



**The Transition to a New Educational Culture through the
Use of E-portfolios:
Exploring Possibilities – A case study in Iraq**

**الانتقال إلى ثقافة تعليمية جديدة من خلال استخدام الحقائق الإلكترونية:
استطلاع الاحتمالات - دراسة حالة في العراق**

by

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of the requirements for the degree of
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ABSTRACT

The e-portfolio has become widely used by many educational institutions in the world, and it has been acknowledged for its numerous benefits. The purpose of this study is to explore the readiness of a private university in Iraq to use the e-portfolio platform as a new technology tool for the first time; and to analyze its level of acceptance among the management team, teachers, and students. This case study was carried out at a private university in Baghdad, Iraq during the last semester of the academic year 2021-2022. A qualitative research design was used to gain insights into how technology particularly e-portfolio is perceived at the university. One-on-one and focus group interviews were used as instruments to collect data from ten participants, the Head of ICT, ICT Assistant, Administrator, two teachers, and five students. It was found that students were eager to use the e-portfolio and had perceived its potential value in their academic learning, but some require support and training because they have different IT skills. It was also revealed that the factors contributing to the success and acceptance of the new e-portfolio technology resemble understanding the benefits of the tool and its actual use. Lastly, the management team and teachers positively perceived the idea of e-portfolios but were not ready enough for a technological change due to certain constraints, but they aim for the change to happen one day. The study had some limitations which were treated according to what was found in the literature about such cases. Each point of limitation was justified under its respective section in the research paper. This study is important because it is an attempt to respond the need for the education system in Iraq to be in line with the global Ed-tech revolution and it is the first research paper exploring the e-portfolio tool in Iraq.

نبذة مختصرة

اصبحت الحقيبة الإلكترونية مستخدمة على نطاق واسع من قبل العديد من المؤسسات التعليمية في جميع أنحاء العالم ، وقد تم الاعتراف بها لفوائدها العديدة. إن الغرض من هذه الدراسة هو استكشاف مدى استعدادية جامعة أهلية في العراق لاستخدام منصة خاصة بالحقيبة الإلكترونية كأداة تقنية جديدة لأول مرة بالإضافة الى تحليل درجة قبول الاداة بالنسبة لأعضاء فريق الإدارة والمعلمين والطلاب. أجريت دراسة الحالة هذه في جامعة أهلية في بغداد بالعراق خلال الفصل الدراسي الأخير من العام الدراسي 2021-2022. تم استخدام تصميم بحث نوعي لاكتساب الرؤى حول كيفية تلّقي التكنولوجيا وخاصة الحقيبة الإلكترونية في الجامعة. تم استخدام المقابلات الفردية والمجموعات البؤرية كأدوات لجمع البيانات من عشرة مشاركين بما في ذلك رئيس تكنولوجيا المعلومات والاتصالات، ومساعد تكنولوجيا المعلومات والاتصالات، والمدير الإداري، واثنين من المعلمين، إضافة الى خمسة طلاب.

لقد تبين أن الطلبة كانوا متحمسين لاستخدام الحقيبة الإلكترونية وبأنهم مدركين لقيمتها المحتملة في تعلمهم الأكاديمي ،مع ذلك فإن البعض منهم بحاجة إلى الدعم والتدريب وذلك لامتلاكهم مهارات مختلفة في استخدام تكنولوجيا المعلومات. وتبين أيضاً بأن العوامل التي تساهم في نجاح وقبول استخدام التقنية الجديدة المتمثلة بالحقيبة الإلكترونية مساوية لإدراك فوائدها واستخدامها الفعلي. أخيراً ، تبين أن أعضاء فريق الإدارة والمعلمون تقبلوا فكرة الحقائق الإلكترونية برحابة لكنهم لم يكونوا مستعدين بما يكفي لبدء التغيير التكنولوجي وذلك بسبب قيود معينة، مع ذلك فإنهم يهدفون إلى حدوث التغيير يوماً ما.

كانت هنالك بعض المحددات اثناء كتابة هذه الدراسة والتي تم علاجها وفقاً لما تم ذكره في النتائج الفكرية السابقة حول مثل هذه الحالات. تمت اضافة تبرير لكل نقطة من المحددات تحت القسم الخاص بها في ورقة البحث. تتأتى أهمية هذه الدراسة من كونها محاولة للإستجابة الى حاجة النظام التعليمي في العراق ليكون متماشياً مع الثورة التكنولوجية العالمية للتعليم ولكونها أول ورقة بحثية تستكشف أداة الحقيبة الإلكترونية في العراق.

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CHAPTER 1

INTRODUCTION

This chapter discusses the purpose and the importance of the study, its aim, the context where it was conducted, the delimitations, and some background information about the e-portfolio.

1.1 The Purpose of the Study

With the advancement of technology and the global interest in developing the education system by the use of applications and platforms to facilitate the teaching-learning process, Iraq seems to be lagging along with other developing countries. It is unfortunate to witness the decline in education in a country once described as the Cradle of Civilization. Extended years of conflicts and wars have imposed a negative impact on the quality of education and the outcome of learning in Iraq. According to the UNICEF (United Nations International Children's Emergency Fund 2019) report, fifty-two percent (52%) of the young population aged 14 years old are facing difficulty reading in second grade. This is in addition to stating that children who experienced traumatic violence and were internally displaced in Iraq require support. On the other hand, according to Iraq Palm (5 September 2021, p1), Iraqi children who received proper educational support mainly from private schools are taking advanced positions in the Rapid Mental Arithmetic competitions which are held annually in neighboring countries. This indicates that with a good level of education and advanced teaching methods, Iraq may rise again and provide prosperity for its young generation. The shift from following the traditional classroom learning methods to employing technology in education has been a trending topic in Iraq due to the need for providing solutions to overcome the multiple curfews announced by the government during the Covid19 pandemic and on other occasions. This study is important because it is an attempt to answer the need for the education system to be in line with the global Ed-tech revolution and it is the first research paper exploring the e-portfolio tool in Iraq. Not only in Iraq; but the lack of the basic technology skills is still an issue in some of the Arab world's educational institutions; Jwaifell (2013) argued that technology is still not used in classrooms to allow students to acquire the necessary skills they need to secure their employability in the future. The purpose of this

study is to explore the readiness of a private university in Iraq to use the e-portfolio platform as a new technology tool for the first time and to analyze its level of acceptance among the management team, teachers, and students.

1.2 The Aim of the Study

This study aims at introducing a technological tool which is the electronic portfolio – also known as e-portfolio - to an Iraqi private university and attempt to understand whether the university welcomes the idea of changing their classic teaching methods into a more advanced approach with the help of technology. Nasseif (2021) described e-portfolios as innovative tools used in many educational institutions around the world to enhance learning as well as develop students' assessment methods. A search of the literature revealed that although extensive research has been carried out on exploring the use and the worthwhileness of implementing e-portfolios in different parts of the world, no attention has been paid to studying the subject in Iraq; thus this study can function as a resource containing information about the e-portfolio concerning the local context. The outcomes of this study shall be presented to the university to help the decision-makers see the full picture if they decided to carry on with the implementation. The steps taken in this study can be applied to any similar context where a new technological tool was being introduced for the first time. One of the widely used tools is the electronic portfolio or as it is known the 'e-portfolio'. Jwaifell (2013) stated that e-portfolios in all their different types and features allow teachers to monitor students' skills and help them to educationally grow.

1.3 The Context and Delimitations of the Study

This study was conducted at a private university in Baghdad the capital of Iraq. For reasons that will be discussed in detail under the methodology chapter, opting for a case study approach seemed to be the most feasible method of research. The number of participants was twenty at the beginning of the study, but it was later minimized to ten which was more suitable for the outcome and the aim. The reason behind this was that the data collection phase coincided with the final exams of the university; the researcher did not want to disrupt the context. The private Iraqi university where this research was conducted did not own a Learning Management System (LMS), nor used an e-portfolio system. The writer of this paper was introduced to a free platform

during her Master's studies in the United Arab Emirates where she benefited from it and decided to present it to this private university. The Wix e-portfolio platform was selected to be introduced to the University for the fact that it is free, does not require an LMS or a CMS to be implemented, and is accessible not only via computers but via smartphones as well.

1.4 E-portfolio Background

In general, an e-portfolio is a learner-centered pedagogical method of teaching. If one educational institute considered implementing e-portfolios; then, technology has to be implemented first. The learner-centered approach is a compelling and effective method of education where the active participation of students is taken into consideration (Baris 2011), the e-portfolio encourages students to contribute to their learning. The e-portfolio provides a collaborative space for teaching and learning in addition to lifelong usage experience. The e-portfolio allows users to create personal websites to showcase, reflect, and store data. This technological tool supports various functions but not all platforms offer similar services and features; thus, educational institutions are advised to understand their needs before deciding which platform to adopt (*UC Blue Ash College* 2016). Tailoring a platform based on the needs of the institutions can be quite costly, purchasing software and offering the required support to users can be a future step for institutions being introduced to e-portfolios for the first time. The choice of technology impacts the teaching and learning outcome; therefore, it has to be selected wisely. From the experience of the writer of this case study, below are the most widely used e-portfolio systems around the world:

Google Sites: it is a web page offered by Google as a basic platform for collaboration, it is free and suitable for beginners.

Weebly: it is a website with easy and attractive templates to use that allows for uploading graphics easily, it is free and accessible via all devices.

Mahara: it is collaborative software that connects users, it has to be accessed through a course management system (CMS).

Wix: it is a free platform that allows users to build websites; it has user-friendly templates, suitable for reflections, and is accessible via all types of devices.

There are other platforms such as WordPress, PebblePad, Elgg, etc.; each one of these self-hosted systems has a different type and license such as an open-sources platform or a commercial type with inside app purchases to unlock certain features, etc., the below table was prepared by Himpsl and Baumgartner (2009, p. 19) presenting the most recommended products – referring to platforms- stating their different types, licenses, and providers. See figure 1.

Product	Provider	Type	License
Drupal ED	funnymonkey	I	OS
Elgg	curverider	A	OS
Epsilon	BehNeem LLC	M	PU
Exabis	Exabis Internet Solutions	L	OS
Factline	factline Webservices GmbH	I	P
Fronter	Fronter International	L, I	U
Mahara	eCDF New Zealand	M	OS
Movable Type	Six Apart	I	OS
PebblePad	Pebble Learning Ltd	M	PU
Sakai	The Sakai Foundation	L, I	OS
Taskstream	Taskstream Inc.	M, I	PU
Wordpress	automattic	A	OS

Figure 1 Short List of Recommendable Products

1.5 Research Framework

The Technology Acceptance Model (TAM) is a suitable model for clarifying what conceptual issues that lie under the use of e-portfolios as described by M. W. Ng et al. (2013). The (TAM) presented by Davis (1989) has been used in this study to analyze participants' perceptions of using a new system within teaching and learning. Davis (1989) theorized two cornerstones that determine the use of a system; these are:

- Perceived usefulness is the level to which one trusts that they can have their performance developed by using a specific system; the term comes from the meaning of the word Useful.
- Perceived ease of use is the level at which one trusts that they can use a specific system effortlessly; the term comes from the meaning of the word Easy.

Davis et al. (1989) established links to other factors impacting on and leading to the actual use of any system; these are:

- Behavioral intention and attitudes towards using systems represent the people's intentions regarding behaviors that they assume would enhance their performance and the attitudes they have shown concerning them.

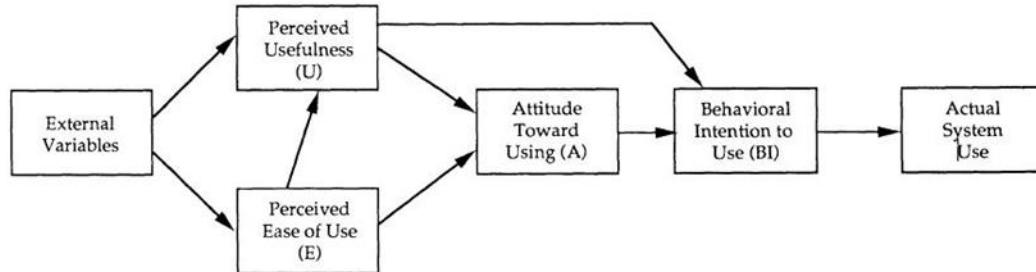


Figure 2 Technology Acceptance Model (TAM)

Davis et al. (1989) stated that one of the fundamental goals of the (TAM) is to offer a foundation for tracking the effect of external variables on internal attitudes, intentions, and beliefs. In this study, the researcher used a modified (TAM) as a research framework to explore students' willingness to use e-portfolios. The modified (TAM) used in this study was based on the modified version introduced by Nasseif (2019). She eliminated external variables in her modified version because the technology explored in her research was not tested at the time nor applied at the academic institute where her study was conducted. Similar to this study, the technology she explored for acceptance through her research was introduced to the participants for the first time. She then had to slightly modify (TAM) elements and make them befitting the context of her study; she also stated that it could be applied in any context experiencing the introduction of new technology for the first time; thus, it has been applied in this current research. The (TAM) elements modified and applied by Nasseif (2019) were used by the writer of this study. The writer of the current study also provided explanations of how the following modified (TAM) elements were explored and achieved following a qualitative approach; the term technology refers to e-portfolio in the following description for the modified model:

- 1) The element of the *perceived usefulness* of technology was modified to become the *perceived potential usefulness* of technology (PPU); this has the function of reflecting the students' perceptions about using the e-portfolio before the actual use and understanding its benefits. It has been advised by the university that the participants had no previous experience in using e-portfolios within the academic field; thus, a workshop was organized at the university before conducting the interviews to present the e-portfolio tool to all the participants of the study. As it was mentioned earlier in this chapter, this step was taken to make the participants acquainted with the e-portfolio features and its usage, as well as have the students who would participate in the focus group interviews prepared to elaborate and share their thoughts about its potential use.
- 2) The element of the *ease of use* of technology was modified to be the *perceived ease of use* of technology (PEU); this has the function of determining the students' perceptions of their ability to use an e-portfolio easily after providing them with the necessarily needed guidelines at the workshop. It is worth mentioning that Nassief (2019) used a different approach to test this element; she preferred to test participants' technological skills in general with no focus on e-portfolios.
- 3) The attitude toward using technology was modified to become the *perceived attitude* toward using technology (PAU); because the participants were introduced to the e-Portfolio platform for the first time during the workshop and had the opportunity to form and share their initial views about it during the focus group interviews.
- 4) The *behavioral intention to use* technology was modified to be the *perceived behavioral intention to use* technology (PBIU). This element helped identify whether students have the desire and intention to use e-portfolios after receiving the required information during the workshop. Their intention to use the e-portfolios was explored by having their responses interpreted, having their interaction in the focus groups recorded, and by looking at their newly created e-portfolio accounts shared with the researcher.
- 5) The *actual use* of technology was modified to be the *potential actual use* of technology. All the elements interact with each other leading to the potential actual use of technology. See figure 1.3.

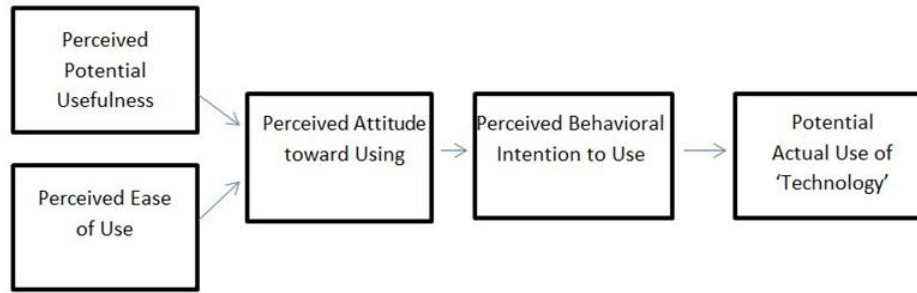


Figure 3 Modified Technology Acceptance Model (TAM)

1.6 Summary of Chapters

In this section, the organization of chapters along with a summary is highlighted below:

Chapter 1: Introduction - This chapter discusses the purpose and the importance of the study, its aim, the context where it was conducted, the delimitations, some background information about the e-portfolio, the research framework, and lists the summary of the chapters.

Chapter 2: Literature Review – This chapter sheds light on the use of technology within pedagogy and education in Iraq which will help form a base for understanding the first steps of the potential e-portfolio adoption process. It also describes what has been mentioned about e-portfolios in the literature.

Chapter 3: Methodology – This chapter states the research questions and describes the sampling technique including information about the participants' selection and access approval, it also presents the selection method and the research instruments.

Chapter 4: Data Analysis and Findings – This chapter describes the data analysis procedures and presents findings from the qualitative data collected.

Chapter 5: Discussion – This chapter provides answers to the research questions and discussed the findings in detail.

Chapter 6: Conclusion – This chapter states what was concluded from the research and describes the limitation of the study as well as provides recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A search of the literature revealed that although extensive research has been carried out on exploring the use and the worthwhileness of implementing e-portfolios in different parts of the world, no attention has been paid to studying the subject on the local level. However; several studies were found covering the use of technology within pedagogy and education in Iraq which will help form a base for understanding the first steps for the potential e-portfolio adoption process.

2.2 The Use of Technology in Iraq's Higher Education

The shift from following the traditional classroom learning methods to employing technology in education has been a trending topic in Iraq, particularly after the decline of the education process during COVID-19 in the country. As a response to the COVID-19 pandemic crisis, different regulations were issued by governments of countries affected by the crisis like policies related to social distancing measures and restrictions of movement for all people (Anderson et al. 2020, p.2). With this in mind, the issue of maintaining the higher education sector functioning properly has become momentous to be placed on the table of discussion in the course of this pandemic. Raza et al. (2021) stated that the evolution of the teaching-learning process from following traditional methods to applying more advanced fashion in delivering classes was greatly helped by the use of technology. Consequently; professors from different universities around the globe including Iraq have stressed identifying the importance of using technology in education through publishing research articles showcasing and proving the benefits and challenges of relying on technology in this area. Learning Management System (LMS) was one of the technology tools discussed as classroom aid tools in several studies conducted on the local level in Iraq. Alshammari et al. (2018) defined the Learning Management System (LMS) as a web-based tool used to sustain the learning process by focusing on all its aspects with the help of this platform. With this definition in place, it would be easier to frame a picture of what is discussed under the studies to follow within this paragraph.

A research study conducted by Alaidi et al. (2020) in Wasit governorate in Iraq examined the benefits of utilizing LMS, paving the road for the implementation of what the researchers described as modern educational methods to be applied in the College of Engineering at Wasit University. The researchers showed that using technological tools such as Canvas LMS increases the level of productivity and functions as a time savior to help students succeed with minimum effort. Even though this study discussed the assets of embedding LMS into higher education and attempted to inspire other academic institutions to have LMS implemented to support classes; they could not cover the hinders of utilizing LMS in higher education. They believed it would be extremely challenging to build interactive classes and design engaging activities for students. The hinders to adopt E-learning systems in Iraq were identified by a group of instructors following a mixed-method research design which was conducted by Hussein et al. (2020). The researchers focused on using Google Classroom as an LMS tool to measure the continued willingness of instructors to use it after the Covid19 pandemic and highlighted several barriers standing against the adoption of LMS in Iraq:

- 1) The problem of access: Access to stable internet services was the most influencing factor of all, internet services were stated to be highly costly and the efficacy is at a low level. The stress on the access to the basic elements namely stable electricity and reliable internet connection which are required for e-learning technology to be applied were also highlighted in another study conducted on the local level by Ameen et al. (2019). Their research was conducted at Salahaddin University in Iraq to study the factors affecting the adoption of a new e-learning system in the country. The study revealed that the major barrier standing in the face of adopting an e-learning system was the poor access to electricity according to 96% of participants. This was followed by 94% responses about a poor Internet connection as another influencing factor as well as 90% for the high cost of the Internet. The problem of access was further explained by Andersson and Grönlund (2009, p. 6) in their critical review presenting the challenges for E-learning adoption in developing countries, the researchers identified *access* as a term that does not only fall under the physical access to a device and an Internet resource but under the size of the bandwidth and the reliability of the Internet service

as well. Similar to Hussein et al. (2020) as well as Ameen et al. (2019) research findings, Andersson and Grönlund (2009, p. 6) have also discussed the high cost of technology use in developing countries. For them, understanding the particular barriers to adopting e-learning methods in developing countries which may not necessarily be found in more developed countries is crucially important to proceed with the implementation process.

- 2) The Lack of motivation among students towards the taught courses: This factor imposes another barrier in the face of adopting e-learning tools in teaching. This was discovered through the feedback given by the instructors who participated in the aforementioned study by Hussein et al. (2020) which revealed that the lack of students' interest is a multidimensional problem since some students were eager to respond to encouragement whereas other students showed no signal of interest in studying via the use of Google Classrooms. This finding covered the gap in the literature brought by Ameen et al. (2019) who stated that no literature on the local level has yet broken down Iraqi students' preferences and intentions related to the advancement of using e-learning technologies in hand.

The recent Covid-19 global crisis has indeed caused no access to educational institutions around the globe which generated an inevitable shift in the methods of teaching by forcing the use of online technology tools by universities to proceed with the teaching and learning journey (Nasseif 2021); however, within this change of educational climate to adapt through using e-learning in higher education, Iraq constitutes an individual scenario. Ameen (2017) highlighted that the repeated wars and the ongoing political unrest have affected the fashion of how Iraqi universities plan and progress.

Despite these facts, the efforts to use technology to support the higher education sector in Iraq were not recent and did not only result from the recent pandemic crisis; yet, not much success was witnessed in the past 10 years. For example, Elameer and Idrus (2011, p. 493) proposed an e-learning strategy in an attempt to rebuild Iraq's higher education sector by consulting a model used at the Universiti Sains Malaysia. The researchers used a questionnaire that was designed and disseminated to a group of professors and academic staff working in Iraqi universities to explore

their perceptions of the possibility of establishing an e-learning system, and to further learn about institutional issues which might formulate constraints in implementing the proposed strategy, this was in addition to studying the advantages resulting from applying technology in Iraq higher education. The study results showed a high level of motivation towards using e-learning tools; this motivation was faced by a fear of technology failure which may result from the lack of infrastructure and services used at universities. Another factor was the budgets dedicated to universities' were not sufficient to cover the implementation project in terms of providing the required technology devices. It has also surveyed the websites of these universities and found them to be statistical and cannot be used for educational purposes or interactive activities. Consulting a model used at an international university is a valid yet ambitious step towards achieving the overall goal of supporting the higher education sector; however, selecting the model or the platform has to be placed within a realistic achievable plan which correlates with the available resources.

After synthesizing recent local studies which were conducted in public universities in Iraq, it was realized by the author of this case study that no practical solutions were produced to overcome the issues of Internet connectivity and budget to proceed with the implementation of an e-learning mode of study and eventually selecting the appropriate tool. Putting these two factors as pillars to drive the motive to continue fighting for a solution, the writer opted for exploring the case of e-learning at a private university in Iraq in an attempt to present a practical solution represented by the use of e-portfolios to support higher education. The idea of presenting the e-portfolio as a free interactive platform and having it placed in the hands of students and academics seems to be reasonable and achievable at this stage to determine its acceptance and applicability.

2.3 What are E-portfolios?

An e-portfolio is an attractive platform that is used to both promote learning and present evidence of accomplishments (Trevitt et al. 2014). Challis (2005) delineated the e-portfolio as a selective set of information collected for certain purposes showcasing users' achievements and progress, administered and saved digitally by appropriate software, and fed by users with multimedia

information. Jwaifell (2013) added the assessment aspect of the e-portfolio to his definition by describing its function as an alternative of evaluation, measuring learners' academic progress acquired throughout the learning process, which would allow teachers to review the students' academic documentaries and have them assessed. E-portfolio has more functions than being an assessment tool; it is a collaborative reflective tool that serves as a container of one's work and ideas which can last a lifetime. The chance provided for students to collaborate, reflect, present evidence of work, and practice innovation through the use of e-portfolios plays a role in increasing entrepreneurial skills which will pave the road for fighting unemployment and securing jobs for fresh graduates (Mapundu & Musara 2019). This was also pointed out by Mozelius et al. (2016) in their study to promote entrepreneurship through the use of e-portfolio. They believed that fresh entrepreneurs often face difficulties reaching out to the world to present their skills and ideas; therefore they suggested the use of an affordable online tool represented by an e-portfolio to be constructed and used by entrepreneurs on the World Wide Web to showcase their work. The idea was to enroll participants in online courses to witness the learning process of constructing personal e-portfolio accounts. It was found that participants with no prior experience of online education were hesitant and showed slow interaction in addition to login complications. This finding has positioned itself to be a root cause for the writer of this case study by considering the issue of participants possessing prior knowledge as a base for designing her scope of work and having this base placed under the scope to be contemplated within the course of designing the structure of her research.

2.4 The Adoption of E-portfolios

Experiencing the use of the e-portfolio for the first time requires understanding the factors contributing to its successful implementation as well as the adoption constraints. Many studies were conducted over the last decade producing e-portfolio for the first time in different parts of the world; these studies can serve as sources containing valuable lessons and experiences to be consulted by institutions where e-portfolios have not been implemented yet.

Previous studies have discussed the first stages of implementation and provided tips on how to

carry out a seamless integration of e-portfolios into the system and proceed with a smooth adoption process. In a study conducted at York St John University in the UK to identify the benefits of e-portfolios, Moores and Parks (2010, p. 1) produced twelve pieces of advice to be applied for a successful e-portfolio implementation which could be relevant to any program requiring a professional development record for graduates to be kept. Moreover, they have used PebblePad as an e-portfolio platform but confirmed that the findings can be relevant to people using any type of e-portfolio platform. Their study examined the benefits of e-portfolio with physiotherapy and occupational therapy programs for undergraduates to enable students to fill the requirements of engagement in professional development programs through reflective accounts and activity record keeping. According to the researchers, the following practical tips are ought to be taken into consideration when introducing a new learning technology such as e-portfolio for students:

- 1) Recognizing the added value of adopting e-portfolios over the use of paper portfolios with regards to the number of alternatives e-portfolios can offer in terms of link sharing, information adding, and easy editing.
- 2) Taking the time to use e-portfolios into consideration for them to be effective; since e-portfolios can be used and developed over long periods to build CVs, create presentations, and add reflections.
- 3) Planning the time of e-portfolios induction to students plays a major role before commencing the adoption process. It prepares students to smoothly absorb the new technology by giving them the time to learn about other basic forms of information technology (IT) such as emailing and Internet surfing.
- 4) Providing the opportunity for students to create their personal space on the web and making it monitored by them including controlling access options has a role in enhancing their sense of ownership.
- 5) Setting the use of e-portfolios as a requirement for students' assessments encourages students to effectively use it and learn its various functions.
- 6) Avoid writing the assessment guidelines for structuring e-portfolios with regards to word count and other rubrics allowing for a personalized approach.

- 7) Giving clear directions to students on maintaining confidentiality when storing digital documents or sharing information with third parties by using e-portfolios lowers the risk of personal security breaches.
- 8) Teaching students to use the reflective feature of e-portfolios to rethink situations encourages them to be reflective practitioners.
- 9) Sharing constructive instant feedback with students through their uploaded work plays a role in increasing their motivation.
- 10) Securing access to e-portfolios must be ensured to enable students to record and reflect on their experiences instantly if need be; mobile devices can provide direct and easy access to most e-portfolio platforms without the need for computers.
- 11) Using the assistance of information technology (IT) support services of the institution to guide students on how to use the software during the implementation process allows academic staff to focus on their pedagogical guidance of using e-portfolios.
- 12) Sharing recommended practice of using e-portfolio is valid but it is recommended to avoid over-sharing since many educational institutions have already used e-portfolios at some point.

The last advice may not be applied to the educational institutions in Iraq; therefore, this case study in hand is aimed to serve as an explicit source of information for those institutes and teachers looking for one explicit source of information.

Following the implementation process of the e-portfolio, maintaining the continued usage of e-portfolios positively contribute to the successful outcome of the integration. Despite that a few studies found in the literature reported some negative feedback from participants related to time being wasted working on the e-portfolio and the loss of interest over time; but, suggestions were made to overcome these seemingly solvable issues. A good example of this can be seen in (Chun-I Lee & Chen 2015) research study conducted in Taiwan. They proposed a three-phase model to tackle these concerns. The model was called MAR which stands for **M**otivation, **A**ction, and **R**entry. The study linked these three factors to success components related to the use of e-portfolio which were identified after collecting some data from participants. Factors like learners' perceived usefulness of e-portfolios, university's support, type of e-portfolio users, in addition to

the willingness to re-visit e-portfolios were the ground golden pathways to promote the continued use of e-portfolios. This would be guaranteed if these factors were taken into consideration during and after the integration process. The study also recommended that the use of an e-portfolio can be further promoted by exercising activities such as e-portfolios design competitions to be held amongst students and project creation contests. These findings are highly important to be highlighted during any e-portfolio induction session including the one conducted by the writer of this case study.

2.5 E-portfolios as Tools for Professional Preparedness

The benefits of e-portfolios are not limited to the academic years of the students' life but extend to prepare them for what comes after graduation. Examining students' attitudes when using an e-portfolio to enhance their employment opportunities was the core of the study conducted at Zayed university by Tubaishat (2015). In the participation of 217 students, the e-portfolio was explored to see if it helps in preparing students to find jobs in the information technology (IT) field by increasing their recruitment opportunities. The results of the study showed that students expressed positive feedback about the use of e-portfolio as a tool to increase their preparedness for employment; they believed that e-portfolios play a helpful role in lifting their confidence to secure a job opportunity in the information technology (IT) field. Students stated that by uploading their artifacts and showcasing their competencies onto the e-portfolio platform, employers would have their e-portfolios reviewed and choose those students as future employees.

Containing students' best academic work and promoting self-reflective experiences add additional value to its role within the employment sector. The e-portfolio was also examined as a tool to promote students' personal and professional skills. It was found that the e-portfolio has a positive effect on the development of students' self-regulated skills in addition to its contribution to increasing students' understanding and engagement in lessons. This was found by the research study conducted by (Alexiou & Paraskeva 2010) in the voluntary participation of 41 university students using Elgg as a free networking interface to create e-portfolios. Providing a free source

for creating accounts is a valid action and the same notion shall be performed by the writer of this case study along the course of examining the applicability of implementing e-portfolios in Iraq.

It is worth mentioning that there is a dearth in the literature about the negative effects of e-portfolios on the teaching and learning process and no single article was found criticizing the use of e-portfolios in education.

CHAPTER 3

METHODOLOGY

3.1 Introduction

The purpose of this study is to explore the readiness of a private university in Iraq to use the e-portfolio platform for the first time and to analyze its level of acceptance among the management team, teachers, and students. The writer employed a qualitative research design to gain insights into how technology particularly e-portfolio is perceived at the university. The understanding was viewed as the central phenomenon; the idea was to understand the desire of participants to transfer classic methods of teaching and learning to modern methods with the help of technology. The researcher used a qualitative method to gain details related to thoughts, perceptions, and feelings which are not easy to be found and analyzed by following other conventional methods (Strauss & Corbin 1998). The method used for the present research was the case study approach because it is considered specifically valuable when it is used in a situation where the researcher has little control over the variables (Hitchcock & Hughes 1995). Therefore; the researcher does not aim to oppose extreme control over the events, but rather aims to provide a narration of events by mixing the description of what happens with the analysis of the situation. To have this illustrated in detail, this chapter will be divided into seven subsections: the first subsection will be dedicated to the research questions, the second will discuss the sampling of the study, the third will focus on the selection of the methodology, the fourth will highlight the instrumentation, the fifth will state the validity and the reliability of the case study, and lastly the sixth subsection will state the ethics considered during the process of research.

1.2 Research Questions

The writer of the present case study opted for following what has been referred to by Cohen, Manion, and Morrison (2007, p.81) as operationalization which means determining a set of behaviors that can be addressed and adjusted. According to them, this is a critical and effective

step in the process of research and it requires setting out a general purpose for the research and then having it interpreted into individual questions to which specific answers can be provided.

Accordingly; the general aim of the study was to understand the following:

- Does the university welcome the idea of including technology within their teaching methods represented by the use of e-portfolios?

To obtain concrete answers, the general question was broken down into the following three specific questions:

Research question 1) to what extent does the management team perceive the idea of using e-portfolios for the first time?

Research question 2) to what extent do teachers accept adopting e-portfolios in their teaching methods?

Research question 3) to what extent do students accept using e-portfolios?

1.3 Sampling

The present case study was carried out at a private university in Baghdad, Iraq during the last semester of the academic year 2021-2022. The sample size of this small-scaled study was ten participants, including three members of the management team -Head of ICT, ICT Assistant, Administrator-, two teachers, and five students. All of them had different experiences in using technology, and no previous experience in using e-portfolios for academic purposes.

3.3.1. Access

Access is a key step to be taken at the early stages of conducting any research. Researchers must consider the physical access to people as well as the access to information. Cohen, Manion, and Morrison (2007, p.109) have described securing access as the negotiation to reach people, the negotiation of the possession of the data; the negotiation of sharing the data. During the initial stage of conducting this study, the researcher sought to have access to a private university in Baghdad asking for their support to conduct her research study. For that, she needed to pay some unofficial visits to the university and later submitted a formal request

to secure access and waited for the approval. A description of the type of the study was submitted to the university in the form of a PowerPoint presentation identifying key points about e-portfolios. Access was granted slowly (Walford 2001), the approval took approximately one and a half months to be obtained.

3.3.2. Participants

Participants in this study were recruited with the help of the ICT department at the university. The technique of asking for the university's support to disseminate recruitment material along with handing out invitations for participants to attend the e-portfolio presentation has proven to be successful. The sampling strategy used was the purposeful type as Patton (1980, p.100) explained, it boosts the adequacy of information gathered from small-scaled samples. It is used in writing case studies to enable the research to gain access to people who enjoy extensive knowledge about specific subjects benefiting from their role and network accessibility (Ball 1990). Therefore; the researcher specifically asked to recruit participants occupying different managerial, administrative, and academic positions for the sake of collecting different perceptions. This sampling technique has greatly helped with achieving the desired variation to be included within the sample (Patton 1980). As to students, the university decided to select them randomly, the reason for the random students' selection was to increase the probability that the data collected reflect different opinions from the population of interest (Patton 1980). The researcher used a non-probability sample in this study. According to Cohen, Manion, and Morrison (2007, p.103), studies with a small number of participants like the one in hand frequently use non-probability samples since they can prove the argument without generalizing the findings, known for easy set-up, as well as being affordable for researchers. The researcher has the full knowledge that by following this type of sampling, the findings shall only speak for the targeted group in this study.

During the second stage and after receiving the university approval to conduct the workshop and complete the study, the Head of the ICT Department distributed invitations to potential participants based on the university's preliminary nomination plan and the request of the

researcher. Upon receipt of the approval, informed consent forms prepared by the researcher were handed out to the participants to be signed by them. A workshop was organized in the presence of all participants where consent forms were collected and it was followed by face-to-face interviews and a focus group discussion.

1.4 Selection Method

The writer used a qualitative research method to gain insights into how technology particularly e-portfolio is perceived at the university. In this study, the researcher is attempting to understand the use of technology tools within teaching methods by the university and is aiming to transform the situation in this educational setting by showcasing the benefits of using e-portfolios as well as presenting the outcomes of this study to the decision makers at the university.

1.5 Research Instruments

To address the research questions of this study, both face-to-face interviews and focus group interviews were used as instruments to collect data.

3.5.1. Interviews

Face-to-face interviews were used in this study to answer the first and the second research questions. Cohen, Manion, and Morrison (2007, p.182) mentioned that the most popular instrumental technique used in qualitative studies is the semi-structured interview. There are many benefits to using this type of technique in qualitative research; it enables the researcher to collect facts, have access to thoughts, notice motives and feelings, provide comments about actions, and present explanations (Silverman 1993). One-on-one interviews were conducted face-to-face at the university and ranged in length from 15 to 25 minutes. Creswell (2015, p.217) highlighted that this type is ideal to follow when meeting interviewees who are ready to express their minds comfortably and who are articulate; therefore, data were collected from the management team and teachers via this method. The interviews

were audio-recorded to facilitate the analysis. The interviews comprised open-ended questions created to understand the perceptions of the management team and teachers towards using the platform to allow for probing. The interviews were followed by an elaboration of information and thoughts to clarify and answer questions about the e-portfolio. The interview questions can be found in appendix 3.

3.5.2. Focus Group Interview

The focus group interview method is the collection of data by conducting interviews with a group of four to six people (Creswell 2015). In this study; focus groups were conducted to answer the third research question. A group of five students was interviewed at the university where the researcher asked several questions and elicited responses from the students. Morgan (1988, p.43) advised that each focus group may comprise four to twelve people. The researcher encouraged the students to share their ideas and the fact that they were interactive and cooperative has greatly helped in collecting the data. The researcher recorded the interview using the mobile phone voice-recording feature and took notes of the main key points discussed along with responses. The focus group interview lasted for 30 minutes. The focus group interview questions can be found in appendix 3.

1.6 Validity and Reliability

Triangulation is one of the techniques used to provide validity and reliability for qualitative research. It has been defined by Cohen, Manion, and Morrison (2007, p.141) as the use of two or more approaches to collect data to map out the way to investigate different standpoints from participants. According to them; this technique has more to provide to the study and it is the most frequently used type among researchers. In addition to this, they added that to apply this technique, one must use the same approach of data collection on different occasions, or use a different approach on the same aspect of the study. In this study, the researcher used two methods to collect data from participants to guarantee trustworthiness and authenticity. The researcher used interviews with the management team including ICT officers, one administrator, and

teachers; she also used focus group interviews with students to collect more data. The famous work (Lincoln & Guba 1985) stipulated on that the criteria required for assessing quantitative research in terms of validity and reliability; these can be summarized as 1) credibility 2) transferability 3) Dependability 4) confirmability. Many researchers debated the application of these criteria to qualitative research to guarantee credibility or “rigor” such as (Smith and Noble 2015). They have explained alternate terminology for the criteria used in assessing quantitative research and listed different terms carrying the same meaning in qualitative research. Their work resulted from consulting the quantitative research terminology mentioned in (Lincoln & Guba 1985) work *Naturalistic Inquiry* and by consulting the alternative terminology related to the credibility of qualitative research found in (Long & Rigour 2000) work *Rigour, Reliability and Validity in Qualitative Research*. These alternative terminologies can be summarized as follows:

- 1) Truth value, which carries the same meaning of 'validity' in quantitative research; has been maintained in this study by accurately presenting participants' viewpoints in detail making sure no methodological bias is found in the study.
- 2) Consistency, which carries the same meaning of 'reliability' used in quantitative research; has been maintained in this study by making transparent independent decisions related to the research which cannot result in affecting the findings which ultimately makes the study trustworthy.
- 3) Applicability, which carries the same meaning as 'generalizability' used in quantitative research; has been maintained in this study by stating extensive details of the context where the study has been conducted as a consideration for the study findings to apply to another setting.

Incorporating strategies to develop the credibility of any research during the design stage is crucial to guarantee a rigorous study. The strategy used in this study fits the context and applies the qualitative research criteria listed above, which makes it trustworthy and authenticated.

1.7 Ethical Considerations

Ethical reporting in research represents the need for the report, to be honest, not previously published, not plagiarized, shared with participants, and not biased (Creswell 2015). The data was collected ethically in this study; much sensitivity was paid to participants and context. The researcher obtained permission to access the context and submitted a formal request to conduct the research at the site. The researcher was keen not to disrupt the site and left the decision to the faculty management team to decide the timing. The workshop time and interviews were kept to a minimum to suit the busy schedule of the participants. Permission to collect data was obtained in advance as well. A detailed description of the plan and procedures highlighting the nature of the qualitative approach was also discussed with the university in advance. The identity of participants was kept confidential as well as the data. The privacy of participants was discussed with the university in advance, it has been clarified that neither the names of the participants nor the name of the university shall be revealed and that participants shall be referred to by numbers such as *student1*, *students2*. A list of the interview questions was given to participants before the interviews to ensure that participants would feel comfortable when answering the questions. Upon the arrival at the site and before conducting the interviews, the informed consent was obtained from participants by asking them to read and sign the informed consent form particularly designed for this study. The process of obtaining the informed consent starts by adding signatures to a document stating that the participant voluntarily took part in the research (kyngas et al. 2020). The Informed consent form can be found in the appendices as Appendix 1. A few aspects were conveyed to the participants before the interview stage such as the purpose of the study, how long will the interview take, and the basis of providing the results summary of the study. The participants were also informed that they have the freedom to withdraw or not participate in the interviews if they wish to do so.

3 Data Analysis and Findings

3.1 Introduction

A workshop was organized at the university before conducting the interviews to present the e-portfolio to all participants. This step was taken to make the participants acquainted with the e-portfolio features and its usage as well as have the students who would participate in the focus group interviews prepared to elaborate and share their thoughts about its potential use and be able to create their accounts using a free e-portfolio platform. During the workshop, a PowerPoint presentation which was previously designed by the researcher was introduced to participants showcasing information about e-portfolios. The slides focused on the definition of the e-portfolio, its benefits, its types, and where and since when it has been in use. The information used in the slides was collected by consulting available information retrieved from the Internet in addition to personal efforts made by the researcher to further explain the tool, see figure 4. The ‘what are E-portfolios?’ piece was introduced to all participants by playing a previously downloaded video retrieved from YouTube (SLCC ePortfolio 2016), in addition to demonstrating the process of creating accounts using Wix. The researcher asked the students who participated in the focus group discussion to attempt to create an e-portfolio account and share the link to the e-portfolio or a screenshot of the structure with the researcher after completion. This was to enable the researcher to conduct a document analysis for the received material after the interviews.



Figure 4 E-portfolio Presentation

3.2 The Procedures

During the interviews, the researcher took careful notes to register the collected data. This was in addition to audio-recording both the one-on-one interviews and the focus groups interviews. The researcher followed an interview protocol where she had the questions written in a form and ready to be asked, see appendix 2. Creswell (2015, p.224) defined this protocol as the form that is designed to fulfill the purpose of reminding the researchers about the study questions and giving them the space to take notes. The header of the form contained some information about the study, the title of the interviewee, as well as the date and time of the interview. The form also contained some reminders for the researcher to conduct smooth interviews such as written notes to state the steps to be taken to maintain the confidentiality of data, notes for the participants about their freedom of participation and withdrawal, in addition to appreciation notes. The protocol also contained open-ended questions, starting with an ice-breaker question about the use of technology in general, and going through more in-depth questions to collect the answers which are directly related to the research questions.

The responses were fully recorded during the entire time of the interviews. Following that, the researcher commenced a thematic analysis process by analyzing the data by transcribing the previously recorded voice notes she collected during the interviews into texts. She also used small sticky notes and placed them on the protocol form to remind her of certain impressions received from participants. After noticing a certain pattern of responses emerging from the interviews in the scene, she started establishing themes with the help of the modified (TAM) elements. The answers to the questions were disseminated to the elements of the modified (TAM); the themes extracted from both the one-on-one interviews and the focus group interviews are *drivers of change* and *training for change*. The researcher grouped these themes in a table to see whether these responses could reflect a similar or a different nature than those found in the literature and establish links with what different participants have responded. To make sure that the researcher understands the responses correctly, she took a marker and wrote down the themes on the whiteboard existing in the classroom and offices where the interviews were held to gain participants' validation of the data. Bryman (2016, p.11) described the thematic analysis process as examining the data looking for key themes and having them identified through coding which is the process of breaking down the collected data into parts and having these parts labeled. The description continues to include the idea behind coding which is to search for repetitions in texts in addition to searching for associations between codes. The interpreted data represented by themes established from all participants' responses were labeled based on the modified (TAM) used in this research to facilitate reading the final result of the level of e-portfolios acceptance. This means that the first stage of the analysis process started with a thematic analysis to identify themes in consultation with a framework to establish the relationship between the data using a theoretical analysis represented by the modified (TAM). The codes which were identified from the two approaches were eight, which will be further explained later in this study.

The codes are *Storage, instant feedback and accessibility, reflection, recruitment, independency, social media, time waste, and training*.

3.3 Interview Data

The interviews were conducted on a face-to-face basis at the university after the workshop to answer the first and the second research questions RQ1, and RQ2. Five participants responded to the open-ended semi-structured interview questions which were then transcribed and linked to the modified (TAM) elements. None of the participants had used an e-portfolio platform for academic purposes before that day, but some have heard of it. The goal of collecting their responses was to understand the extent to which the management team perceived the idea of using e-portfolios for the first time at the university and to understand the level of teachers' acceptance to adopt e-portfolios in their teaching methods. The interview questions can be found in appendix 3.

3.4 Interview Data Analysis

This subsection presents the analysis of the data collected from the participants of this study who were interviewed after the workshop. The interviewees were the management team represented by the Head of ICT, one ICT Assistant, and the Administrator; the other participants were two teachers from the same university. The management team and the teachers were interviewed to enable the researcher to understand their perceptions about using the e-portfolio since it has never been used at the university. The management team has a major role in decision-making and planning; therefore, understanding their perceptions would reflect where the university stands in terms of technology usage in general and e-portfolios in particular. The responses correlated to the modified (TAM) elements during the analysis process.

In response to the first interview question which was the ice-breaker in a series of five questions, the Administrator stressed the importance of technology in education highlighting its role in educational development, and stated that: "*The University still has many rounds to play to reach to the level of international universities in terms of technological development*". One of the teachers in his response to the second interview question about the level of technology used within the university's teaching methods stated that: "*We use the university's email accounts and website. We use some equipment in the language lab for exams as well. I think we need an*

electronic database to store our teaching material instead of uploading some PDF files to the website”, that answer correlates to the first modified (TAM) element reflecting the potential usefulness of technology use. The other teacher mentioned: "What I understood from the presentation was that an e-portfolio helps in giving a quick feedback for students and I believe it is better than using social media accounts to communicate material with students as we do now”, this also correlates to the first modified (TAM) element. In response to the third interview question, the Head of ICT stated that: “During the time of Covid19, we supported teachers in using Google classrooms to upload material for the students for a while in order not miss classes; but, this was not successful remotely. Any new technology requires guidance and training to apply if it was intended to be used for the first time”, this can be linked to the second element which is the perceived ease of use. In response to the third and fourth interview questions about the applicability and usage of an e-portfolio within education, the ICT Assistant stated that: “The e-portfolio is useful; I have had an idea about it although I have never used it personally, it can be applied in the university but I believe it requires time for people to learn it and accept it in addition to the necessity of securing finances to support the implementation and training”. The latter answer can be linked to the first, the second, and the third element of the modified (TAM). The third element is the perceived attitude toward the use, and the fourth element is the perceived behavioral intention to use, these can both be linked to the answer provided by one of the teachers who encouraged the use of e-portfolios by saying: “I assume it would be valuable to use a new tool to support teaching, but I would not completely rely on it; particularly that it requires high technology skills and self-efficacy, I would use it to store teaching material and showcase my work, but I think it will be challenging to use it for assessment since not all students own computer”. As to the last question in the interviews regarding the requirements of the e-portfolio implementation process, all participants have agreed that several challenges will stand in the way of the implementation of e-portfolios such as the lack of the ICT skills of students and teaching staff.

3.5 Interview Data Findings

This subsection presents the results attained from the qualitative analysis linked to the modified (TAM) elements to facilitate understanding the findings. It was difficult to determine whether the management team and teachers had purely positive or negative perceptions about the implementation of e-portfolios; in fact, their responses indicated clear signs of mixed feelings. In general, responses such as acknowledging the potential usefulness of e-portfolios reflect positive feelings which could lead to the acceptance of technology and can be considered as factors to help make the change; these are:

- The *storage* feature of the e-portfolio could help teachers upload and store the teaching material.
- The *feedback* feature would allow teachers to communicate with their students without relying on personal social media platforms but send and receive feedback by using a professional platform instead.

However, these responses were followed by some concerns which would supposedly hinder the potential implementation. The main concern was:

- The lack of ICT skills of some of the students and teaching staff that requires continuous training and support

3.6 Focus Group Data

Five students have participated in this research, they were selected randomly by the university to attend the workshop and participate in the study. None of the students had experienced the use of e-portfolios at the university before that since the university does not have specific e-portfolio software nor includes mandatory use of e-portfolios within the academic teaching methods. The students were second-year undergraduates studying at the Department of English Language.

Focus group discussions were used to answer RQ3 of this research which is to understand the students' level of acceptance of the new technology 'e-portfolio'. Determining the level of acceptance was achieved through employing the modified (TAM).

Collecting the perceptions of participants by conducting the focus group interviews based on the modified (TAM) elements has reflected the students' conceptions about using a new technology 'e-portfolio' in their education, and understanding their thoughts and attitudes has led to determining the level of the potentiality of the actual use of the software.

As it has been mentioned earlier; the researcher reviewed the voice notes which were recorded during the focus group interviews and had the data organized in files. These data went through transcriptions and were then ready for analysis. The researcher took adequate time to listen repeatedly and prepare the data for analysis. The interview questions asked during the focus group discussions were based to the modified (TAM) elements shown under the methodology section.

3.7 Focus Group Data Analysis

The purpose behind encouraging the participants to use the e-portfolio was to enable them to create e-portfolio accounts, reflect on any topic of their liking, and share the link to their e-portfolios with the researcher by email. That would allow the participants to learn this tool by practice and give the researcher the material to analyze their e-portfolios as documents. The focus group discussion occurred after the workshop and the first collection of students' feedback was performed instantly. As it was mentioned earlier in this chapter, the researcher introduced multiple e-portfolio platforms during the workshop and asked the students to feel free to use any platform they feel comfortable with; yet, the researcher highly recommended the use of Wix since it can be accessed via a mobile device and does not necessarily require a computer. Furthermore; the researcher demonstrated how to create an e-portfolio account using the Wix platform for students and answered their questions. Additionally; the researcher played a video

for the participants constituted on ‘What is an e-portfolio?’ which was retrieved from the YouTube channel of Salt Lake Community College, see figure 5.

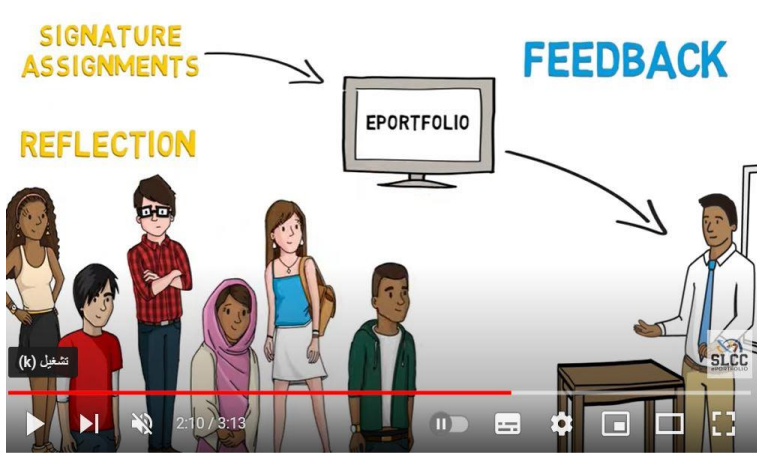


Figure 5 ‘What is an E-portfolio?’ Video Snip

Consequently, the first collection of data represented by students’ feedback, perceptions, and thoughts reflected what they have watched and the information they have received during the workshop. The second step was analyzing the snapshots of the e-portfolio structure shared by students.

This subsection presents the results attained from two procedures. The first one was the qualitative analysis based on the modified (TAM) for the pre-test stage represented by the focus group interviews, and the second from the analysis of the documents conducted for the post-test stage represented by the e-portfolio that was created by one of the participants after the workshop. The major findings of the focus group responses and document analysis are mentioned in the following subdivisions below:

4.7.1. The Perceived Potential Usefulness

The researcher introduced the benefits of e-portfolios and asked questions on whether students find them useful or not and in what case. She also encouraged students to elaborate more and express personal views. The majority of students felt that an e-

portfolio could be useful as storage for their school work and assignments in addition to admiring the e-portfolio's features in enabling users to send and receive instant feedback through the platform. Some students thought that e-portfolios might be useful for reflection; however, others felt that they do not depend on reflection and argued that they do not need it. One of the comments was related to the recruitment opportunities an e-portfolio may offer when one attempts to showcase their talents or upload their work to e-portfolio. Four positive comments, as opposed to one negative comment, reflected that students perceive and understand the potential usefulness of e-portfolios which is the first element of the modified (TAM) suggested in this study. Some of the comments are italicized below under the highlighted key points:

- Storage:

Student1: *“Instead of uploading some of my documents on invisible folders on my PC, I would rather have them stored online to make a good use of the colorful options e-portfolios offer; I would also be able to easily send a link if I wanted to share a certain document with someone”.*

- Feedback:

Students2: *“I like technology in general, but I have never used an e-portfolio before this day, I like the notion of posting my school work online and receiving comments on my work instantly or in a short while. I work hard on assignments hence why I would also like if my peers and parents to see the encouraging feedback I would most likely receive on my e-portfolio from my professors”.*

- Reflection:

Positive response:

Student3: *“I voluntarily make summaries and reflections of lessons for my peers to help them understand complicated subjects. Summaries are useful in making long subjects seem shorter and easier. I now use my Instagram account to post these summaries; although this application was not created for this purpose, it should be more fun. The reflections are making my account seem more academic and less social, I think I will create an e-portfolio account and use it to reflect on the lessons and I will post my summaries there”.*

Negative response:

Student4: *“I am not a big fan of reflection; I would not want to waste my time writing about the same things I studied over - for example - the past week, I prefer to study smart and not for long hours, I would not use e-portfolios for reflection”*.

- Possible future recruitment:

Student5: *“It is nice to learn that a free accessible tool – referring to the Wix e-portfolio - can help us get noticed by future employers and provide us with the opportunity of getting recruited after graduation”*.

4.7.2. The Perceived Ease of Use

To determine the students’ perceived ease of use of this new tool; they were asked about how easy or hard the use of the e-portfolio can be for them. Four of them gave positive answers and only one student had mixed thoughts. The researcher used the Wix platform for the workshop presentation because she believed that it is not as complicated as other tools such as Mahara, and it can be accessible by a mobile device. During the workshop, the researcher presented the most frequently used showcase structures used by e-portfolio users and illustrated the suggested structure on the whiteboard. The researcher used her e-portfolio structure as a guideline for students to help them build their e-portfolios. The researcher also consulted the sample structure of the user interface which was created by a student from the University of Dundee and was illustrated in a study made by Luchoomun et al. (2010), see figure 6 below.

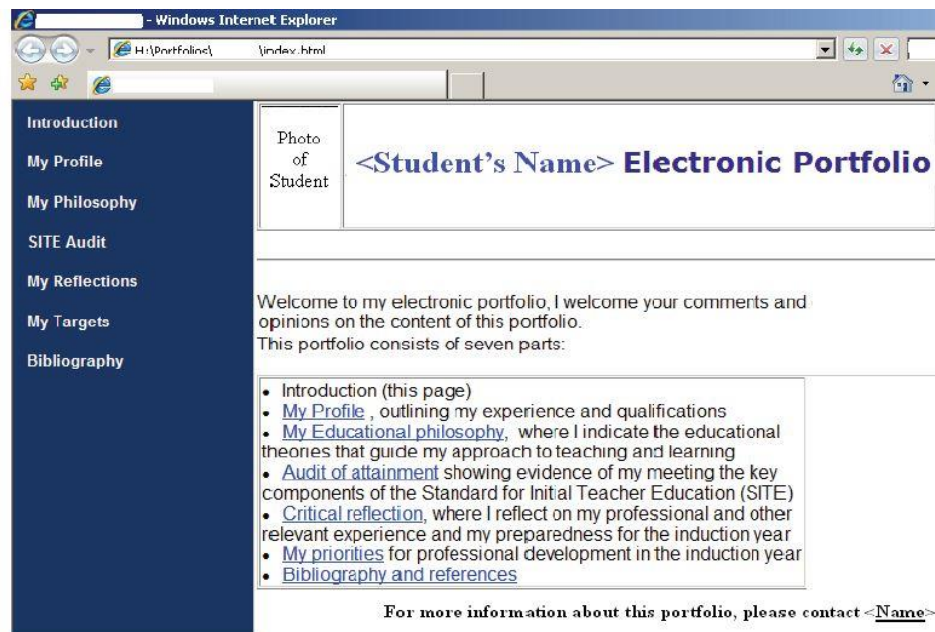


Figure 6 A sample of the user interface of a student's e-portfolio from the University of Dundee

Both the above-mentioned sample and the researcher's e-portfolio structure were combined to produce a relatively new, well-built, and easy-to-use structure for the students who participated in the study to enable them to attempt to build theirs' easily. The suggested structure comprised of eight sections representing the front page ribbon, these sections are:

- Introduction: This is for users to write an introductory part about their e-portfolio.
- My profile: this is for a user to state some personal facts about themselves.
- My philosophy: this is for users to write a few lines about what they believe could be relevant to their academic, personal, or professional thoughts.
- My reflections: this is for users to write their reflections on lessons, events, group work, experiences, etc.
- My target: This is for users to write their short-term or long-term goals.
- My talents: this is for users to showcase their talents such as photography, video editing skills, calligraphy, painting, handicrafts, interior design, programming skills, or any attractive skill.

- Contact me: this is for users to provide contact details 'preferably an email address or insert contact details and hide them, people can reach out to a user by clicking on the *contact me* tab where they can directly send messages to the e-portfolio user through the website. This is a more secure option as users will not have to reveal any direct contact details.
- CV: this is for users to upload their curriculum vitae; however, they would need to create one first. It is not a necessary step at the time being as its benefit will increase more after graduation or if students considered to apply for an internship.

The researcher explained that teachers' e-portfolio can be constructed differently; she advised teachers that they can consult their paper portfolio sections or copy them into the e-portfolio to create the structure they feel comfortable with. She gave them ideas for sections to create like: quizzes, assignments, exam schedules, and taught material.

The students were shown the detailed steps of 'how to create an e-portfolio account', received instructions on the best practices to do it; and were allowed to ask questions during the workshop and seek clarifications.

Here are some of the comments recorded during the discussion:

- Positive comments:
 - Student3: "I think it's easy to use e-portfolios as long as I can sign up independently using my email or Facebook accounts, the interior of the e-portfolio seems just like any other website, it's like I can construct a place for my own on the Internet based on what I like".
 - Student5: "It seems easy to use e-portfolios, I do not think it requires any kind of training, we live in the era of technology and thus people should already be familiar with using such user-friendly platforms".
 - Sudent1: "It is simple to use an e-portfolio. The concept is new to me, but I assume it would be easy for anyone who uses social media platforms to also use e-portfolios smoothly without guidance".

Student2: "I think I can use it with a little guidance or training, I like that it doesn't take much time to register and build a structure. I assume it can all be completed within minutes. I can also access it anytime via mobile to add notes and have it updated. Time is important to me, so if technology helps me accomplish my tasks quickly, independently, and easily then I would use it".

- Negative comments:

Student4: "Using the e-portfolio doesn't look as easy as setting up an 'email' for example. It looks more difficult, I see many patterns which are making me confused. I might change my mind when I attempt to do it by myself".

4.7.3. The Perceived Attitude

During the focus group discussion, students were asked about their feelings if the university decided to adopt an e-portfolio usage policy. They were particularly asked about how they would feel if the e-portfolio tool was used within teaching methods at the university. The students have had the opportunity to form an idea of the e-portfolio during the workshop which was held earlier that morning; thus, students have already generated opinions and perceptions about this tool from what they have learned. The researcher encouraged the students to share their honest feelings and ensured them that their responses will be kept confidential. The students have shared interesting opinions which have mostly reflected a high level of interest in using new technology. Four students out of five have expressed positive feelings toward using the e-portfolio in their education and only one student had negative feelings. The positive feelings revolved around the benefits which the e-portfolio could bring to them, some have compared it with social media platforms while others have focused on its technical features. The only negative comment was a concern made by one of the students about the need for training to use the e-portfolio and the fear of system usage failure.

- Comments reflecting positive attitudes:

Student2: *“I wish to have this tool included in the courses; we would then at least be obliged to use it. Once we all learn how to navigate the tool, we would increase our chances of gaining its benefits”*.

Student3: *“I would use it even if the university does not have it included within the teaching methods. I can see that it could be beneficial for me because I will have the space to freely reflect on any topic I like and receive comments as well, it will be my personal space. Moreover; I like the possibility of creating posts and adding several pictures with a description for each, this is not yet achievable on social media platforms”*.

Student5: *“I would use any tool that could help me be more organized and accomplish tasks quickly; I assume that this is one of the features of the e-portfolio as I was able to spot some tabs for creating assignments and setting reminders in the settings bar during this morning’s presentation. I wish I could use it in class to aid my education”*.

Student1: *“I like having all my files in one place such as documents, pictures, reading material, links, and lecture notes; I believe that I will be able to do this by using the e-portfolio. I usually use a paper portfolio and I understand that e-portfolios are not a replacement for my paper one, but it is more organized and has more features”*.

- Comments reflecting negative attitudes:

Student4: *“It seems useful, but I think it requires training, I do not think I can use it easily; I think I am not the only one who thinks so since learning to use it without making mistakes will be an additional burden added to studying for exams. In simple words, I do not have high technology skills”*.

4.7.4. The Perceived Behavioral Intention

Negative E-portfolios were designed to cater to various purposes, finding recruitment opportunities is one of them. In this study, the students were seemingly fond of the idea of having their work saved for after graduation to help them secure a job in the future. This indicates that The element of *‘perceived potential usefulness’* representing the first element of the modified (TAM) suggested in this study; directly affects *‘the*

perceived behavioral intention' element. Students who intended to have their skills presented online and those who became practically thinking about getting recruited have expressed positive comments in response to question four. Students were asked to specify how the e-portfolio would best serve their needs as students if it became in use.

Four students were interested in e-portfolios and showed signs of positive intention; whilst one have expressed negative feelings. Below are two examples of the feedback:

Student5: *“I think that finding a job directly after graduation is challenging, especially if one has no prior experience. Using a tool to help facilitate the recruitment seems to be great. Uploading files containing my skills and probably getting noticed by future employers is enough reason to make me use it”*.

Student4: *“Using an e-portfolio does not add value to my learning since I have managed to study without it and I still can. I can use social media platforms if I need to share something with someone. I feel it is a waste of time”*.

4.7.5. The Potential Actual Use

Most of the students' responses were positive which highly indicated their positive intention to use e-portfolios. After showing students a video speaking about the e-portfolios and explaining how to create an e-portfolio account on the Wix platform, the researcher asked the students to attempt to create an e-portfolio account following her explanation. The researcher asked the students to share the outcome with her by either having their e-portfolios published and then sharing the link with her via the email she provided or by taking a snapshot of their e-portfolio account front page capturing the structure and having it shared with her. This step was supposed to be taken as an additional step to help the researcher conduct her post-test analysis by applying the documents analysis approach. theoretically, if students succeeded in creating their accounts or if their responses were positive rather than negative, this would reflect that students have potentially perceived the usefulness of the tool, students have proven the potential ease of use of the tool, students have shown a good attitude toward it, and students have proven their intention to use it. This would lead

to state that students might use the system if they maintained consistency regardless of having it mandatorily used at the university or not. The researcher was fully aware that students were on the doors of taking their final exams and would understand if they would not find the time to share their work with her which was considered as a limitation factor in this study; but students feedback were sufficient to reflect their perceptions. Only one student has succeeded in creating and sharing the e-portfolio account with the researcher until the moment of writing this study. The student reflected her ideas about using the e-portfolio to showcase her interior design talent which reflected her desire of using the e-portfolio for business. It is worth mentioning that the potential actual use of the system represents the result for all the (TAM) elements combined and since the majority of the feedbacks were positive and one student out of five succeeded in creating the account regardless of the poor design, this can be treated as a sign of success and acceptance despite weakness of actual evidence. A sample of the e-portfolio created by one of the students is shown in figure 7.



Figure 7 A Sample of Participant E-portfolio Account

3.8 Focus Group Findings

It is logical to state that if students' responses were more positive than negative; this would

indicate a good level of acceptance of the tool. The researcher built the following table to help her squeeze the responses into one table:

Table 1 - Focus group discussion responses analysis

Student	PPU	PEU	PAU	PBIU
1	P	P	P	P
2	P	P	P	P
3	P	P	P	P
4	N	N	N	N
5	P	P	P	P
Total: 5	P: 4 N: 1	P: 4 N: 1	P: 4 N: 1	P: 4 N: 1

The (PPU) stands for the first element in the modified (TAM) is the *Perceived Potential Usefulness* of technology, and the (PEU) stands for the second element of the model is the *Perceived Ease of Use* of technology, The third acronym (PAU) stands for the third element that is the *Perceived Attitude toward Using* technology, and the (PBIU) refers to the fourth element which is the *Perceived Behavioral Intention to Use* technology. The codes *P* and *N* refer to *Positive* and *Negative* referring to the nature of the responses received. Looking at the table above, we can see that four students out of five provided positive responses to the questions which were then coded and labeled using the modified (TAM) elements after the interpretation of the data, and one student gave a negative response to the questions.

The two themes generated from that process were:

1) Drivers of change: accepting new technology and transferring to a new teaching method can be ensured by perceiving the outcome of using that system and by understanding its factors and

value; such as storage, instant feedback and accessibility, reflection, recruitment, independency, and use of social media.

2) Training for change: analyzing the challenges of implementing any technology has a critical role in overcoming them, time waste factor and the lack of ICT skills are both considered challenges in this study. A number of participants thought that using an e-portfolio could be a waste of time while others lacked the basic ICT skills to start using it. In conclusion, proper training would most definitely contribute to causing the desired change of classic teaching methods and ultimately embrace the technological revolution.

3.9 Summary of Analysis and Findings

Collecting the participants' perceptions from both the semi-structured interviews and the focus group interviews based on the modified (TAM) elements has contributed to understanding the level of their acceptance of the new technology 'e-portfolio' that will lead to determining the potentiality level of the actual use of the software.

To summarize what has been explained above, the following steps were taken by the researcher to conduct the analysis, highlighting the reasons why they have been taken in that manner:

- 1) The researcher completed collecting the data, described them, and grouped them into themes; she then conducted a simultaneous analysis process to make sense of it.
- 2) The researcher read the data several times to form an understanding of the information given by the participants to analyze them and capture the entire picture of the set categories.
- 3) The collected data was neither too lengthy nor short; the information received was organized in paper files, and some were transferred into computer files.
- 4) The researcher transcribed the data from the semi-structured interviews and the focus group interviews and then had the texts written in notes and a Microsoft word document table for instant interpretation.
- 5) The researcher reviewed all the lines to enhance the categories or the codes.
- 6) The researcher searched for repetition in responses to establish links in them.

- 7) The researcher listed the positive and negative comments in a table specifying the type of participant and identification number as in student1, student2.
 - 8) The researcher used the modified (TAM) to label the outcome.
 - 9) The analysis generated eight codes and two themes based on the modified (TAM); see the diagram below.
 - 10) The responses of participants were positive rather than negative.
 - 11) The researcher planned to conduct a document analysis for the e-portfolio structures created by students who participated in the study; only one student shared her work perhaps due to exams.
 - 12) The received e-portfolio structure was poorly designed yet it can indicate acceptance.
- The researcher found that students were eager to learn new technology and had perceived its potential value in their academic learning, but some require support and training because they have different levels of ICT skills.
 - The researcher found that the factors contributing to the success and acceptance of the new e-portfolio technology resemble understanding the benefits of an e-portfolio and using it.
 - The researcher found that the management team and teachers perceived the idea of e-portfolios but were not ready enough for a technological change due to certain constraints, but they aim for it to happen one day.

The codes, themes, and the link to the modified (TAM) elements leading to the result are illustrated in the diagram below.

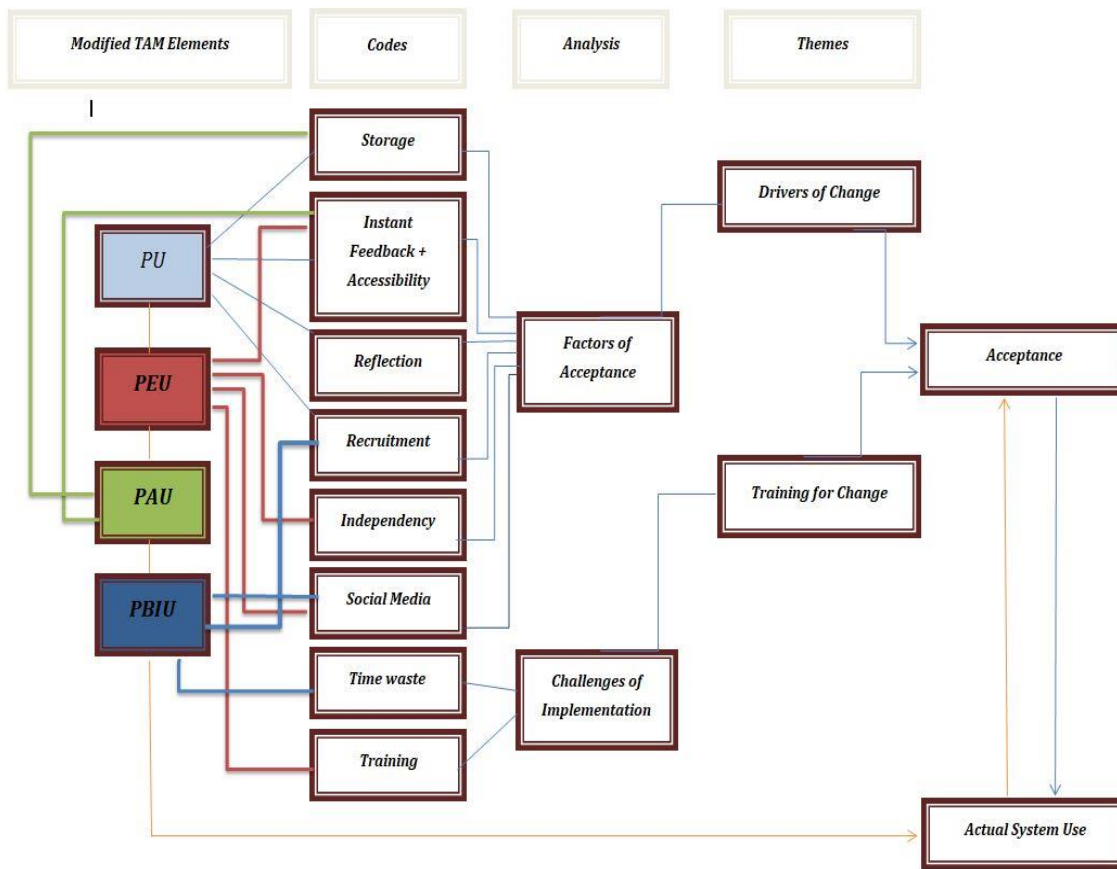


Figure 8 Data Analysis process and result

CHAPTER 4 RESULTS AND FINDINGS

4 Discussion

4.1 Introduction

Collecting the perceptions of participants from both the semi-structured interviews and the focus group interviews based on the modified Technology Acceptance Model (TAM) elements has highly contributed to understanding the level of the participants' acceptance of the new non-mandatory technology 'e-portfolio'. This has led to determining the level of the potentiality of the actual use of the e-portfolio software. The modified (TAM) was utilized as the research framework in this study following a qualitative approach that was suitable for the nature of this research. Many researchers have used the (TAM) to examine various elements in their studies by following a quantitative approach and collecting surveys and questionnaires to introduce numerical data; whereas, this study used the (Tam) to qualitatively understand participants' perceptions about e-portfolios. Using a qualitative approach with (TAM) as a research framework was also followed by M. W. Ng et al. (2013) who examined the factors impacting the implementation of the e-portfolio software at the Hong Kong Institute of Education.

Similar to the study at hand, using the (TAM) to examine the perceptions and attitudes of participants in educational institutions towards using non-mandatory technology was the core of the study conducted by Fathema et al. (2015). They have also found that factors such as the quality of the system and self-efficacy can help in predicting the participants' attitude towards using the technology explored.

4.2 Answers to the Research Questions

In response to the general research question of this study "Does the university welcome the idea of including technology within their teaching methods represented by using e-portfolios?" the

factors of acceptance and the challenges of implementation detail the answers to the specific three research questions asked in this study:

3.5.1. Factors of Acceptance

After analyzing the data to provide concrete answers to RQ1, RQ2, and RQ3; it became clear that the responses received from the management team, teachers, and students reflect the acceptance of the e-portfolio technology and can be considered as factors to help make the desired change of the teaching methods. According to the (TRA) Theory of Reasoned Action (Ajzen & Fishbein 1980), these factors are interlinked and impacted by each other. The current study represents a good example to explain the theory, the participants' perceived intentions in showing a certain behavior was a function of their attitude toward the usage of the e-portfolio; their attitudes predicted their intentions and that would paint an image for the acceptance of the technology and later to the actual use of the system. The factors of acceptance are: **The realization of the usefulness of the e-portfolio:** the *storage* feature of the e-portfolio could help teachers upload and store their teaching material and provide the space for students to upload their work and follow their academic progress. This is in addition to the *feedback* feature which would allow teachers and students to communicate without relying on personal social media platforms but send and receive feedback by using a professional platform instead. Another e-portfolio feature is the *reflection*, some students were very positive about this feature for it provides them with the space to write and share experiences. During the interviews, many students expressed their admiration for the idea of building a personal website by the use of an e-portfolio to assist them to find employment opportunities. By realizing the usefulness of these features, the acceptance of the software would be guaranteed and the institute would be closer to the implementation.

The determination of the ease of use of the e-portfolio: four students gave positive answers when they were asked about how easy or hard the use of an e-portfolio can be

for them, they have highlighted a few determinants of easy use to reflect on their thoughts, these are:

instant feedback and accessibility - the Wix platform presented was easy to be accessed via a mobile device, students expressed that sending and receiving instant feedback would help in their studies and that being able to access the e-portfolio whenever and wherever they are is considered a plus. Only one student had mixed thoughts and could not determine how easy or hard the platform was before receiving proper training, the Management team and teachers shared the same concept. Agreeing to the ease of use with or without training would bring the idea of implementation another step forward toward accomplishment.

The link between the attitude and the intention: feelings and thoughts are leading motives towards accomplishing set goals, in this study; four students have shared interesting positive opinions which have mostly reflected a high level of interest in using the new technology. The factor of forming an attitude towards the use of an e-portfolio was highly impacted by the first factor which is the realization of the usefulness of the e-portfolio. The positive feelings shared by the students revolved around the benefits that the e-portfolio could bring them; some have compared it with social media platforms, while others have focused on its technical features. The only negative comment was a concern made by one of the students about the need for training to facilitate using the e-portfolio and the fear of system usage failure. The factor of attitude is critical since it can predict the intention to use the technology.

3.5.2. Challenges of Implementation

Time Waste: Opinions received during the interviews which were related to personal beliefs were based on predictions. The time waste factor describing the e-portfolio was also found in similar studies in the literature; but, suggestions were made in other studies to overcome this seemingly solvable issue. Hsieh et al. (2015) proposed a three-phase model called the (MAR) to tackle these concerns and stated that this opinion is rooted in the loss of interest over time and that it is solvable. The model

was explained in detail in the literature review section.

Training: the researcher found that the management team and teachers perceived the idea of e-portfolios but were not ready enough for a technological change due to certain constraints including the lack of ICT skills of students and teaching staff. Understandably, the factor of people having different ICT skills would affect any system implementation process; but, many solutions can be tailored to particularly serve that institution. If the stakeholders or decision-makers of an institution aim to implement a system that they deem necessary for their institutions; they can conduct studies carrying action research nature to analyze the situation or consult other studies of similar cases to provide solutions. The action research has to be conducted by a staff member or members of the university to understand the use of technology tools within teaching methods, they can gradually focus on studying the e-portfolio or any other system they find useful. Creswell (2015, p.22) in describing the criteria of action research stated that the goal of conducting the study could be to increase power, transform, and enable people in educational settings. Enabling people who work in educational settings to acquire ICT skills and develop their self-efficacy is an essential step to take before any implementation of technological systems. For e-portfolios and other advanced software to be used, students and staff must possess at least the basic technological skills before the implementation. The more the users feel comfortable with basic computer skills, the Internet, and email, the more they accept new technology. It is true that during the focus group interview, the majority of the students expressed that they are well acquainted with users' IT skills except for one student who did not; yet, this cannot be generalized to the university as a whole. This training-related finding refers to the different levels of students' and staff skills and represents a call for an IT skills assessment to be conducted to determine users' levels before commencing any technological software implementation.

CHAPTER 5

5 CONCLUSIONS AND RECOMMENDATIONS

The writer used a qualitative research method to gain insights into how technology particularly e-portfolio is perceived at the university. The aim was to transform the teaching methods to a more advanced style in this educational setting, it started by showcasing the benefits of using e-portfolios as well as presenting the outcomes of this study to the decision makers at the university. Despite the globally widespread belief that the current generation of students and young teachers are comfortable with using technology which would result in a seamless interaction between the human and the machine, the findings of this study suggest that this is not necessarily true. The findings showed that the participants perceived the benefits of the e-portfolio but were not ready enough for a technological change due to a hesitation resulting from a belief that certain constraints including the lack of ICT skills of students and teaching staff and a fear of a system usage failure would hinder the implementation process. The findings showed that the attitude towards using the e-portfolio evidenced a direct connection with the behavioral intention to use it. Additionally, for the management team, the teachers, and the one student who expressed mixed or negative feelings toward the software; the perceived ease of use was the determining factor. Instead of predicting that staff and students do not enjoy the required technical skills to include learning software in teaching methods, the university may evaluate the computer skills of staff and students and then organize support and training sessions to develop their skills based on the outcome of the evaluation. This evaluation is important to determine which software responds to the needs and requirements of that institution. The insightful findings and the suggestions discussed in this study along with the steps taken to determine the facts would not only benefit this private university in its journey to develop its education methods; but, would also benefit any other institution during its preliminary stage of transforming their educational culture.

5.1 Limitations and Recommendations

Despite that this case study did not take all the time it needed to be completed, the researcher enjoyed writing it under pressure. There were a few limitations in this study:

- 1) The access issue: since the researcher does not work for the private university where this research was conducted, the approval to access the university to collect data took approximately one and a half months to be obtained, this was followed by two weeks to organize the workshop and fix a date for the presentation. For future research, studies that are built on the nature of transforming culture or developing skills are ought to be conducted by staff members of institutions. Staff members would have easier access to data and participants.
- 2) The number of participants: the plan was to seek the participation of twenty participants in the study, but the number was minimized to ten since the workshop coincided with the final exams of the university. Lessening the number to ten did not affect the outcome since case study findings cannot be generalized. For future research, ten participants from each department would seem reasonable if the study is deemed to include all departments and sections of any educational institution.
- 3) The data collection method: the plan was to include a questionnaire if the number of participants was high, but a qualitative approach with face-to-face interviews and a focus group discussion seemed more aligned with the questions of the case study.
- 4) The data analysis: the use of the Nvivo software to interpret data was in the initial plan, but this was changed into a hand analysis and the use of a Microsoft Word document for the interpretation due to the low number of participants. For future studies, Nvivo and other related software are designed to help facilitate the transcription of data if the number of participants was high; thus, opting for the usage of the software can be useful in large-scale studies.

All the above-mentioned limitations were operated according to what was found in the literature about such cases. Each point was justified under its respective section in the research paper.

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Appendices

Appendix 1 - Consent Form

Consent Form

Statement of Informed Consent

Title of the study: The Transition to a New Educational Culture Through the use of E-portfolios: Exploring Possibilities – A case study in Iraq

Name of the researcher: Dunya Al-sammarraee

The purpose of the study: is to explore the readiness of your university to use the e-portfolio platform for the first time and to analyze the level of acceptance among the management team, teachers, and students. The general aim of the study is to provide answers to the following:

- Does the university welcome the idea of including technology within their teaching methods represented by using e-portfolios?

Time: each interview/focus group discussion should last 25 minutes.

Freedom of withdrawal:

Your participation in this study is voluntary.

- You may withdraw at any time.
- You may take a break at any time.
- You may ask questions at any time.
- You may leave at any time without specifying a reason.

Researcher:

I, the researcher, wholeheartedly appreciate your participation in this study. This study is part of the dissertation research prepared to obtain the master's degree in the (MEd) Management Leadership and Policy in Education program from the British University in Dubai.

Participant:

I, the participant, have read the consent statement. I understand that I have voluntarily participated in this study. I understand that my identity will be kept confidential. I know that the research data will serve the above-stated purpose.

By signing, you confirm that you have read the consent form, understood its content, and agreed to participate in this research voluntarily.

Name of participant:

Signature & date:

Name of researcher:

Signature & date:

Appendix 2 - Interview Protocol

Interview Protocol

Study: The Transition to a New Educational Culture through the Use of E-portfolios: Exploring Possibilities – A case study in Iraq

Date and Time of Interview:

Location:

Interviewee:

Interviewee's Job Title:

The following is to be clarified:

- **Study description**
- **Purpose of the study**
- **Data collection process + Procedures of protecting data and participants' confidentiality to be stated**
- **25 minutes max for the interview**
- **Interviewee to read, sign, and date the consent form**
- **Set the voice recorder on**

Questions and answers:

1) Do you encourage using technology in education? Why?

2) To what level does the university use technology in the teaching methods?

3) How do you perceive the idea of using a new technology tool such as the e-portfolio within teaching?

4) How applicable do you think the implementation of an e-portfolio system should be? Why?

5) What would the university require to start including e-portfolios within teaching methods?

- **Thank the participant**

Appendix C - Semi-Structured Interview Questions and Focus Group Interview Questions

Interview Questions

Type A: Semi-structured Interviews

Participants: Management Team + Teachers

Title: The Transition to a New Educational Culture through the Use of E-portfolios: Exploring Possibilities – A case study in Iraq

- 1) Do you encourage using technology in education? Why?
- 2) To what level does the university use technology in the teaching methods?
- 3) How do you perceive the idea of using a new technology tool such as the e-portfolio within teaching?
- 4) How applicable do you think the implementation of an e-portfolio system should be? Why?
- 5) What would the university require to start including e-portfolios within teaching methods?

Type B – Focus group interviews

Participants: University Students

- 1) Do you find e-portfolios beneficial or not? Why?
- 2) Do you think e-portfolios are hard or easy to use? How?
- 3) How would you feel if the university decided to adopt e-portfolios as one of the teaching methods?
- 4) What purpose do you believe e-portfolios may serve for students?