaborative discussion. Batson, (2002) defines E-portfolio as the biggest thing in technology innovation on campus and they are said to have a greater potential to alter higher education at its very core than any other technology application exist.

Challis (2003) defines E-portfolio as: “Selective and structured collections of information about a teacher’s practice, gathered for specific purposes and showing or evidencing one’s accomplishments and in the context of one’s teaching philosophy ethos” (p. 93).

According to Chen et al., (2012), a worldwide endeavour has been emerged to utilize Information Technology (IT) to the learning domain, with fundamental educational strategies focusing on assimilating IT with teaching. In relevance to these attempts, E-portfolios are one of a new assortment of innovative educational instruments. E-portfolio not only covers affections, views, skills and pertinent procedure but its capacity to sprint in IT systems assists teachers incorporate teaching and measurement to assess learner efficiency and learning outcomes from dissimilar viewpoints.

No doubt, E-portfolios were considered to increase significant impact in tertiary education where many educational institutions are aiming for this innovative teaching and learning environment.

In response to this, the Saudi government has allocated an amount of US\$10 billion for higher education for the next five years. Also, the Saudi government has given a special focus on a well-funded Nationwide Centre for e-Learning including E-portfolio which promotes the awareness of e-learning via workshops, conferences and training programs. E-portfolio is no doubt one of the important agenda to deal with technological skills, adoption of new technology and acceptance of resources towards achieving the government vision in higher education. However, an extensive E-portfolio literature review reveals that E-portfolio systems are widely used but still not thoroughly studied in all their related perspectives (Sim and Hew, 2010). This issue was supported by the annual report produced by the Ministry of Communications and Information Technology, Saudi Arabia (2010) on the evaluation of programs of e-learning in high level institutions confirmed that information technology projects and electronic transactions are facing problem of projects failures between 65% to 75%.

The main reasons are primarily related to special factors relating to human elements in terms of training, qualification, competence, new technology acceptance, motivation and method of communication. The report pointed out that the weakness of the acceptance of human resources such as E-portfolio implementation in the higher education is one of the biggest obstacles to achieving the governmental vision of e-learning in higher education in 2012. The above issues need to be investigated in order to find the way forward to improve E-portfolio acceptance.

1.2 Statement of Problem

No doubt that the E-portfolio is very useful in current e-learning technology in higher education. There is a fact that the mission and vision of the higher education institution is very clear but the acceptance and implementation part of its e-learning settings such as E-portfolio acceptance does not really meet the target. To some higher education institutions with advanced technology and IT experienced staff. E-portfolio application seems to be helpful and beneficial, while others see the E-portfolio acceptance still remains obstacles. This research attempts to concentrate on the factors of E-portfolio acceptance and resistance by lecturers in higher education of which the problems exist such as in the context of newly established institution in Saudi Arabia.

This study would like to investigate how a newly established university with a lack of ability to use new technology as well as a lack of technological support and experiences would affect the E-portfolio acceptance. This effort is spurred in line with the Saudi government initiative and work within the context of newly established university in Saudi Arabia.

This research attempts to focus on the factors that create the problems for E-portfolio acceptance. The problems are investigated from different perspectives including the technological infrastructures as well as the mind-set of lecturers in using the existing E-portfolio system. This study is also aimed to understand and measure the technological infrastructures acceptable for people's acceptance and human factors affecting their choice.

The first challenge here being investigated is not the E-portfolio itself but its acceptance by the institutions in different context such as higher education. The main reason being identified here is that how human interacting with technology. The technology perspective may involve any advances in education such as internet technology, hardware and software. The human perspective to be studied is attributed

to their willingness and ability to use the technology that lead to their acceptance towards the actual use of E-portfolio.

The second challenge is the theoretical perspective of E-portfolio acceptance, examining the processes involved in the adoption and user acceptance of IT is fundamental for ensuring successful adoption and implementation process (Abdul Hameed et al., 2012a). Most of the existing theories and models of IT advances describe either the decision to adopt the technology or the individual's behaviour to accept and use the technology. Few models explain both innovation adoption and technology acceptance, jointly. Moreover, the majority of previous IT literature have focused on the adoption of IT innovation but has rarely examined both the adoption of IT innovation and human acceptance at the same time. The existing theories need to be relooked and examined to observe IT innovation adoption and user acceptance in higher education.

1.3 Research Objectives

The main aim of this study is to investigate the lecturers' E-portfolio acceptance in higher education that leads to enhance their performance and teaching efficiency to higher level management of higher institutions, the results of this research will certainly support their strategy to promote the E-portfolio system in the university. The research objectives of the study are presented as follows:

1. To investigate the use of lecturers' E-portfolio and its related issues and functions.
2. To identify the factors influencing lecturers' acceptance towards E-portfolio system.
3. To formulate E-portfolio acceptance model from lecturers' perspective.
4. To validate the hypothesized E-portfolio acceptance model for newly established university.

1.4 Research Questions

The research questions of this study are developed based on the developed hypotheses which are discussed in research methodology chapter. The research questions are listed as follow:

1. What are the uses of E-portfolio and its related issues and functions?
2. What are the factors influencing lecturers' acceptance toward E-portfolio system?
3. What is the appropriate acceptance model from lecturers' perspective?
4. What is the validity and reliability of hypothesized E-portfolio acceptance model for newly established university?

1.5 Importance of the Study

From the practical perspective, this study is substantial in that it is going to offer an understanding into one of the most essential problem in terms of technology acceptance in higher education context; it is E-portfolio acceptance. The expected findings of this study are important to the development of E-portfolio acceptance and to initiate successful future implementation of E-portfolio applications. This study attempted to identify the constructs which could impact the lecturers' acceptance of E-portfolio in higher institutions. Identifying those significant constructs that could impact and influence the lecturers' acceptance is aimed to reduce the lecturers' resistance in utilizing the E-portfolio application and its features. Therefore, the findings from this study contributed practically in solving the research problem, which is the lecturers E-portfolio system acceptance. Furthermore, it can assist to figure out the most critical constructs that promote and prevent E-portfolio acceptance in higher education institutions. As a result, it might ensure that the lecturers in preparing effective guidelines in order to attract their students in participating in E-portfolio activities. It supplied the E-portfolio application administrators and creative designers with the good crucial aspects which could boost the lecturers' ability and their intention to use the E-portfolio system.

1.6 Scope of study

This study is intended to develop a new model to measure E-portfolio acceptance model in the context of newly established universities. A newly established university is chosen as a case study in this research as it reflects the real problem of E-portfolio.

Taif University is chosen as a case study in this research as it falls in the category of a newly established university. A great detailed study will be implemented ranging from bottom to top level management.

The collected data comprised information that assisted the researcher to comprehend mentioned independent, mediating and dependent variables influencing E-portfolio acceptance in Saudi Arabia. This study even attempted to develop an appropriate combined model regarding acceptance of E-portfolio systems in higher education through the use of established related technology acceptance theories.

Secondly, the scope of study of this research parks on lecturers only because they are the key facilitators in a holistic and character-building education for students. Moreover, Aa-alak and Alnawas (2011) assert that lecturers are perceived to be important agents that contribute to the success of new educational technology since their knowledge about using technology and attitude toward utilisation of such systems plays an important role in diffusion of newer technology such as E-portfolio.

1.7 Definition of Terms

For the purposes of this study, the following operational definitions have been used:

Artifact: a piece of lecturer and learner work stored in E-portfolio System.

Electronic portfolio (E-portfolio): it has function that the students and lecturers offer gathered, shown, chosen, as well as introduced to demonstrate development as well as modify over the time” (Barrett, 2005, p.)

Lecturers Technology Acceptance: It is defined as the extent to which a lecturer's behavioural intention tends to regularly or fully use their institution's E-portfolio system throughout his/her academic studies in which the E-portfolio application is designed to use a specific learning management system.

Higher Education: This refers to education provided by Saudi Arabian governmental universities, vocational institutions, community colleges, and teachers' colleges etc.

The Technology Acceptance Model (TAM): It is an information systems theory that models how lecturers come to accept and use a particular new pedagogical application such as E-portfolio.

The Diffusion of Innovation Theory (DoI): The most important idea of diffusion of innovations theory generally appertains to how distribute and spread out the ideas from one community or group to another or from a concentrate or institution inside a community or group to other parts of that community or group (Everett and M. Rogers, 2003).

1.8 Organization of the Thesis

This thesis is actually organized and split up into five chapters. The first chapter presents history and background of the research, problem statement, research objectives and aims, research questions and also the significance and scope of the study. It concludes with a summary and overview of following chapters.

Chapter two reviews, analyzes and cites comprehensive literature. Third chapter explains the research design, advantages; hypothesized E-portfolio acceptance model illustration, and further explanation of the methodology used in this research. The fourth chapter signifies the obtained findings and results data collection as well as data analysis as well as presents the E-portfolio measurement acceptance model.

Finally, chapter five summarized the last findings, discussions, implications and also illustrated the recommendations and tips for upcoming future investigation.

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