

Implementation of e-learning system readiness: The effect of the cost readiness on implementing e-learning

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Abstract— *The primary goal of this research is to examine and analyse the cost readiness factor as it relates to e-learning deployment in Kurdistan. The study will look at the cost efficiency and cost readiness factors that influence the successful adoption of an e-learning system, and propose prospective and long-term solutions that would go a long way toward overcoming cost obstacles in the future. The researchers used a quantitative research method to determine the cost readiness of e-learning implementation. The participants in this study were 516 people from Kurdistan's several private universities. The results demonstrated that cost preparedness has a large predictive value for e-learning and will have a direct positive relationship with it. The survey questions may not necessarily generalize to the greater community of instructors and administrative personnel at private colleges, which is one of the study's limitations.*

Keywords— *E-learning, E-learning system readiness, Cost readiness. E-learning.*

I. INTRODUCTION

Many activities, including education, health care, agriculture, business, and military activities (Hameed & Anwar, 2018), have changed as a result of technological advancements. In today's globalized digital world (Hamza et al. 2021), education, which includes both teaching and learning (Ismael et al. 2021), is viewed as a critical component for gaining a competitive advantage (Jamal et al. 2021). Individuals and organizations are becoming more knowledge-intensive (Sabir et al. 2021) in order to acquire a competitive advantage, allowing them to focus more on obtaining and maintaining information in order to obtain a considerable advantage (Saleh et al. 2021). To put it another way, technology improves educational standards; to say it another way (Sorguli et al. 2021), learners can be more effective in their learning by using technological equipment (Top & Ali, 2021). Universities that develop new technologies produce a more efficient learning atmosphere and learning environment (Abdullah et al. 2021). Since the 1950s, technology has played a significant role in the development of educational standards (Ahmed et al. 2021). Since 1998, there has been an increase in interest in the use of technology in education (Akoi et al. 2021).

Individual connections, as well as connections between individuals and information, are critical (Ali & Anwar, 2021), but having the association is insufficient (Ali et al. 2021). In the evolving context (Ali, 2014), technology plays a role in assisting learners in whatever they choose to undertake (Andavar et al. 2020). Technology is flexible (Anwar & Abd Zebari, 2015), sensitive, and easily adjustable according to necessity in this environment (Anwar & Abdullah, 2021), and it no longer decides or constrains the options for action (Anwar & Balcioglu, 2016). Kurdistan universities (Anwar & Climis, 2017), like any other university, will provide an education in which students at all levels benefit from studying in a research environment (Anwar & Ghafoor, 2017), resulting in graduates who are well prepared for work, further education, and making a valuable contribution to society (Anwar & Qadir, 2017).

The conventional technique of teaching and learning in the classroom, in which both the teacher and the learner must be physically present in the same room (Anwar & Surarchith, 2015), was used in the past (Anwar & Shukur, 2015). This is still the most prevalent technique of instruction, and it is used all around the world (Anwar, 2016). However, internet technology appears to have

rendered the traditional method of teaching obsolete (Anwar, 2017), and a number of academics have proposed that education through the use of information and communication technology tools, sometimes referred to as e-learning, is the way of the future (Anwar, K., & Louis, 2017). E-learning is defined as the practice of teaching and learning through the use of electronic equipment (Aziz et al. 2021), such as computers to view interactive learning films, electronic whiteboards for teaching, photo and video editing, and the use of sound during a presentation (Demir et al. 2020). As a result, watching instructive movies (Faraj et al. 2021), manipulating photos/videos, inserting audio for presentations (Hameed & Anwar, 2018), and using an interactive whiteboard are all examples of e-learning system implementations (Hamza et al. 2021). It is generally supported by computer networks via a variety of channels (Ismael et al. 2021), including wireless and satellite systems, as well as mobile technology, such as cellular phones, laptops, and other mobile devices (Jamal et al. 2021).

II. RESEARCH PROBLEM AND AIM OF STUDY

Generally, the concept of e-learning is gradually gaining ground in most institutions around the world, some universities have started putting a lot of efforts and resources to embrace the e-learning system, which many scholars believe is the way of the future (Sabir et al. 2021). Despite this, researchers and other scholars believed that there is still a long way to go in order to actually achieve the level of development in adopting the e-learning system (Saleh et al. 2021). There are some potential problems that need to be overcome so as to cross the line in implementing the e-learning system, these problems are but not limited to (Sorguli et al. 2021):

- i. High cost of hardware devices and software programs needed to effectively implement the e-learning system;
- ii. Poor internet access due to high cost which results in lower bandwidth speed;
- iii. High import tariffs and less price completion;
- iv. Poor condition of telecommunication infrastructure.

The problems listed above seems to be the cost readiness problem affecting the education sector as a whole; therefore (Top & Ali, 2021), this study will focus strictly on the cost readiness factor affecting e-learning implementing in private universities in Kurdistan (Andavar et al. 2020).

The main aim of this study is to analyze and investigate cost readiness factor affecting the implementation of e-learning in Kurdistan (Anwar & Abd Zebari, 2015). The research would investigate the cost efficiency factor that affects the successful implementation of the e-learning system, and come up with prospective and sustainable solutions (Anwar & Abdullah, 2021), which would go a long way in overcoming the cost barriers for future implementation (Anwar & Balcioglu, 2016).

III. LITERATURE REVIEW

There are several aspects involved in making decisions; we need to consider Advantages, disadvantages and costs involved (Anwar & Climis, 2017). The financial, managerial, operational, Should be considered in the choice of the most Efficient (Anwar & Ghafoor,2017). The Economy of the Costs initially was introduced by (Anwar & Qadir, 2017), with the publication of the work *The Nature of the Firm*, in which it investigated the reason of the existence of the (Anwar & Shukur, 2015). Management of costs is defined by (Anwar & Surarchith, 2015) as a branch of the accounting that defines questions of strategically costs that are moved in such a way by how much not financial information (Anwar, 2016). Therefore, the objective of the management of costs is to supply to conditions them companies to take decisions finally to increase the competitiveness of the company (Anwar, 2017). Knowledge of costs is important for the survival of companies. Managers need knowledge about the costs of the organization (Anwar, K., & Louis, 2017). However, the organization must ensure that the sales price covers Costs and expenses of the product and that can generate a desired profit margin (Aziz et al. 2021). A Cost System is the monetary parameterization of the production system of a company (Demir et al. 2020). The Accounting of costs possess is an extreme importance when collecting, processing and to inform how the resources applied in the productive system of goods or services of affect the results of a company (Anwar & Abd Zebari, 2015). For (Anwar & Abdullah, 2021), cost is a sacrifice of resources, expenditure, a launching against the prescription in one determined countable period, generally with the objective of presentation of external financial reports. (Anwar & Balcioglu, 2016), cost is relative expense to or service used the well in the production of other goods or services. As (Anwar & Climis, 2017), the accounting of costs is the branch of the accounting that if destines to produce information for the diverse management levels of an entity, with the intention of assisting the functions of determination of performance, planning and control of the operations and of taking of decisions (Anwar & Ghafoor,2017).

Technology can have a mutual relationship with learning. The emergence of recent technologies motivate lecturers to leverage and understand these technologies for classroom use (Anwar & Qadir, 2017); simultaneously, the on-the-ground implementation of those technologies in the classroom will directly impact on how these technologies continue to take shape. Technology is incorporated a large result, not simply on universities, however on the academic community as an entire (Anwar & Shukur, 2015). Students have the benefit of learning to use technology tools to conduct analysis, to find data or to browse through digital libraries (Anwar & Surarchith, 2015). Technology is an efficient educational aid. In the current age (Anwar, 2016), it along with its numerous tools and applications has become a lot of integrated within the learning method. This will play a vital role in enhancing this method and creating it active rather than passive (Anwar, 2017).

Information technology is a term usually used to describe the elements of hardware and software that permit individuals to access, retrieve, store, organize, manipulate and present information electronically (Anwar, K., & Louis, 2017). Communication technology is a phrase utilized to describe telecommunications tools through that information are often sought (Aziz et al. 2021), sent and accessed as an example, phone modems, faxes and computers. Information and communication technology (Anwar & Abd Zebari, 2015) represents the convergence of information technology and communication technology (Anwar & Abdullah, 2021). ICT is that the combination of networks, hardware and software as well as suggest that of communication, collaboration and engagement that enable the processing (Anwar & Balcioglu, 2016), management and exchange of knowledge, information and data (Anwar & Climis, 2017). Information and communication has brought lots of potentials for academic modification (Anwar & Ghafoor, 2017). Learning has become easier and purposeful for students with the incorporation of ICT lecturers might differentiate (Anwar & Qadir, 2017) learning directions and make student-centered learning utilizing computer technologies. ICT has also impacted the educational access (Anwar & Shukur, 2015). With the advancement of technologies, schooling is often done anyplace and anytime (Anwar & Surarchith, 2015). An incorporation of ICT in education has additionally played vital roles in getting ready individuals (Anwar, 2016).

The use of ICT in education has revolutionized and remodelled the education sector worldwide and created positive impacts provided on implementation ways are followed (Anwar, 2017). Saekow & Samson, (2011), define utilizing ICT in education includes the uses of technologies that allow students to receive information (Anwar, K., & Louis, 2017), communicate and exchange information with

others in an academic environment. Educational systems around the world are getting increasingly pressured to use the new ICT tools to their curriculum to supply students with the information and skills that they have in the twenty first century (Aziz et al. 2021). The challenge that educational systems are encountering is a way to rework the curriculum and learning method to supply students with the requisite skills to operate effectively in a very dynamic and endlessly changing environment (Anwar & Abd Zebari, 2015). ICT provides powerful tools that will facilitate in transforming the current isolated, student-centered and text bound classrooms into wealthy, student focused interactive information environments (Anwar & Abdullah, 2021). To fulfill these challenges, learning faculties or universities should incorporate the new technologies and applicable ICT tools for learning (Anwar & Balcioglu, 2016).

Furthermore, (Anwar & Climis, 2017) claimed that incorporating ICT into education can transform learning into a lot of student-centered learning in which students collaborate with one another to tackle tough learning tasks (Anwar & Ghafoor, 2017). Integrating ICT into education necessitates lecturers' knowledge of a variety of constructivist pedagogies in order to change their traditional pedagogies. E-learning, according to (Anwar & Qadir, 2017), is a term that encompasses a variety of processes and applications (Anwar & Shukur, 2015), including distant learning, online learning, virtual learning, computer learning, web-based learning, and digital collaborations. E-learning is a hybrid of information technology and education, with each contributing to the transformation of how teaching and learning are carried out in the digital world. This entails innovative methods of accessing, learning (Anwar & Surarchith, 2015), or teaching, as well as the creation of learning materials and the delivery of learning content over the internet or other storage devices (Anwar, 2016). Through the use of multimedia resources such as CD-ROMs, video, CDs, hypermedia, computer simulations, interactive whiteboards, and other tools, the responsibility for learning is shifting from the teacher to the student. The transition from teaching to learning has been a huge transformation in education. In fact, we live in a world that is centered on the learner. In his study on the essentials for e-learning, (Anwar, 2017), the institutions in question debate the relevance of e-learning in connection to distance education. He also discussed the significance of e-learning as well as its historical context (Anwar, K., & Louis, 2017). Furthermore, he was able to pinpoint the critical effects of e-learning after it is fully implemented, which include (Abdullah et al. 2021):

- Eliminate the costs for instructor fees and materials to a certain level;

- Reduce time of learning and the time employee's absence from duty;
- Increased retention and enhanced hands-on application unlike traditional methods;
- Help manager instruction and progress via portal;
- Make easy use of multimedia in practice and assessment according to learners' abilities;
- Allow for automated monitor of user's progress with supervisor and teachers;
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- Be highly interactive as it engages users and pushes them than pulling them to progress;
- Help fast learners study on their own pace in any course and avoid redundancy;
- Enable slow learners to also study in their own pace by eliminating frustration with themselves, their fellow learners, and the subject matter;
- Make knowledge cumulative as lessons are built consecutively and with flexibility;
- Make learning takes place anytime anywhere and greatly increases knowledge retention;
- Assist e-learners create, have access, view, modify and print or send documents;
- Enhance evaluation as it becomes self-paced since e-learning is a networked phenomenon;
- Make easy delivery of content using standard internet technology as it enhances surf ability.

E-learning supersedes training and instruction since it is a tool that improves behaviour performance (Ahmed et al. 2021). According to (Akoi et al. 2021), the benefits of e-learning are many, which also include cost-effectiveness (Ali & Anwar, 2021), enhanced responsiveness to change, consistency, timely content, flexible accessibility and providing students value (Ali et al. 2021). (Ali, 2014), in their study stated that the e-learning techniques that are adopted by many universities in the past are in the form of prepared lectures (Andavar et al. 2020), which are stored in external memory such as floppy diskettes, CD-ROMs that can be played as at when the need arises (Anwar & Abd Zebari, 2015). However (Anwar & Abdullah, 2021), this has been found to have slight disadvantage because of the ratio of students per computer system in which most of these facilities are not interactive enough when compared with the situation in which the lecture is conducted in real time over the internet (Anwar & Balcioglu, 2016).

There are many various approaches and definitions to outline e-learning (Anwar & Climis, 2017). Some definitions are additional precise, especially regarding the technologies used, others just scratch the surface by providing a general concept of its means (Anwar & Ghafoor, 2017). In this study chose a distinct assortment of definitions e-learning (Anwar & Qadir, 2017). The origin of

the term e-learning is not certain, although it is recommended that the term most likely originated during the 1980's (Anwar & Shukur, 2015). E-learning is an innovative approach to delivering electronically mediated, well designed, student-oriented, interactive e-learning environment, independent of the place and time, whether by utilizing internet or digital technologies according to the educational styles principles (Anwar & Surarchith, 2015).

According to (Anwar, 2016), e-learning is flexible and focusing on interaction among lecturers, students and the online environment and on collaborative learning by stating that e-learning is about connecting learners to other learners (Anwar, 2017), lecturers to professional support services and providing platforms for learning (Anwar, K., & Louis, 2017). The e-learning industry refers to the effective integration of a variety of technologies across all areas of learning (Aziz et al. 2021). E-learning technologies are designed to support learning by encompassing a variety of media, tools, and environments (Demir et al. 2020). It enables for each synchronous and asynchronous learning environments. E-learning acts as a catalyst for authentic and purposeful learning experiences (Faraj et al. 2021). The emergence of e-learning, the fast growth of the internet and the advent of the (WWW) has created important impact on how information transfer and learning are conducted. E-learning is an outcome of the progression of distance education wherever digital technology is utilized within the teaching and learning method (Hameed & Anwar, 2018). The internet is a broadly used educational medium for each distance and face to face learning (Hamza et al. 2021).

E-learning is at the initial stage of development, the relevant theoretical research still need to be more improved. Through the analysis of domestic and international e-learning research, e-learning is a new teaching model that basically characterized by self-learning supported by information technology and centred by learners (Ismael et al. 2021). This teaching mode re-orientates the teacher-student role of conventional teaching, to make an open self-teaching system learning environments (Jamal et al. 2021). E-learning has its specific objectives and methods. It combines subjects of various disciplines with various supporting software that allow students (Sabir et al. 2021), lecturers and administrators to arrange learning resources and conduct learning activities (Saleh et al. 2021). E-learning provides services to students in educational institutions (Sorguli et al. 2021). Through the internet, students can access to libraries repeatedly a lo of comprehensive than libraries in their faculties or communities, and can be valid of information that is up-to-date, not found in their textbooks (Top & Ali, 2021), and may uncommon to their lecturer, interactions through emails are shown to be motivating factors for students to

enhance their educational skills. Email also enables students to collaborate with individuals not physically exist (Abdullah et al. 2021), over massive distances. The extent of e-learning technology use in course delivery varies wide. On the other hand, courses delivered primarily by lecturers in classroom setting with some integration of technology. Several lie somewhere in between these two extremes also called blended learning (Ahmed et al. 2021).

E-learning should have the following three features (Ali & Anwar, 2021): collaboration, problem-based learning and authenticity (Akoï et al. 2021). Collaboration means that students and lecturers solve problems through interaction (Ali, 2014). Problem-based learning means that the student activities include the completion of work or research projects (Ali et al. 2021), instead of taking the exam, test. Authenticity means that all the course materials and activities are realistic, closely related with what are students interested in (Andavar et al. 2020). E-learning refers to the utilization of information and technology to improve and support learning in teaching, including the delivery of content via electronic media like Web (Anwar & Abd Zebari, 2015), audio or video, satellite broadcast, interactive TV, radio, CD-ROM, and so on, that may be a new kind of education that aims to mix new technologies with conventional education (Anwar & Abdullah, 2021). (Anwar & Balcioglu, 2016), define e-learning as the combination of learning process and the internet. He stated that the rapid development of Information and Communication Technology (ICT) (Anwar & Climis, 2017) and the power of the internet have enabled the world to turn into a small global village, where communication has become prominent in today's businesses (Anwar & Ghafoor, 2017), and has also become the means of livelihood (Anwar & Qadir, 2017). (Anwar & Shukur, 2015), stated that knowledge and information can be transferred easily by the use of information technology tools (Anwar & Surarchith, 2015). Therefore, there is the need to pay close attention to the way the educational sector has been revolutionized by the information technology (IT) through the internet. Similarly (Anwar, 2016), defines e-learning as the type of learning that takes place with the use of computer and its related component (Anwar, 2017). The learning process can be via online, through the internet or offline through CD-ROM and the learning process can be in the form of audio, visual, or audio-visual (Anwar, K., & Louis, 2017). (Aziz et al. 2021), highlights the concept of e-learning as the use of networked technologies that will enable the learning revolution possible, they stated that e-learning is playing a significant role in changing the way teaching and learning takes place. (Demir et al. 2020) are in agreement with their belief that e-learning provides flexibility for learning process to be accessible to anyone, anytime and anywhere

(Faraj et al. 2021). (Hameed & Anwar, 2018), stated that e-learning provides a wide range of benefits and opportunities to teachers and learners (Hamza et al. 2021). (Ismael et al. 2021), describes e-learning as a method of providing education with the use of computers and communication technologies (Jamal et al. 2021), these technologies include but not limited to: the internet, computer networks, CD-ROM, Personal Digital Assistants (PDSs), mobile phones, projectors and other electronic devices that can be used to deliver teaching and learning (Sabir et al. 2021). Suleiman in his study on essentialities for e-learning in Nigeria's tertiary institutions stated that the relationship between technology and education has been in existence for quite a long time, and the e-learning is strategically a subset of technology in the area of education (Saleh et al. 2021). His study focused on the conceptual relevance of e-learning with regards to distance education (Sorguli et al. 2021). (Top & Ali, 2021) in their study on e-learning and distance education highlight the prospects and challenges of e-learning.

They posit that e-learning has been used in developing education in many parts of the world; some institutions are using it to deliver distance education (DE) and lifelong learning (Abdullah et al. 2021). Many scholars described distance education as a method of teaching and learning where there is no physical contact between the teacher and the learner in which the medium of teaching ranges from print documents (Ahmed et al. 2021), CD-ROM, audio and video tapes to online facilities such as: internet, intranet/extranet, satellite TV, video conferencing (Akoï et al. 2021), virtual classroom and web-based learning (Ali & Anwar, 2021). They also listed the benefits of e-learning to include; offering students a wide variety of learning opportunities (Ali et al. 2021), learning at convenient time and place, increased availability and different varieties of learning tools and resources, improved opportunities for individualized learning (Andavar et al. 2020). As an increasing range of universities adopt e-learning strategies, their successes depend not solely on the availability of technology but as well on the extent to that university and students are supported as they explore and develop innovative ways in which to integrate technology into the learning experience (Anwar & Abd Zebari, 2015). Pedagogic practices should be adapted, technical proficiency becomes a lot of necessary and reliable technical infrastructure should be maintained in order to use e-learning effectively (Anwar & Abdullah, 2021). These demands translate into a host of new lecturers and student s support need that universities have to address (Anwar & Balcioglu, 2016).

Several factors make e-learning attractive to education institution and learners. As an example the provision of the

internet implies that e-learning eliminates learning barriers of time and distance, whereas at the same time permitting students to take charge of their learning (Anwar & Climis, 2017). Creating an e-learning experience involves serious commitment to understanding the various options of this and the ways it can be used most advantageously to impact learning (Anwar & Ghafoor, 2017). (Anwar & Qadir, 2017) suggested that teaching methods utilized in traditional courses might have to be review if they are not transferable to e-learning environment (Anwar & Shukur, 2015). Changing work patterns have translated into a lot of course preparation time and skills to run online courses (Anwar & Surarchith, 2015). As a result the perceived increasing employment, mindset and also the lack of skills in some cases has resulted within the reluctance to adopt and use – learning (Anwar, 2016). Students use the e-learning system for their learning purposes and lecturers use it for the purposes of coming up with and teaching courses, delivering materials and observance and administering the students’ activates and so on (Anwar, 2017). Students are exposed to the front end while lecturers are at the back end and are expected to be technologically sound enough to handle the system (Anwar, K., & Louis, 2017). Therefore in the implementation process of e-learning system, teaching staff need to be focused clearly as they play a central role in the effectiveness of online delivery and it is not the technology but the instructional implementation of the technology that determines the effects on learning (Aziz et al. 2021). Changes in education have led to a paradigm shift from lecturers’ centeredness to learner centeredness through to subject centeredness (Demir et al. 2020). This means that the lecturers can no longer able to make a decision what to be learnt but rather the interests of the learners do this and confirm how they need to learn it. It is so a learner-controlled, self-paced, education environment wherever the learners have authority over the convenience access and

assessment (Faraj et al. 2021). (Hameed & Anwar, 2018), pointed out three reasons for universities for investment in e-learning. Firstly these technologies increase the quality of course offerings. Secondly they enable courses to be delivered more efficiency and third they provide opportunities to teach new groups of students or existing students in more flexible ways (Hamza et al. 2021). Over the past decade, as elsewhere the main reason behind developed countries’ universities increasing investment in this area has been to enhance quality. The Open University invests heavily in e-learning to improve the quality of its distance learning offerings. Imperial college invests in e-learning to improve the quality of its campus-based course. A secondary consideration has been to use opportunities to teach new group of students (Ismael et al. 2021).

Research Hypothesis: Cost factor is ready to implement e-learning in education sectors.

IV. METHODOLOGY

The study was carried out in private universities in Erbil. The researchers employed quantitative research method to find the cost readiness in implementing e-learning. Currently there are seven private universities in the Erbil city. The questionnaire was distributed randomly among 700 academic and administrative staffs of private universities. The participants of the present study were 516 participants from different private universities in Kurdistan region of Iraq. The questionnaire included of 15 items of cost readiness and 15 items of e-learning, all items evaluated by using five point Likert scale ranging from 1=Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree to 5= Strongly Agree. After the completion of data gathering, all data were examined by SPSS to find out cost readiness level of e-learning implementation.

V. DATA ANALYSIS

Table 1: Reliability analysis

| Variables | Cronbach's Alpha | Number of items |
|----------------|------------------|-----------------|
| Cost readiness | .806 | 15 |
| e-learning | .878 | 15 |

Table 1 shows the reliability statistics for two variables; cost readiness as independent variable and e-learning as dependent variable. It was found that the Cronbach's Alpha for cost readiness = .806 > .6 this indicates that 15 items used for cost readiness were reliable, the Cronbach's Alpha for e-learning = .878 > .6 this indicates that 15 items used for e-learning were reliable for the current study.

Table 2: Correlations Analysis

Correlations

| | | | |
|----------------|---------------------|----------------|------------|
| Items | Pearson Correlation | Cost readiness | e-learning |
| Cost readiness | Pearson Correlation | 1 | .677** |
| | Sig. (2-tailed) | | .000 |
| | N | 516 | 516 |
| E-learning | Pearson Correlation | .677** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 516 | 516 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 2 presents the correlations between the scales using person correlation. Correlations analysis presents the values of the identified correlation tests; the researchers attempted to find the correlation between cost readiness as independent variable and e-learning as dependent variable.

According to correlation analysis, the researchers found that cost readiness has significant correlation ($r=.677^{**}$, $p<0.01$) with e-learning. Concerning the strength of the linear relationship is moderate between cost readiness and e-learning.

Table 3: Model Summary

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .677 ^a | .459 | .458 | .45588 |

a. Predictors: (Constant), Cost readiness

Regression analysis is analyzing relationships among factors. $Y=f(x_1, x_2...X_c)$. Regression analysis is to estimate the how Y will influence and change X and predict. In this section the cost readiness as an independent variable and e-learning as a dependent variable. The e-learning’s overall difference could be measured by its variance. The differences are measured as the sum of the square between participant’s forecasted e-learning values and the total mean

divided by the number of participants. After division it will clarify variance by the total variance of e-learning, the researchers found that the amount or the number of total difference or variance that is accounted based on regression calculation. The number should vary between 0 -1 and is symbolized by R Square. Table 3 shows the value of R square = .677 this indicates that 68% of total variation in e-learning has been explained by cost readiness.

Table 4: ANOVA

ANOVA

| | Model | Sum of Squares | df | Mean Square | F | Sig. |
|--|------------|----------------|-----|-------------|---------|------|
| 1 | Regression | 90.562 | 1 | 90.562 | 435.758 | .000 |
| | Residual | 106.822 | 514 | .208 | | |
| | Total | 197.384 | 515 | | | |
| Dependent Variable: E-learning | | | | | | |
| Predictors: (Constant), Cost readiness | | | | | | |

Table 4 explains F value for cost readiness as independent variable =435.758, since (435.758>1) this indicates there is a significant relation between cost readiness and e-learning.

Table 5: Coefficients

| Model | | Coefficients | | | T | Sig. |
|-------|----------------|-----------------------------|------------|---------------------------|--------|------|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .745 | .152 | | 4.897 | .000 |
| | Cost readiness | .802 | .038 | .677 | 20.875 | .000 |

a. Dependent Variable: E-learning

A single regression analysis was used to find the relationship between cost readiness and e-learning. As seen in Table 5 the result of research hypothesis, it was found that the cost readiness has significantly predicted e-learning (Beta is weight .802, p<.001) this indicates that the cost readiness will have a direct positive association with e-learning.

VI. DISCUSSIONS

This section concludes the findings and the analysis based on the research objective and purpose in order to give answer to the research question. The researchers were able to discuss in detail the concept of e-learning, its features and characteristics, the benefits and limitations. Taking into consideration all barriers to E-learning implementation are discovered and within each category of barrier are different critical factors. Research has pointed out critical barriers in e-learning system implementation, which lead to its failure during the implementation process hence negatively or positively affecting the students' achievement.

This study concentrated on cost readiness as one of the critical barrier of implementing E-learning. The research is seeking for not only the cost readiness for implementing e-learning rather than whether implementing e-learning achievements are worth the cost (Thompson, 2000). One of the main benefits of implementing e-learning in private universities is to set a channel to achieve graduate degree. One of the essential concerns that private universities should take into consideration is the cost analysis. There are many thoughts and opinions regarding the cost readiness and cost effectiveness during implementing e-learning in education sectors. Among different concerns, the vital consideration the education sector utilizes to judge

the financial performance of implementing e-learning is cost.

Whether education sectors are ready or not is essential information for additional decisions regarding the implementation of e-learning. This research is significant in that it reminds scholars or education practitioners of the significance of cost readiness of e-learning implementation which became an essential educational form of education field. However, the study is not limited to highlighting the significance of cost readiness of an e-learning implementation. It shows how the cost is ready for an electronic educational program. The finding revealed that private universities' budget and capital are ready for implementing e-learning to enhance students' academic achievement. It was found that the cost readiness has significantly predicted e-learning this indicates that the cost readiness will have a direct positive association with e-learning.

VII. CONCLUSIONS

The study aims to investigate the cost readiness of implementing e-learning in Kurdistan. Many developing countries have implemented e-learning applications to deliver education to students through the Internet. As the population grows, several developing countries' education sectors try to facilitate sophisticated web sites by providing many features to perform in better way to help students.

The finding revealed that an increase in readiness of cost should lead to increase in chance of implementing e-learning.

The student segment of online education system understands the benefits of the new process in its usefulness, and it is ease of use. The finding is significant for private universities in developing countries that desire to initiate e-learning for the purpose of improving and increasing the access to quality education at reasonable costs. It was found that the cost readiness has significantly predicted e-learning (Beta is weight .802, $p < .001$) this indicates that the cost readiness will have a direct positive association with e-learning.

VIII. LIMITATIONS

The limitations of this study were that the survey questions may not necessarily generalize the larger population of teachers and administrative staffs of private universities, and the research question is not enough to show a clear association between cost readiness and e-learning implementation. Therefore, to expand and support the findings of the present study, it is recommended that follow-up studies be conducted, with larger sample size and a broader diversity of the sample groups included in the population.

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