INVESTIGATION ON LECTURER ACCEPTANCE AND USE OF E-PORTFOLIO IN TABUK UNIVERSITY IN SAUDI ARABIA

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UNIVERSITI SAINS MALAYSIA

2023

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by

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Thesis Submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2023

ACKNOWLEDGEMENT

With much appreciation, I would like to thank all those who supported me during my journey work on this dissertation.

First, thanks to Allah for giving me the ability, strength, and guidance for the successful completion of this thesis.

Then, with deep gratitude and appreciation, the inspiration, the encouragement, the valuable time, and the continuous guidance given to me by my supervisor, Dr. Azidah Abu Ziden. I simply cannot begin to imagine how things would have proceeded without her help. She made me confident of my abilities and gave me determination to work towards my goal. Thank you.

I am greatly indebted to my colleagues, Bader Alshammari and Saleh AlJohani for their help, advice, suggestions, and strong encouragement throughout the thesis process.

Special thanks to my mother, brothers, and sisters for their prayers and support during my education until I arrived at this stage. Also, I would like to express my gratitude to my life partner, my wife Fatima, for her boundless encouragement, patience, love, and support throughout my study and while working on my dissertation, and throughout my whole life. Thanks for my children Abdullah, Yazeed, Abdulmalik, and Elaf, for their understanding and patience that allowed me to pursue my studies and dissertation.

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LIST OF ABBREVIATIONS

AITSL	Australian Institute for Teaching and School Leadership
AMS	Assessment Management Systems
BTC	Bahrain Teacher College
CCTV	Closed-Circuit Television
CITC	Communications and Information Technology Commission
CSEF	Computer Self-Efficacy
C-TAM-TPB	Combined Technology Acceptance Model and Theory of Planned Behavior
DIT	Diffusion of Innovation Theory
DIT	Diffusion of innovation theory
DVD	Digital Video Clips
GCC	Gulf Cooperation Council
GETAMEL	General Extended Technology Acceptance Model for E-Learning
GOF	Global Goodness of Fit
HEI	Higher Education Institution
ICT	Information and Communication Technology
IT	Information Technology
ITT	Interactive Television Technology
KASP	King Abdullah Scholarship Program
KAU	King Abdulaziz University
KFU	King Faisal University
KFUPM	King Fahd University of Petroleum and Minerals
KSU	King Saud University
LCS	Lecture Capturing Systems
LMS	Learning Management Systems
LMS	Learning Management Systems

meta-HIP	meta-High Impact Practice
MPCU	Model of PC Utilization
NCeDL	National Centre for e-learning and Distance Education
ODeL	Open-Distance e-Learning Environment
SA	Saudi Arabia
SCT	Socio-Cognitive Theory are the eight models mentioned
SEU	Saudi Electronic University
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UBT	University of Business and Technology
UoT	University of Tabuk
UTAUT	Unified Theory of Adoption and Usage of Technology
VCS	Virtual Classroom Systems
VCS	Virtual Classroom Systems
WTO	World Trade Organization

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PENERIMAAN DAN PENGGUNAAN E-PORTFOLIO DALAM KALANGAN PENSYARAH UNIVERSITI TABUK DI SAUDI ARABIA

ABSTRAK

Dalam beberapa dekad kebelakangan ini, sistem E-portfolio telah mendapat banyak perhatian. E-portfolio ialah alat berguna untuk pengajaran, pembelajaran dan pertumbuhan yang melibatkan pensyarah dan pelajar serta disokong oleh maklum balas daripada fakulti. Hasil daripada tumpuan ini, komponen bersepadu yang menghubungkan pelajar dan pengajar menghasilkan peningkatan E-portfolio akademik yang lebih tinggi. Prestasi pensyarah boleh disemak dan dipantau merentasi beberapa disiplin. Matlamat utama kajian ini adalah untuk melihat motivasi pengajar untuk menerima dan menggunakan E-portfolio di Universiti Tabuk di Arab Saudi. Untuk menyediakan versi baharu yang diperluaskan bagi teori penerimaan dan penggunaan teknologi bersatu, kajian ini menyepadukan pembolehubah yang sedia ada iaitu jangkaan prestasi, jangkaan usaha, pengaruh sosial dan faktor pemboleh (UTAUT). Tiga pembolehubah baharu telah diperkenalkan kepada model baru yang diperluaskan: triabiliti persepsi daripada teori Defining Issue Test (DIT), efikasi kendiri komputer daripada teori Systematic Concept Teaching (SCT), dan pengurusan diri. Kajian ini menggunakan pendekatan kuantitatif, dan 292 responden adalah profesor dari Universiti Tabuk. Pendekatan kuantitatif yang digunakan dalam kajian ini terdiri daripada pemeriksaan subjek tertentu untuk penjanaan data statistik. Kaedah kuasa dua rendah tradisional, teknik statistik ialah Kuasa Dua Separa Bawah (PLS), yang memanjangkan komponen utama dan analisis kanonik korelasi (Abdi, 2010) dan sering digunakan untuk penyelesaian persamaan linear. Sementara itu, model dalaman

dan luaran menggunakan vektor berat dirujuk sebagai model struktur dan ukuran untuk melakukan sebarang jujukan regresi. Semasa prosedur pemprosesan data, pemodelan persamaan struktur digunakan untuk mengkaji hubungan antara pembolehubah penyelidikan. Keputusan menunjukkan bahawa niat tingkah laku berkorelasi positif dengan jangkaan prestasi, jangkaan usaha, dan pengurusan kendiri, tetapi pengaruh sosial, triabiliti yang dirasakan, dan efikasi kendiri komputer tidak. Tambahan pula, penggunaan E-portfolio dikaitkan dengan niat tingkah laku dan keadaan yang membolehkan. Transformasi pantas masa depan, boleh dikatakan, menimbulkan masalah kepada perancang dan ahli strategi pengajaran. Pengagihan sumber akademik dan pengajaran yang berkesan perlu memahami bagaimana pensyarah menerima dan menggunakan portfolio elektronik serta aspek tingkah laku yang memberi kesan kepada keputusan mereka untuk berbuat demikian. Untuk melengkapkan pemahaman kami tentang penentu E-portfolio, penyelidikan masa depan dalam bidang E-portfolio yang menggunakan model UTAUT yang diperluaskan mesti dilakukan. Untuk melengkapkan pemahaman tentang penentu E-portfolio, penyelidikan masa depan dalam bidang E-portfolio yang menggunakan model UTAUT yang diperluaskan mesti dijalankan. Lebih banyak faktor mungkin dibentangkan dalam kajian akan datang, contohnya, faktor peribadi, budaya, organisasi dan teknikal. Ini akan menyumbang kepada penggunaan model dan keputusan penerimaan untuk merangkumi perspektif institusi dan pengurusan yang lebih tinggi.

INVESTIGATION ON LECTURER ACCEPTANCE AND USE OF E-PORTFOLIO IN TABUK UNIVERSITY IN SAUDI ARABIA

ABSTRACT

In recent decades, the E-portfolio system has gotten much attention. An E-portfolio is a helpful tool for teaching, learning, and growth that involves lecturers and students and is backed up by feedback from the faculty. The study's primary goal is to look at the factors affecting lecturers' accepting and using of E-portfolios at the University of Tabuk in Saudi Arabia. In order to provide a new, extended version of the unified theory of acceptance and use of technology, this study integrates the already-existing variables of performance expectation, effort expectancy, social influence, and enabling factors (UTAUT). Three new variables were introduced to the new expanded model: perceived triability from the Defining Issue Test (DIT) theory, computer self-efficacy from Systematic Concept Teaching (SCT) theory, and self-management. This study used a quantitative approach, and the 292 respondents were lecturers from the University of Tabuk. The data collection, the researcher, constructed an online survey in Google Drive. The quantitative approach employed in this study comprises the examination of a particular subject for statistical data generation. The analysis was performed using Smart Partial Least Squire (Smart-PLS). The results show that behavioural intention is positively correlated with performance expectation, effort expectation, and self-management, but social influence, perceived triability, and computer self-efficacy are not. Furthermore, the utilisation of an E-portfolio is favourably associated with behavioural intention and enabling conditions. The fast transformation of the future, it may be argued, creates a problem for instructional planners and strategists. The effective distribution of academic and instructional

resources needs to comprehend how lecturers accept and use electronic portfolios as well as the behavioral aspects that impact their decision to do so. To complement our understanding of the determinants of E-portfolio, future research in the field of E-portfolio that employs the expanded UTAUT model must be undertaken. To complement the understanding of the determinants of E-portfolio, future research in the field of E-portfolio that employs the expanded UTAUT model must be undertaken. More factors might be presented in future studies, for example, personal, cultural, organisational, and technical factors. These would contribute to the model's use and acceptance results to cover higher institutional and management perspectives.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The Saudi Ministry of Education encourages integrating technology in learning settings at institutions, according to Bangert and Alshahri (2018). Improving curricula and instructional technology is also a priority for the Ministry of Education. Additionally, the development of Saudi education today emphasizes using mobile learning and distance learning and incorporating technology into educational settings (Alali, 2015). The growth of institutions implies that new pedagogical and technological initiatives are necessary to support Saudi higher education. E-portfolios have become one of the essential technological tools in higher education over the past 20 years (Mobarhan, 2015). E-portfolios are increasingly important in many global industries as they strive to increase efficiency. E-portfolios represent a valuable instrument for pedagogical purposes, fostering learning and development through the involvement of both instructors and learners and benefiting from the support of faculty evaluation (Alajmi, 2019).

According to Abdullah et al. (2016), using E-portfolios in higher education will enhance and facilitate the effectiveness of lecturers' instruction and student learning. E-portfolios have increasingly contributed to the enhancement and effectiveness of the lecturer's work. Nasseif (2019) showed that these digital portfolios enable lecturers to showcase their educational practices, learning design strategies, and their reflection on the effectiveness of different teaching pedagogies. These aids lecturers in gathering proof of their pedagogical expertise and demonstrating ongoing pedagogical growth. An E-portfolio serves as an online assessment tool that can be used to track and

evaluate an educator's progress. It documents and illustrates their instructional goals, methods, and professional development plan, making it a valuable instrument for personal development. A lecturer may share their work with coworkers, students, and administrators using an electronic portfolio to keep track of their accomplishments and goals (Mudau, 2021a).

An E-portfolio comprehensively overviews a lecturer’s teaching philosophy and personality. It also elucidates their occupational aspirations by presenting illustrations of course schematics, pedagogical resources, classroom administration, evaluative instruments, and student feedback (Harun et al. (2021). Moreover, lecturers can add multimedia elements to their E-portfolios such as videos, presentations, podcasts and photos, to make them more engaging and captivating. Research literature has demonstrated that the utilization of E-portfolios has a positive influence on the educational experiences of both students and lecturers. As posited by Nwaukwa et al. (2019), who investigated the efficacy of E-portfolios in augmenting learning, the implementation of E-portfolios has been found to stimulate students' active involvement in the learning process and foster the advancement of their analytical reasoning capabilities.

Similarly, E-portfolios provide lecturers with a versatile mechanism for capturing, contemplating, and disseminating their experiences and expertise among their peers and students (Bennett, 2020). However, Abdullah et al. (2016) claim that several issues, including system infrastructure, user proficiency, technological satisfaction, and faculty effort, hamper the integration of E-portfolio into education. A lack of effective business planning, competition, poor decision-making, and the high costs of technology are among the factors contributing to the downfall of many online educational institutions.

Various research studies have demonstrated that the success of any technology is highly dependent on its acceptance (Almaiah et al., 2019; Baber, 2021; Park, 2020). The evidence suggests that users more accepting of new technology tend to be more likely to engage with it, learn more, and experience greater satisfaction with the system overall. Acceptance is a crucial aspect of the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, as expounded by Venkatesh et al. (2003). Consequently, the UTAUT model has established itself as a preeminent framework for examining the determinants that impact technology adoption and acceptance across diverse domains, including the education sector.

In the context of UTAU, acceptance refers to the willingness of an individual to use a new technology, which is crucial for realizing its full benefits. This means new technologies may not achieve their potential or meet their intended goals without acceptance. Venkatesh et al. (2003) assert that technology acceptance relies upon critical factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions, as the UTAUT framework addresses. These factors have the potential to impact technology acceptance significantly. Thus, technology can be implemented more successfully and achieve its intended goals by considering these aspects and fostering an environment that supports acceptance.

The acceptance of new tools by users may be significantly influenced by various factors, given the increased usage of technology in the education sector and the emergence of novel forms, such as the achievement file. These factors may include, but are not limited to, (a) computer self-efficacy, (b) perceived triability, and (c) self-management. These factors also can impact the intention of users, such as lecturers, who have characteristics that distinguish them from other users.

This study examines lecturers' behavioral intentions regarding using an E-portfolio and the variables that limit such use. To accomplish this, the UTAUT (Venkatesh et al., 2003) was used as a conceptual framework to investigate the factors that affect the acceptance and use of E-portfolio among lecturers at the University of Tabuk in Saudi Arabia. This study also extends the UTAUT by investigating the potential influence of computer self-efficacy, perceived triability, and self-management on the behavioral intention towards using E-portfolios by lecturers at the University of Tabuk in Saudi Arabia. A cross-sectional method was used to achieve the research objectives (descriptive and inferential statistics). Surveys were conducted, and the data were analyzed using partial least squares regression (PLS). Thus, this chapter will provide a study overview, problem statements, research objectives, research questions, and some background information on the topic and then show the research's importance, operational definitions, and restrictions.

E-portfolios in higher education institutions must be thoroughly researched to be used effectively for teaching and learning. To successfully implement E-portfolio, it is essential to comprehend lecturers' needs, expectations, and challenges in adopting and using it. There is a research gap in determining the factors that influence and promote lecturers' active engagement and adoption of E-portfolios. Consequently, investigating the factors influencing lecturers' behavioral intentions toward using E-portfolios for learning is currently scarce and needed. The factors impacting consumers' desire for E-portfolios require further study. Research is necessary to ascertain the elements influencing lecturers' adoption of E-learning technologies in the educational setting of Saudi Arabia.

1.2 Background of the Study

Saudi Arabia has taken significant steps in integrating E-learning within its education sector. Most universities operating within the country have demonstrated a willingness to embrace technological innovations for teaching and learning. The Saudi government has allocated funds towards enhancing E-learning programs and providing support for universities willing to embrace this mode of education (Al-Shahrani, 2016). Saudi universities have made significant efforts in the realm of e-learning. These efforts have involved imparting faculty training to facilitate the delivery of online lectures, establishing e-learning platforms for students, and investing in cutting-edge infrastructure to ensure the seamless delivery of online learning programs (Nasseif, 2021). Moreover, there is a growing trend of Saudi universities collaborating with international higher education institutions to share valuable resources and knowledge, ultimately advancing the development of e-learning programs. The ultimate goal is to enhance the quality of E-learning programs and guarantee Saudi universities' global recognition for their exceptional online education provision (El-Senousy, 2020).

Many of these technologies have been included in the educational processes at various educational institutions around Saudi Arabia to accomplish this trend and with the introduction and development of various educational technologies. E-portfolios are among an increasing number of innovative teaching tools. In 2013, the e-portfolio was implemented by the Saudi Ministry of Education across all of its academic institutions and educational components, encompassing students, lecturers, and educational institutions (Alajmi, 2019).

According to Alshawi and Alshumaimeri (2017), E-portfolios are a tremendous and cutting-edge form of lecturer education in Saudi Arabia's higher education institutions. It is one of the practical ways to achieve lecturers' reflection, which promotes evolution in the workplace and fosters lecturers' creative abilities. Lecturers' ability to plan, organize, critically think, observe, and create is also improved. It allows lecturers to acquire new and different teaching and learning techniques within the educational process. According to Alzahrani (2015), E-portfolios are an essential agenda item for dealing with technical skills, new technology adoption, and resource acceptance to achieve the Saudi government's vision for higher education.

1.2.1 E-portfolio in Saudi Arabian Higher Education

In Saudi Arabia, there has been a noteworthy shift towards digitalization in higher education, which the adoption of E-portfolios has facilitated. Consequently, significant efforts have been made by Saudi Arabian universities to integrate E-portfolios into their academic programs. According to Alajmi (2019), Saudi higher education institutions embraced the E-portfolio in 2013. The implementation of E-portfolios has contributed to the advancement of contemporary academic practices in Saudi universities. These online platforms have proven practical tools for students and lecturers to methodically and systematically document and showcase their academic achievements. As a result, there has been a more comprehensive assessment of academic progress for both students and lecturers, highlighting their growth and development throughout their academic journey (Alshahrani et al., 2020).

E-portfolios in higher education in Saudi Arabia have proven to be a game-changer that has transformed how students and lecturers showcase their learning and progress (Alshawi & Alshumaimeri, 2017; Nasseif, 2021). The E-portfolios have been designed to enable users to personalize them according to their particular preferences. This customization feature has the effect of rendering the overall experience more captivating and immersive for the user. This added feature augments the users' capacity to retain and internalize knowledge. The E-portfolio system has significantly transformed how users showcase themselves to potential employers through digital technology (Alshahrani et al., 2020). Therefore, the E-portfolio system can transform higher education in Saudi Arabia and beyond, making it a valuable investment for lecturers and students.

1.2.2 Lecturers' E-portfolio at the University of Tabuk

Employment for Saudi lecturers starts from the rank of teaching assistant to the rank of professor. The teaching assistant and lecturer must complete their postgraduate studies in master's and doctoral degrees internally or externally in the best higher education institutions in the world, and the University of Tabuk bears all costs and tuition fees. The institution also hires non-Saudi professors from various international countries at various academic levels, from associate professor to professor. The University of Tabuk comprises 1699 lecturers, with a gender distribution of 58% men and 42% women, who are dispersed throughout all faculties and sections of the institution. These lecturers come from diverse nationalities, including Saudi Arabian, Arab, and non-Arab (University of Tabuk, 2020).

Tabuk University has been making significant efforts to incorporate E-portfolios into its academic programs. These online platforms have served as valuable tools for lecturers to record and highlight academic accomplishments, enabling a more comprehensive assessment of lecturers' academic progress. Through the implementation of E-portfolios, Tabuk University has made a significant contribution to the development of modern academic practices. Moreover, this approach has facilitated the academic achievements of lecturers in a systematic and organized way. Lecturers have been able to display their growth and development throughout their academic careers and track their academic achievements using E-portfolios.

At Tabuk University, the utilization of an E-portfolio was implemented as a means of assessing the performance of lecturers across multiple institutions. The University of Tabuk is one of these universities that adopted the E-portfolio to evaluate the professional practices of lecturers in 2013. The University aims to evaluate its lecturers using the E-portfolio through: i) Examining the performance of lecturers to verify that they are meeting the university's requirements, ii) revealing parts of that performance's strengths and weaknesses, iii) Giving members a chance to improve their academic performance; ii) Using exceptional performance as a yardstick for granting lecturers the right to take sabbatical breaks; iii) Attending conferences, seminars, workshops, and training programs; and iv) receiving any other academic benefits, v) Establishing a link between promotion and overall academic achievement, vi) Contract renewal and termination for expatriates based on academic achievement, and vii) Establishing a university-wide policy of recognizing and supporting excellent academic achievement (University of Tabuk, 2020).

The University of Tabuk did not specify how the E-portfolio would be shown. However, for the design of the E-portfolio form, many criteria were considered: i) Adherence to the University's standards for academic evaluation and staff promotion, ii) Clarity and simplicity, iii) Offering the evaluator a range of options (five numbered options), iv) Ensuring a high level of review by the Deputy-Dean and the Dean of the College, and v) Working with Vice Dean to relax confidentiality restrictions so the evaluator can conduct assessments with greater objectivity.

Although there is a lot of interest in integrating E-portfolios into the educational process at the University of Tabuk, there remains a significant concern regarding the optimal utilization of said E-portfolios by lecturers. Implementing E-portfolios at Tabuk University faces several key challenges, notably lacking a robust technological infrastructure and adequate resources. This dearth of critical systems supporting E-portfolios is a common issue among many universities in Saudi Arabia, making it challenging for students and lecturers to embrace this technology (Nasseif, 2021). One of the challenges E-portfolios faces is the level of comprehension and acceptance among lecturers. They must thoroughly understand the significance and purpose of E-portfolios in the learning process to incorporate them into their teaching effectively.

Additionally, it is necessary to provide the lecturers with the appropriate training to assess and provide feedback on digital portfolios. Furthermore, adopting E-portfolios in Saudi universities is also impacted by cultural and societal factors. For instance, concerns regarding privacy breaches and the unwillingness to share personal information publicly may hinder using E-portfolios.

A study by Alzahrani (2015) at Taif University, a recently established academic institution in Saudi Arabia, observed that using E-portfolio among lecturers is suboptimal, with a considerable proportion not utilizing it. Alzahrani (2015) further emphasized that the unsatisfactory outcome of these projects is primarily attributable to distinctive human factors, such as qualification, training, competence, communication techniques, motivation, and the acceptance of emerging technologies. According to Alzahrani (2015), one of the main barriers to fulfilling the Saudi government's goal of E-learning in higher education is the lack of user acceptance, such as adopting E-portfolios.

Several studies have been conducted at educational institutions in Saudi Arabia to ascertain the factors influencing the adoption of various E-learning technologies such as the E-portfolio. At King Abdulaziz University in Saudi Arabia, Alfarani (2016) studied lecturers' attitudes and factors that might affect their current and future use of mobile teaching and teaching tools. This mixed-methods investigation made use of the UTAUT and DIT theories. The research findings have demonstrated significant associations between performance expectations, effort expectations, social impact, ease of use, perceived ability, social standards, and reluctance to change. These factors have been found to exert a significant and direct influence on how educators presently and prospectively appraise the adoption and implementation of mobile learning.

Additionally, academic personnel believed in the value of technology and the advantages of e-learning tools, according to research by Zeny et al. (2015). However, they reported difficulties and limited use of technology tools in teaching practice, explaining their aversion to using an E-portfolio. The study found that the ineffective use of new technology and e-Learning tools in teaching and learning practice is hampered by a lack of practical training, cultural understanding, and supporting

infrastructure. Therefore, measuring lecturers' readiness, needs, expectations, and preferences of new technologies facilitated identifying the gap between their competencies and readiness and the university objectives and vision in Saudi Arabia.

A lecturer's knowledge, experience, and perception of technology are significant factors affecting their intention to use technology in an e-learning process, according to Mokhtar et al. (2018). They advise further research to identify the factors that encourage lecturers to use its technology tools. In Saudi Arabia, the E-portfolio is a critical component of higher education and an effective mechanism for self-reflecting lecturers' records and observations. It allows them to return to their previous experiences quickly and offer the necessary comments, allowing all lecturers to improve their working styles (Alajmi, 2019). Many studies have shown that lecturers who use E-portfolios like blogs, Blackboard, and Mahara learn to reap numerous benefits. For example, it alleviates the constraints imposed by huge student numbers, distance, and limited resources (Algahtani, 2017). It affects KSA's higher education. However, using E-portfolios is tricky, and several factors affect their acceptance.

The introduction of new science and technology, according to Ammenwerth (2019), will only completely represent its value and its ability to produce value when people are prepared to accept and integrate it into their daily work. The UTAUT model, formulated by Venkatesh et al. in 2003, is designed to understand better why users accept or reject technology and to predict acceptance or non-acceptance of new technology. UTAUT defines acceptance as the intention or willingness to use technology. The UTAUT assumes that intention to use directly determines actual system use. Thus, UTAUT attempts to reveal factors that directly affect the success or failure of technology, with success seen as equivalent to actual system usage.

This study was built around the UTAUT (Venkatesh et al., 2003), exploring the internal and external factors influencing technology acceptance. More specifically, this study used UTAUT to investigate the factors affecting the adoption of E-portfolios by lecturers at the University of Tabuk. Since 2013, the University of Tabuk has embraced the usage of E-portfolios as a method of assessing the academic performance of lecturers and as a knowledge map for identifying prospective knowledge and expertise required for national initiatives and development (University of Tabuk, 2019). (See appendix A).

As previously stated, the target population for the present study is the lecturers at the University of Tabuk. The University employs more than 1699 lecturers, 40% female, and more than 36,500 students. The research investigates the factors influencing lecturers ' willingness to accept an E-portfolio at the University of Tabuk. The study examined the topic by utilizing two distinct types of variables, focusing on the role of variables in the research process. The dependent variables are behavioral intention and use behaviour. In contrast, the independent variables are the UTAUT factors (performance expectation, effort expectancy, social influence, and facilitating conditions) and other criteria like perceived trialability, computer self-efficacy, and self-management. Understanding these factors is crucial to implement and adopt E-portfolios in various contexts successfully.

1.3 Problem Statement

The E-portfolio is unquestionably considered a promising and innovative approach that confers remarkable advantages to the professional performance lecturers in Saudi Arabian higher education institutions. Therefore, Tabuk University has been making significant efforts to incorporate E-portfolios into its academic programs. At

Tabuk University, lecturers' E-portfolios represent a viable effort that empowers these professionals to document their academic advancement and highlight their evolution and maturation during their academic journey. Despite these efforts towards adopting E-portfolios, specific challenges impede the lecturers' successful implementation of this tool. The incorporation and utilization of E-portfolios by lecturers present a significant challenge to adopting and implementing such technologies within higher education institutions. This obstacle has a detrimental impact on applying Saudi Arabia's vision and aspirations.

Despite the limited amount of research on the challenges posed by the adoption of lecturers and their utilization of digital files in Saudi Arabian universities, Al-Zahrani's (2015) study showed that over half of the lecturers at the University of Taif in Saudi Arabia neglected to utilize the E-portfolio system in their academic practices. Al-zahrani (2015) argues that acceptance factors represent the most significant obstacles in integrating the E-portfolio into Saudi Arabia's higher education system. These factors include personal, social, and control factors that can substantially impact the acceptance of the E-portfolio.

A further investigation conducted by Alasmari (2017) has shown that integrating and utilizing E-learning in universities within Saudi Arabia poses a challenging choice, given the limited consideration for the users' acceptance of these contemporary technologies. Alasmari (2017) adds that the level of acceptance of the E-learning of the employees themselves, whether students, lecturers, or employers, should be studied. At Tabuk University, which is the focal point of this particular study, the scholarly work of Bellaaj et al. (2015) revealed that Tabuk University must thoroughly examine the extent to which its users embrace E-learning tools. Furthermore, the topic of incorporating virtual learning into the educational framework

and the underlying incentives that drive the utilization of this technological innovation are subjects that warrant further deliberation and analysis.

To effectively employ E-portfolio in teaching and learning, in-depth research on the acceptability and usage of E-portfolio at Tabuk University in Saudi Arabia is required. It is essential to understand lecturers' needs, expectations, and challenges in adopting and using the E-portfolio to implement E-portfolio successfully. The factors that influence and encourage lecturers' active participation and adoption of E-portfolios, however, are not well understood by researchers (Alshehri, 2020). As a result, research on the elements that impact lecturers' behavioral intentions toward using E-portfolios for learning is currently few and critically needed. According to (Abdullah et al., 2016; Alzahrani, 2015), additional research is required to determine the factors influencing individuals' adoption or rejection of E-portfolios.

The literature on technology acceptance offers researchers reliable models to employ when looking at specific technology acceptability among consumers. A paradigm called the Unified Theory of Acceptance and Use of Technology (UTAUT) assesses how successful E-learning users are. It has been demonstrated to be more effective than the others, serving as an integrative and international model (Chao, 2019; Nur et al., 2017). The UTAUT model offers a framework that defines how such technologies and systems are used and displays IT acceptability. The capacity of the UTAUT model to consider various TAMs dramatically aids in the analysis of technology adoption and use (Venkatesh et al., 2003). As a result, the UTAUT model was used as the theoretical basis for assessing how technology-related factors affect the acceptance and use of E-portfolios by lecturers. This study includes several explanatory factors derived from the UTAUT model: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

Performance expectancy can significantly affect the acceptance and use of E-portfolios. If lecturers perceive the E-portfolio to enhance their learning outcomes, improve their assessment processes, and provide them with a platform to showcase their skills and achievements beneficial, easy to use, and highly functional, then they are more likely to accept and use it. On the other hand, if users do not see the value of the E-portfolio and perceive it as complicated or difficult to use, they may not use it or use it less frequently. Studies have found that users' performance expectancy is a key factors in determining their acceptance and adoption of new technologies such as E-portfolios (Batucan et al., 2022; Marikyan & Papagiannidis, 2021; Mahande & Malago, 2019; Ouherrou et al., 2022). A well-designed and user-friendly E-portfolio can help to increase lecturers' performance expectancy and thereby increase their acceptance and use of E-portfolio.

Effort expectancy, which refers to the degree to which an individual believes that using technology will be free of effort (Venkatesh et al., 2003), can significantly affect the acceptance and use of E-portfolios. Research shows that the more effortless, efficient, and requires minimal effort the system is, the more likely users are to accept and continue to use it (Ahmed & Ward, 2016; Batucan et al., 2022; Marikyan & Papagiannidis, 2021; Ouherrou et al., 2022). Therefore, it is essential to provide lecturers with a user-friendly interface and clear instructions on how to use E-portfolios effectively. Additionally, providing technical support and training can help improve lecturers' perceptions of the ease of use of E-portfolios, which can further enhance their effort expectancy (Klampfer & Köhler, 2015; Mobarhan, 2015).

Social influence, which refers to the degree to which an individual perceives that significant others believe they should use a particular technology (Venkatesh et al., 2003), can significantly affect the acceptance and use of E-portfolios. Studies have

found that users' Social influence is also a critical factor in determining their acceptance and adoption of new technologies such as E-portfolios (Ahmed & Ward, 2016; Klampfer, 2015; Marikyan & Papagiannidis, 2021; Neufeld,2015; Ouherrou et al., 2022). If lecturers perceive that their peers value using E-portfolios, they are more likely to accept and use E-portfolios. Therefore, it is important to communicate the benefits of E-portfolios to lecturers and encourage them to use them in their courses (Klampfer, 2015). Additionally, providing opportunities for collaboration and peer feedback through E-portfolios can further enhance the social influence and increase the acceptance and use of E-portfolios (Ahmed & Ward, 2016).

Facilitating conditions refer to the degree to which an individual believes the necessary resources and support are available to use technology (Venkatesh et al., 2003). Facilitating conditions can significantly affect the acceptance and use of E-portfolios. Research shows that If lecturers perceive that they have access to the necessary resources, such as technical support, training, and guidelines, they are more likely to accept and use E-portfolios (Elshami et al., 2018; Mudau, 2021; Song, 2021;). Therefore, it is important to provide lecturers with the necessary resources and support to use E-portfolios effectively. Additionally, providing incentives and rewards for using E-portfolios can further enhance the facilitating conditions and increase the acceptance and use of E-portfolios (Mobarhan et al., 2014; Slade & Downer, 2020).

The UTAUT paradigm has garnered considerable recognition in the field. However, concerns have been expressed regarding its ability to explain technology adoption on an individual level comprehensively. As a result, the UTAUT model has been expanded. Several studies (Alfarani, 2016; Al-Gahtani, 2016; Cimperman et al., 2016; Kabra et al., 2017, Khalilzadeh et al., 2017) have posited that increasing the number of external components in this model may increase its ability to forecast IT

adoption. The proposed theoretical model's explanatory power has been increased by adding other components, such as computer self-efficacy, self-management, and triability, to the original UTAUT model.

The Internet and computers are the two most essential technology instruments for using an E-portfolio. Therefore, it is crucial to look at users' perceptions of their capacity to use a collection of tools and software to do particular tasks. One of the most crucial aspects for lecturers to demonstrate their degree of acceptance and usage of the E-portfolio in this discipline is their level of computer self-efficacy. Compeau and Higgins (1995) popularly characterized computer self-efficacy as an individual's assessment of their computing capacity. According to Abdullah et al. (2016) and Al-Gahtani (2016), computer self-efficacy is strongly connected with new e-learning systems acceptance and plays an essential part in describing the uptake of these new technologies. Chao (2019) argues that computer self-efficacy is essential in accepting and implementing new E-learning technologies. According to Abdullah et al. (2016), computer self-efficacy significantly affects how well students utilize and accept electronic portfolios. Although computer self-efficacy helps users adopt educational technology more readily, lecturers haven't been the focus of these studies.

Self-management is a paramount issue that will profoundly influence the implementation of E-portfolios in the forthcoming years. According to Alasmari (2017), learners accept new educational technology if they are self-disciplined and capable of engaging in independent study, time management, and goal achievement. In Alzahrani's study from 2015, the researcher concluded that the limited use of E-portfolios by the remaining users was because more than half of the lecturers at the University of Taif in Saudi Arabia indicated they did not have enough time to use them due to their academic and administrative responsibilities as well as other concerns

outside of work. Huang (2014) stated, “considering the critical impacts of self-management of learning- on-learning outcomes, although numerous researchers have focused on the relationship between self-management of learning and learning achievements, little is known about the moderating role of self-management of learning in mobile learning satisfaction and continuance intention. Little is known about self-management of learning’s effect on technology adoption.”. On the other hand, several studies have discovered that self-management significantly affects users' acceptance of these technological tools in the context of embracing the various instruments of technology in education (Alasmari, 2017; Aliaño et al., 2019; Badwelan et al., 2016; Balkaya & Akkucuk, 2021; Jawad & Hassan, 2015).

The current study also considers perceived trialability, which is thought to be a crucial element in gaining acceptance for any new technology used in the teaching and learning process, mainly if the users fall into the category of lecturers because they are partners in planning, designing, and putting the technology into practice in the educational process. As a result, their involvement in these activities enables the institution to utilize numerous technological instruments integrated into the educational processes to the fullest extent possible. On the other hand, not involving them in such processes will lead to a lack of acceptance or anxiety about the technology tools used in their instructional activities. Lin and Bautista (2017) state trialability denotes restricted utilization before adoption. Consequently, individuals who intend to adopt an innovation must conduct a trial to ascertain if it fulfills their requirements. Trying an innovation also allows users to validate expectations and develop ideas for how it can meet specific needs. According to Koksal (2016), new goods and services that can be evaluated before fully implemented are often adopted more quickly than those that cannot.

According to Alasmari (2017), perceived triability indicates lecturers' attitudes on their desire to use E-learning technologies in the present and the future. Alzahrani (2015) supported the idea that a user is more likely to accept or embrace new technology if given a chance to try it out. Their comprehension of the product will therefore increase. Perceived trialability was the second most significant predictor of lecturers' attitudes and behavioral intentions for using mobile learning now and in the future (Alfarani, 2016). Additionally, Alfarani (2016) found that lecturers' attitudes and behavioural intentions toward implementing mobile learning, both now and in the future, were most significantly predicted by perceived triability. According to Alfarani (2016), most university lecturers feel that they should have access to new educational technology tools before they are completely adopted from the perspective of the lecturers and the setting of the E-portfolio. Alzahrani (2015) revealed that 58,5 % of the lecturers at Taif University in Saudi Arabia did not have an opportunity to use an E-portfolio. It indicates the necessity to provide the chance trial of using the E-portfolio by the lecturers before it is officially approved in academic work.

There aren't any studies on the lecturers' acceptance of the E-portfolio system at the University of Tabuk in Saudi Arabia, nor are there any studies about the e-portfolio system at the University of Tabuk, despite the factors mentioned above that influence the end-actual user's use and future intention to use a new system and technology in education having been studied in the past (computer self-efficacy, triability, self-management). Therefore, this study will focus on the variables that affect the adoption and utilization of E-portfolio by lecturers at Tabuk University in Saudi Arabia. The UTAUT model's variables—effort expectation, facilitating condition, performance expectancy, and social influence—have been accepted, and they have been expanded by including the conceptions of external factors, such as

computer self-efficacy, triability, and self-management. The above criteria will serve as a gauge for identifying lecturers' behavioural intentions concerning adopting and using the E-portfolio.

1.4 Objectives of the Study

This study examines lecturers' behavioral intentions regarding using an E-portfolio in Saudi Arabia. It looks at the issues preventing using E-portfolios in Saudi Arabia's higher education system. Sub-objectives of this study were established to accomplish the primary objective as follows:

1. To examine the influence of UTAUT variables on lecturers' behavioural intention to use E-portfolio in Saudi Arabia. It will also specifically investigate:
    a) The influence of performance expectancy on lecturers' behavioural intention to use E-portfolio.
    b) The influence of effort expectancy on lecturers' behavioural intention to use E-portfolio.
    c) The influence of social influence on lecturers' behavioural intention to use E-portfolio.
2. To investigate the influence of the additional variables on behavioural intentions of lecturers to use E-portfolio in Saudi Arabia. It will also specifically investigate:
    a) The influence of perceived triability on the behavioural intention of lecturers to use E-portfolio.
    b) The influence of computer self-efficacy on the behavioural intention of lecturers to use E-portfolio.

c) The influence of self-management on the behavioural intention of lecturers to use E-portfolio.

2- To investigate the influence of facilitating conditions on lecturers' use behaviour of E-portfolio.

3- To investigate the influence of behavioural intention on lecturers' use behaviour of E-portfolio.

1.5 Research Questions

1) Do UTAUT variables significantly affect the lecturers' behavioural intention towards E-portfolio acceptance and use in Saudi Arabia?

   a) Is the influence of performance expectancy on lecturers' behavioural intention to use E-portfolio significant?

   b) Is there any significant influence of effort expectancy on lecturers' behavioural intention to use E-portfolio?

   c) Is the influence of Social Influence on lecturers' behavioural intention to use E-portfolio significant?

2) Do the additional variables have substantial impacts on the behavioural intention of lecturers to accept E-portfolio in Saudi Arabia?

   a) Is there any significant influence of triability on the behavioural intention of lecturers to use E-portfolio?

   b) Is there any significant influence of computer self-efficacy on the behavioural intention of lecturers to use E-portfolio?

   c) Is there any significant influence of self-management on the behavioural intention of lecturers to use E-portfolio?

3) Do Facilitate Conditions have a significant influence on lecturers' use behaviour of E-portfolio?

4) Does Behavioural Intention has significantly influence on lecturers to use behaviour of E-portfolio?

1.6 Significance of the Study

From a practical standpoint, this research is significant because it will provide insight into one of the most critical issues regarding technology acceptability and application in higher education: E-portfolio adoption. The predicted outcomes of this study will be critical in developing E-portfolio acceptability and usage and the effective deployment of E-portfolio applications in the future. This study aims to determine the factors influencing lecturers' adoption and use of E-portfolios in higher education. The goal is to minimize lecturers' reluctance to use the E-portfolio application and its features by identifying those key constructs that might impact and influence their adoption and utilization. The current study examines the UTAUT model, which has been deemed suitable for current research despite its connection to IT.

Several studies across various industries, such as banking, E-commerce, healthcare, and education, have also employed the UTAUT (Al-Hujran et al., 2014). Students, lecturers, administrators, lawmakers, and other stakeholders gain from using UTAUT models in education (Teo, 2011). The UTAUT model has been improved by incorporating the notions of effort expectancies, enabling conditions, performance expectancy, and social effect. It specifically integrates concepts of external elements such as computer self-efficacy, triability, and self-management. The mentioned

elements will assess lecturers' behavioural intentions toward accepting and using E-portfolios.

Moreover, what is important to be mentioned in this study is the vitality of perceived triability, which reflects the extent to which an E-portfolio can experiment before lecturers commit to utilizing it on a limited basis. Perceived triability is a critical factor in getting acceptability for adopting any new learning or teaching technology. The relationship between testability and innovation adoption rates is significant (Sahin, 2006). It was also asserted that a notion would be embraced more readily the more times it was examined. The study's conclusions will thus help with the practical answer to the research problem, which is lecturers' acceptance of the E-portfolio system. It can also help researchers identify the most critical factors influencing E-portfolio acceptability and utilization in higher education institutions. As a result, lecturers may develop relevant instructions to encourage their students to participate in the activities of the E-portfolio. It will provide administrators of E-portfolio applications and imaginative designers with the necessary features to boost lecturers' capability for and interest in using the E-portfolio system.

1.7 Operational Definitions

1.7.1 E-Portfolio

E-portfolio refers to UB, a feature that students and lecturers have gathered, shown, chosen, and presented to illustrate progress and change over time (Barrett, 2004). A lecturer's learning path, career, experience, and accomplishments throughout time are illustrated and described in this study utilizing an electronic portfolio, mostly an E-mail that does not yet define a platform or website.

1.7.2 Behavioural Intention

Behavioral intentions refer to regularly utilizing technology to achieve a particular objective (Venkatesh et al., 2003). In the context of the present study, behavioural intentions are defined as the extent to which Tabuk University lecturers intend to use E-portfolio. An individual's behavioral intentions have been found to be a highly robust predictor of the actual usage of E-portfolio technology.

1.7.3 Performance Expectancy

Performance expectancy is “the degree to which an individual believes that using the system will help him attain gains in job performance” (Venkatesh et al., 2003). In the context of the present study, performance expectancy is defined as the extent to which Tabuk University lecturers believe that using E-portfolio will help them attain benefits in relation to their proficiency and efficacy in teaching performance.

1.7.4 Effort Expectancy

The definition of effort expectation is "the level of easiness associated with using the system" (Venkatesh et al., 2003). In the context of the present study, effort expectation is defined as the extent to which Tabuk University lecturers perceive the ease of using the E-portfolio for teaching.

1.7.5 Social Influence

Social influence is “the degree to which an individual perceives that important others believe he should use the new system” (Venkatesh et al., 2003). In the context of the present study, social influence is defined as the extent to which Tabuk University