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The Impact Of The Working Environment And Learning Science In The Electronic Learning Systems Used In Education From The Point Of View Of The Faculty At The Faculty Of Basic Education In Kuwait

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Abstract

The current study aimed to investigate the impact of the working environment and learning science in the electronic learning systems used in education from the point of view of the faculty at the university in Kuwait.288) Member and faculty member of the Faculty of Basic Education. The researcher prepared a questionnaire to reveal the role of e-learning management systems in education from the point of view of the faculty in the Faculty of Basic Education. The results showed the impact of the working environment and learning science in electronic learning education, to a high Sex. The existence of differences in Indication Statistics (degree, and the mathematical averages between (3.93-4.22),4.22) high, the average arithmetic of the tool as a whole (4.03)) high, and a percentage of (80.6%).

Introduction

E-learning systems and educational techniques are increasingly popular and are expected in formal learning environments in the 21st century. In addition to traditional media such as videos and audio, e-learning software, and platforms for the dissemination of educational content, these innovations and technological technologies allow students to interact with these environments, providing richer learning experiences. As technology and its innovations continue to evolve and become more sophisticated, they will have profound implications for learning environments, one of the most pressing of which will mean what the electronic systems and techniques of the student-teacher relationship, learning, and education will mean. As technology continues to affect how students learn, it will also continue to influence how teachers and students interact with each other and with content.

There are clear signs that learning, both in formal learning environments and beyond, is increasingly being acquired through technology. Mobile devices now mean that there is access to a wealth of information anytime, anywhere, through a network connection. One of the clearest examples of the impact of network availability is changing the way people interact about the development of certain types of knowledge. To learn how to design an electronic learning medium or virtual chemical laboratory, many people will move to e-learning systems platforms for virtual environments and online videos as a first option to see the process in progress(Lee & Lehto, 2013).

The availability of networked devices, multimedia, and learning systems allows easy access to educational sites, presentations, and media for almost any imaginable procedural task. Easy access to this type of resource raises questions about how learners, teachers, and educational institutions adapt to a world where information and knowledge are available on demand(Lodge, Kennedy & Lockyer, 2020).

The emergence of new technologies has had a major impact on education, as information and knowledge are often no longer the domain of institutions, and are now

navigating electronic learning systems, through many popular and accessible sites, and it is possible to access and store vast, virtually unlimited information, wherever it wants; computer, mobile phone, iPad and other computer and smart devices. The situation is different from the fact that students in higher education contexts are constantly connected and interact with each other and with content using mobile devices(Gikas & Grant, 2013).

These trends raise many questions about how these systems and devices affect how students access, store, update and use information, under what circumstances these technological tools lead to the most effective learning experiences when these devices are deliberately integrated into learning activities, and how students can use them to understand and apply ideas in practice, and there is an important role for learning science in exploring and understanding these trends and unloading the effects on students and teachers. Learning science has made a significant contribution to understanding effective teaching and learning strategies. The increasing use of educational technologies and learning systems at all levels of formal education in most countries of the world is clear, but in higher education, some of the most profound changes occur. Students are increasingly engaged in their studies in "mixed" or "volatile" or online situations with large proportions of their learning activities in digital environments(Siemens, Gasevic & Dawson, 2015).

In particular, students are increasingly involved in obtaining information and developing knowledge across online learning systems and other platforms. Some commentators have suggested that the impact of these new practices heralds the end of higher education as we know it(Clayton & Eyring, 2011).

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The ease of access to this kind of resource raises questions about how teachers and educational institutions adapt to a world where information and knowledge are available on demand.

Teachers need to use different strategies and tactics in a variety of environments, because of the advantages and disadvantages of learning in both physical and virtual settings. Accordingly, the researcher will investigate the impact of the working environment and learning science in the e-learning systems used in education from the point of view of the faculty at the University of Kuwait.

Theoretical framework

What is the working environment and learning science (dietic) in education

- Working environment

The work constitutes all the conscious and voluntary efforts through which man seeks to satisfy his needs by contributing to the production of services and goods, and the work is surrounded by a set of conditions and factors that encourage intellectuals and researchers to analyze and study it to achieve all the objectives of institutions, companies, and various business organizations, and to help provide for the needs of different individuals (Ben Moussa and Bougarinat, 2013).

The Work Environment is the site used to perform a particular task until completion, and the work environment includes geographical location, areas surrounding the work, such as the location of offices or the building of the) The work environment is where people use to work, such as an institution, factory, office, or classroom.. facility, the classroom or laboratory environment, and its surroundings, and may include other components such as noise level, special features at work(Business Dictionary, 2017). (Oxford Dictionary noted)

According to the researcher, the term working environment is used in education to describe the circumstances surrounding the teacher and the learner, the work environment can consist of physical conditions, such as room temperature, or equipment, such as personal computers and technology and technology

innovations. They can be linked to factors such as work procedures.

Learning in work environments and mentoring

Interest in learning in the work environment has increased recently because of the changing nature of work and the recognition of the workplace as an educational environment. In the context of vocational education and training, students and work-based learning are encouraged. In the area of learning in the workplace, socio-cultural theories consider learning to be an ongoing process, both individual and social participation, made up of social, organizational, cultural, and other contextual factors(Hager, 2013).

Learning in the workplace recognizes the social and cultural environment as a context that defines the possibilities and limitations of learning in the workplace. The government's response to the crisis is that the government's ability to meet the needs of the population is not yet complete. Alternatively, all learning experiences can be considered deliberate because they aim to ensure the continuity of social practices and work(Tynjälä, 2013).

Ethnographic field studies on apprenticeships conducted by Lave and Wenger (1991)indicate that learning occurs in daily interactions and through participation in practice communities. This theory has been criticized because it ignores guidance and formal education and is based on the idea that skills, knowledge, and practices are passed on to beginners(Nokelainen, 2017). By doing so, the theory ignores reciprocity in learning and continuing to learn even after gaining full membership in the practice community(Fuller, Hodkinson, Hodkinson & Unwin, 2005). (

According to Billett, 2002b, it is also used in the section for indirect and direct guidance to describe different guidance practices in the workplace.

1. Access to knowledge, participate in tasks and understand goals.

Developing and promoting values, procedures, and understandings.

3. Expand the ability of learners to adapt to new situations and circumstances by asking questions, solving problems, dialogues, and group discussions.

Learning Science in Education (Dietic)

Learning science is an independent, relatively new discipline. Research in learning or learning science traditionally focuses on the theoretical, psychological, social, and cultural foundations of human learning, as well as on the design of learning environments. Key areas contributing include cognitive science, computer science and learning systems, educational psychology, anthropology, and applied linguistics. Over the past decade, researchers have also expanded their focus on curriculum design, informal learning environments, educational methods, and policy innovations(Sawyer, 2014).

It happened in light of the continuous evolution in the way the educational process is conceived. That is, while in the past the educational process was based on the educational aspect of "teaching science". Today, educators are interested in everything that can contribute to the learning process. The transition in the field of education from the teaching science to the stage of teaching and learning is the result of the development of all fields, and this is evident in the level of the new perception of the educational process, particularly in the role assigned to the learner in that process. One of the characteristics is Robert, 2008). of the transition is that: at the stage of teaching science, the teacher was considered the main focus of the educational process.

The specialization of teaching technology integrates technology, technology, and education, and is linked to teaching and learning science, Combe(Combe, 2004:46)"The difference between teaching science, learning and theoretical education is matched by integration at the practical level." Similarly, educational applications that are not based on teaching and learning science run the risk of a lack of harmony between their data and therefore their ineffectiveness." Combe also

says to illustrate the nature of the relationship between teaching, learning, and teaching sciences when defining "A process of continuous movement that takes place between educational situations (pedagogy) and the theoretical contributions of the various sciences involved and constituting the field of teaching and learning" (p. 147). Definitions of it are still emerging, as it is considered relatively new... the educational process;

Fischer, Hmelo-silver., Goldman & Reiman, 2018)explained the Concept of Learning or Learning Science (LS)LSasa multidisciplinary area that works to increase scientific, human and critical understanding of learning as well as participate in the design and implementation of learning innovations, and improve learning methodologies.

The Johns Hopkins Institute of Learning Science Institute, 20 noted that most researchers agree that learning or learning science is a multidisciplinary area focused on developing effective learning methodologies and solutions. Learning science allows basic questions to be asked about every aspect of the classroom, and then leverages a broad and deep base of research to answer these questions in ways that enhance practice and empower learners.

Didactic Method is a teaching method that follows a consistent scientific approach or educational pattern that engages the understanding and mind of the science of learning student (Tubbs, 2014:35). And the word didactics 2014. This theory is in contrast to the concept of "open learning", which relates to self-learning on subjects of interest and in an unstructured manner(Baldick, 2005:182). Open Learning

Teaching and learning science sit on: "A tally of sciences such as teaching methods, pedagogical science, psychology, sociology, as well as linguistics"(Robert, Learning is thus "the process of receiving knowledge, values, and https://ar.wikipedia.org/wiki/%D9%85%D9%87%D8%A7%D8%B1%D8%A9skills through study, experience or education, which may lead to a constant change in behavior, a measurable and selective change so that the human being is reoriented and restructured in his mind thinking structure" (Sharqawi, 2012:11). The educational method provides students Gul, 2012). with the theoretical knowledge required.

Luckin (Luckin, 2018)believes that science learning combines research, data, and practices to help teachers learn better and students learn more.

Weinstein, Madan & Sumeracki, 2018referredto effective learning and learning strategies, namely, six specific cognitive strategies: spaced practice, entanglement or overlap, retrieval practice, illustration, concrete examples, and dual coding.

It can be said that it is necessary to know the field of teaching science and learning for all those in the teaching profession, to enable teachers to have the tools to help them manage the educational process effectively by making the learning process identical to the learning process. There are many advantages and disadvantages to learning in both physical and virtual settings, where teachers need to use different strategies and tactics in a variety of environments.

Environmental factors in e-learning systems

E-learning has become a common method used in education, especially distance learning, and many teaching programs have improved as a result of the application of e-learning tools, and due to the technological and technical changes currently occurring in the field of education, work must be done (Mustafa, 2007):

1- Develop plans and mechanisms to adapt the work environment to take advantage of it in the e-learning service.
2- Creating the appropriate and necessary work environment for e-learning consists of three basic elements that make up the e-learning system:
   A learner who depends on self-learning.
   - Teacher who tries to interact directly with students.

- Educational institution which seeks to achieve continuous care of learners.

3- Creating a learning environment through e-learning.

4- Identify the methodology of work in the context of e-learning, which includes identifying educational materials and how they are presented.

The growing use of data, sophisticated algorithmic work, and increasingly accessible and cost

effective adaptive environments are resulting in an evolution in digital and emerging

technologies. Data and analytics are being used in ever more sophisticated ways to track

The current outlook urges educational institutions to work to interact with the economic and social environment surrounding them, and this requires effective communication through computer networks with customers seeking to benefit from the educational services provided by different educational institutions and to find the needs that individuals need when learning and acquire specialized scientific and professional skills, but the demands of the producers can also be met to benefit from the transfer of knowledge and technology by teaching learners new practical skills.

To respond in an appropriate way to all these needs, whether from the needs of the employees of the educational institution or the needs of the students, educational institutions must establish new structures to manage the process of cooperation between the educational institution, and the various production destinations that surround the educational institution, it is known that educational institutions that interact well with the surrounding environment both local and regional are considered to be among the best universities, and therefore can attract More students, also returns quickly and even can enter into that interaction through e-lessons, or even the training courses available provided by educational institutions through e-learning, which are provided to target groups, often provided by staff or faculty members in the educational institution, and the strategy of building the educational institution(Hartmann, 2000).

The development of the e-learning system includes four stages: design, infrastructure construction, development, evaluation, and review. Effective communication plays an important role in supporting e-learning. The operational aspects of e-learning are planning, coordination, management, and economics, all of which are vital to ensuring the success of e-learning programs (Mustafa, 2007).

Horton(Horton, 2002)refers to e-learning environments, where there are many criteria to consider when examining environmental factors, integrating them with the technology used so that e-learning environments can be created, and emphasizing virtual imaginary classroom environments, by integrating the modern technology available with the learning or guidance materials used to change the learning environment, and consequently, the e-learning environment serves to change traditional learning methods.

Therefore, the use of e-learning technology and education systems, due to ease of movement, convenience, ease of use, strategic recruitment, flexibility, conviction, and simplicity of educational materials through e-lessons, is low cost. In addition to the impact of the work environment and learning science, which contributes to the participation of students in the learning process as a result of the role assigned to the learner as an essential element in the educational process.

Data and analysis and their impact on work and learning environments

The increased use of data, sophisticated algorithmic work, and increasingly accessible and cost-effective adaptive environments is leading to an evolution in digital and emerging technologies. Data and analytics are used in more complex ways to track student progress, predict the course of learning, and inform interventions. These developments have allowed for more targeted and personalized

learning experiences that support the development of complex learning concepts and ideas, not just the actions and facts announced(Lodge, et al., 2020). Learning analytics has grown rapidly since the first Learnings later, 2017). and Knowledge Analytics Conference(LAK)in 2011.). The field of learning analytics has grown rapidly since the first Conference on Learning and Knowledge Analytics (

This includes audit path data that is generated as students interact with digital environments, personal data about who they are, and what their preferences and data may be about their knowledge and abilities resulting from evaluation. There are significant ethical implications associated with the collection and analysis of this data. At the same time, there are great opportunities to understand how students learn extensively and gain insight into how individual students learn, and these results can then be used to provide personalized feedback and other interventions(Lodge & Corrin, 2017).

In the years following LAK the first LAK conference in 2011, there was growing interest in how this data contributed to understanding student learning.2013)With the ideas and methods of educational psychology, this trend was particularly evident at lack 2018, when the most cited articles in the proceedings were the authors of educational psychology, not the technical areas that until that point dominated the debate on big data and analytics in education. It is always difficult to predict future trends, but there is reason to believe that some emerging modern technologies, such as machine learning and artificial intelligence (AI), can follow a path similar to that of learning analytics. , 2018).

Luckin (Luckin, 2017)stated that AI systems can and will fundamentally change the way they are evaluated in education. There is some speculation about what can be considered artificial intelligence and the role it will play in education (Roll& Wylie, 2016). AI, as in learning analytics, is in our understanding of how students learn. There is in parallel; great potential to leverage learning science to provide personalized interventions including through feedback, claims, and learning pathways designed in digital environments using these same technologies (, 2018).

It's hard to know how to realize the potential of these technologies without relying on learning science to provide a basic knowledge base that describes how students learn. Achieving the full potential of learning, machine learning and intelligent learning analytics in education may still be a work in progress, however, significant progress has been made so far. Lodge, et al., 2020).

Advances in machine learning, artificial intelligence, and learning analytics point to a situation where complex conceptual ideas can be obtained even in digital environments. However, adapting these environments based on how each individual builds meaning and develops his or her mental plan remains a major challenge. (Arguel, Lockyer, Lipp, Lodge & Kennedy, 2017).

Helping students develop their conceptual understanding is a major challenge for developers of adaptive digital learning environments. Given the need for predictability not only in outright behavior but also in how each student understands the ideas, they are exposed to and develop their ability to monitor and update their understanding. Research into learning science that examines how students acquire concepts, how they change their conceptual understanding, how they make judgments about what they know and think about (Kennedy& Hattie, 2018), And how to organize their learning is all-important to achieve the development of these technologies. Broadbent & Poon, 2015).

Wenger noted that technologies that will continue to influence education must be built on: The ability to conduct laboratory experiments increases confidence that different types of conditions and interventions are causing specific outcomes. a foundation that includes a deep understanding of how students learn. Secondly, if these technologies are to realize their potential, learning science will help to better understand individual differences.

With scientists, designers, data scientists, and developers working alongside teachers, the potential of adaptive learning techniques can finally be realized after what appears to be decades of promise (Lodge, et al., 2020).

Teacher and student relationship in the digital world

With machine learning evolving rapidly and using artificial intelligence in new areas, it is believed that there will soon be sophisticated programs and platforms that can completely replace teachers. Studies have shown how difficult this is, as a study conducted by Koedinger, Booth & Klahr, 2013, using the modeling method, where researchers tried to determine the total number of possible ways to deliver instructions, this "teacher model" includes factors such as: how and when comments should be made, how examples are used, and many other educational factors. It quickly became clear that teachers were constantly moving on a set of practically infinite decisions.

Accordingly, it is unlikely that techniques will be able to replace teachers or teaching in the short term, given the complexity of teachers in practice. However, the Fourth Industrial Revolution is here, and digital technologies exist to remain in virtual and physical classrooms(Aoun, 2017).

Techniques can be used more effectively, as learning science refers to the vital elements that teachers bring to digitally challenging learning environments, as well as what students know (knowledge theory), the modeling of knowledge and professional methods of existence (anthropology) is critical to the quality of higher education(Dall'Alba & Barnacle, 2007). It seems difficult so far to simulate modeling of professional ways of actually or digitally existing.

Research suggests that there is a possibility to explore more how to recognize and manage confusion in digital environments(Arguel et al., 2017). However, it will take some time before these environments are built to operate with a capacity that is close to the capacity of a human teacher in a face-to-face environment.

Dynamic student and teacher change in higher education

Many researchers, linked to the unbathed technology, see signs of a major change in policy and practice across higher education settings. Although there has been Lai, 2011some distance from traditional pedagogical methods, the relationship between students and their teachers has been mostly through lectures or other educational methods.

The growing evidence of an extended time frame on the value of active learning(Freeman & Eddy, 2014), supported by theories of constructive learning and educational frameworks, has put increasing pressure on the lecture as a viable way to educate students at universities (French & Kennedy, 2017). A large proportion of this evidence can be traced back to the science of learning.

This was confirmed by Bell & Kozlowski, 2008, who studied how emotional, cognitive, and motivational aspects of active learning contribute to long-term learning and transportation, and found that a complex combination of factors including goal orientation and beyond knowledge affects the success of active learning activities.

Yates& Hattie, 2013, provided an overview of how such research affects education, including in universities, and so on;

The lecture is a major educational approach in higher education and has been under scrutiny for several decades due to changes in the availability of information and knowledge. On the other hand, there has been pressure on universities through increased student numbers and diversification of student groups, often without a commensurate increase in government funding for higher education(Marginson, 2016) Therefore, there was a constant need to enroll students in large classes of various kinds to accommodate the growth in numbers, and thus create tension; because the continuous transition from the elite to comprehensive higher education globally

means at least economically that lectures have remained a central approach or approach. (French & Kennedy, 2017).

The availability of high-quality off-campus learning resources and a greater understanding of the value of active learning have increased the demand for targeted and interactive educational curricula on campus. From the student's point of view, there is also a demand for more flexible learning experiences, where students live increasingly demanding lives, work and caregivers, and other responsibilities that compete with their study of time and attention(Baik, Naylor & Arkoudis, 2015).

The forces of change may lead to a slow but fundamental change in the way higher education is delivered, with high-quality e-learning resources and systems now available free of charge online and access to information at any time, there is a need to refocus on the value of the campus experience(French & Kennedy, 2017). In particular, the value of interaction between students and between students and academic faculty takes on a new level of importance.

Sfard's offer edited two important implications for learning, as Savard's critical argument is that there are two central propositions about what learning is. The first, which is vital, is the second; participation, which is more powerful to learn. Kebritchi, Lipschuetz & Santiague, 2017).

Eva(Eva, 2005)points out that better access to knowledge access in meaningful ways such as application through increased use of e-learning systems, webinars, wikis, and other collaborative tools. Watching an experienced video while practicing is not entirely different from seeing the same practice directly in a live classroom. , Post & Lake, 2015).

In this changing context, it is not easy to take results from experimental studies and apply them to such complex and dynamic circumstances to understand how student-teacher interaction will change and can be enhanced. Horvath & Donoghue, 2016

Thus, there are already many examples of how learning science can be used to understand and enhance student-teacher interaction, as technology increasingly affects policy and practice. These same methods will continue to prove useful and informative as student-teacher relationships continue to evolve.

Key priorities for learning science

Within the broader context of rapidly evolving technologies and rethinking traditional methods of education, there are many key areas in which science contributes to learning. How learning science provides the basis for designing and using cutting-edge technologies such as data-based adaptive learning environments, and how these environments can continue to shape the student and teacher dynamics of education. There are also many other key areas, particularly related to evaluating new technologies, helping students work with techniques, and how to better disseminate these techniques to work alongside teachers. They will be addressed as follows:

Information on the development and evaluation of new technologies

Improvements in the capabilities of electronic learning systems and digital technologies need to continue to facilitate learning, and there will be a parallel need to achieve these developments and determine their effectiveness. This will not only be necessary to better understand how teachers and machines work to enhance student learning, but also to determine the effectiveness of these technologies themselves comprehensively. One of the key issues with the development of educational techniques seems to be that research that examines the effectiveness of tools lags far behind the spread of their use(Lodge & Horvath, 2017). That is, new technologies are created and introduced on a large scale often before the educational implications of these techniques are fully understood.

Luckin (Luckin, 2017)explained that there is great potential for continuous forms of evaluation and feedback beyond procedural areas such as dentistry where simulations

involving continuous evaluation and feedback are common.

In addition to the overall need for learning science to help support the development of new learning technologies, this is a clear need to rely on the principles of quality student education to determine the best way to effectively combine teacher experience with machine power. As student and teacher dynamics evolve, it will be important to monitor and obtain accurate data on how best to deploy techniques, and to prepare activities and curricula specifically designed to maximize the benefits of teacher tools. Simplified divisions will not capture the complex nature of the triangular interaction between students, teachers, and machines. Learning science seems to be well placed to conduct this continuous monitoring in coordination with teachers and educational designers(Lodge, et al., 2020).

2- Helping students work with technologies

Lodgeetal(Lodge, et al., 2020)points out that besides a better understanding of how teachers and machines work together to help students, there is a continuing need to help students work using techniques themselves, as more acquisitions in learning are likely to be implemented according to Sfard's metaphors, by students in digital environments, and students will need to understand how this is happening and help improve it. Without the precise intervention strategies that teachers use in the classroom, students will need at least the short to medium term to be self-guided in their learning. Understand how students learn and adapt to emerging technologies and e-learning systems and determine how best to provide them with the right knowledge and skills to make the most of these environments until these environments are developed in their intervention strategies as a direct classroom teacher. Because teachers are likely to play a lesser role in facilitating participation, it is necessary to understand the implications of student learning.

Identify the best techniques to facilitate teaching and learning

Watters, 2014notes that other areas where learning science will help understand the changing dynamics of a student and teacher in education, through the implications of broader policy and practice. Moreover, there are implications for schools and universities, as well as policy-making bodies and government, where technology increasingly outnumbers education.

Learning science plays a crucial role in providing a base of evidence for what it succeeds in confronting, often accompanied by the development and proliferation of e-learning systems, and the use of techniques in education(Lodge & Horvath, 2017).

The impact of the work environment and learning science on e-learning systems used in education

Innovation in teaching in the learning science framework is a teaching novelty, a purposeful gradual change to introduce new points in the learning environment (work environment) that improve the features of separate parts and components, as well as the educational environment as a whole; ideas, processes, means, methods, forms, techniques, educational systems, information programs, etc.(Simonenko & Retivykh, 2003).

According to studies, learning science in the educational environment is observed in three directions: social, economic, organizational, administrative, psychological and educational. They address the management methods of educational institutions, the development and implementation of new educational techniques, the establishment of innovative schools, etc. Educational innovations include innovations related to the renewal and change of technology, methodology, and education content(Demir & Kutlu, 2016 Toktarova, 2015;).

It is well known that the effective use of information services, electronic systems, teaching techniques and e-learning resources for the new generation in the learning process are strategic tasks to move to e-learning and social and economic efficiency factors to implement the Education Development

Program. In the modern learning environment, educational resources take on a renewed meaning, and their main functions are access to and provision of electronic educational content, tools for organizing information and cognitive interaction for participants in the educational process. Educational resources with the necessary capabilities can provide the ability to adapt to students' skills, differentiation and uniqueness, self-reliance and self-regulation development, creativity and critical thinking, access to new sources of learning information, etc. This leads to new requirements for the formulation, selection and use of educational resources in the environment of e-learning environment(Khairova & Toktarova, 2016)as follows:

- Provide a holistic understanding of academic material, and provide the content necessary to effectively arrange the learning and teaching process.
- Integration with different e-learning systems and services, for example, teamwork tools and comments with the teacher (video conference, webinars, Pdcasts, etc.).
- Provide educational materials for the course in different formats and formats according to the student's preferences (text description, video material, audio lectures, etc.).
- Provide account, editing, visualization and modeling functions when connecting mobile devices to students with various measuring tools, multimedia and desktop devices.
- The work environment is easy and perfect working with educational resources easily and quickly.
- Sustainability, reliability and productivity, which provide an efficient and uninterrupted process for a large number of students who use this e-app at the same time.
- Technological effectiveness is a variety of information tools and cognitive interaction, and the presence of ready-to-use software products that allow the organization of communication on different ranges of complexity, simplicity and convenience.

Personal To ktarova & Panturova, 2015learning is directed to discovering, taking into account and developing students' individual abilities, mastering their thinking and perception, and achieving a high level of awareness and knowledge.

According to Khyrova and Toktarova (Khairova & Toktarova, 2016),technology is involved in fundamental structural changes that can be an integral part of significant improvements in productivity and the teaching and learning process. Technology instills classrooms with digital learning tools, such as: computers and handheld devices; expands course offerings, experiences and educational materials; supports 24-hour learning in 7 days, builds 21st century skills; increases student participation and motivation; and accelerates learning. This model connects teachers with their students and to the content, resources and professional systems to help them improve their education, personalize learning through e-learning systems used in education, in the context of developing the e-learning environment of contemporary higher education institutions in the context of work environments and e-learning, where work is based on theoretical and experimental research methods.

Jackson & Helms noted Helms, 2008) That the methods of management of teaching process, electronic information and cognitive interaction come through independently realized learning activity, and the efficiency of management is achieved provided by the clearly defined objective, algorithmic procedures, methods and standards of arranging direct feedback channels.

Bespalko, 2002)emphasizes the importance of feedback in systems that assume continuous analysis and diagnosis of key factors, including cognitive level, scientific nature of a subject study, awareness of cognition, and a degree of automation. Teaching management is inextricably linked to the specific effects necessary to implement the

objectives of the educational process: support within its limits (performance) or transition to a new state (development).

According to Shamova, Davidenko and Chinova(According, Shamova, Davydenko & Shibanova, 2008)they believe that this type of management is directed to control the educational process for the purpose of moving it to a higher level.

Previous studies

Mustafa Study (2007) aimed at exploring the working environment and learning in e-learning systems used in distance learning. Use the descriptive analytical approach. A questionnaire has been prepared to investigate the work environment and learn in e-learning systems. The sample consisted of 49 male and female students. The results showed that creating the right environment in participating education electronically made it easier to present the lesson in the right form, and the knowledge of many students who used all available electronic capabilities, including e-mail and e-conferences, was built. The process of electronic communication also allowed learners to build their own vision of the subject where they were able to communicate in small groups, which facilitated the achievement of the process of participating learning during a high degree of participation, and the results of the evaluation of students at the end of the semester were high, which is another general content of the group's cooperation and benefit from the discussions that took place between them online.

Jackson & Helms, 2008) Study aimed at identifying students' perceptions about the effectiveness of an electronic teaching program offered at the university level and the need for electronic course management systems.

Abdul-Kader's study(2011)aimed to design a virtual environment for e-learning systems using a more natural and interactive learning VR environment using this technique to learn, achieve the purpose that the platform can provide, and to recognize 3D environments. X3D VR The virtual environment that will host the laboratories, which attempt to simulate the learning process from start to finish, includes all the functions needed for its users to simulate the most realistic real processes using X3D,and the required curriculum experiments are arranged on the home page according to their order in the specified method. X3D To replicate some learning processes to varying degrees in the form of remote courses available online. It helped the student remotely conduct all chemical experiments through the educational website, and provided all the simulations, tools, applications and conditions that formed an effective space where experiments, communication and collaboration could be used to maintain and share rich knowledge. The ability to use virtual reality as a new technology to facilitate the application of distance from distance learning systems. Scientific laboratory applications facilitate information gained from this topic in virtual desktop ecosystems, and give the student the ability to conduct all experiments in a particularly critical way, and those applications have achieved educational benefit by actively participating students in the learning process, and students can observe or conduct virtual exercises and exercises that are difficult to perform in physical classrooms. The applications of foreign language laboratories, which provide many visual and audio media, have focused on the full capacity to process the scene. For future work or more complex design, the laboratory can contain three-dimensional models of equipment. This app gives students the ability to learn audio and video language through a live interactive system. X3D is used as the main implementation tool that gives users of systems visualization and full interaction of all learning steps.

Mohammed's study (2011) aimed to identify the effectiveness of an electronic course to develop the skills of using Moodle system in graduate students and its impact on cognitive achievement. The results showed shifts in learning methods from the teacher-oriented model, to the self-guided learning model, the use of ICT as a source of

professional development for teachers, improved teaching methods at universities and support for technological innovations, and the activation of the role of e-courses and e-learning environments at the university level, helping to grow positive trends towards their learners, the interest in using course management systems to disseminate online courses, and preparing education technology students at the Faculty of Education in e-learning environments.

Mr. El Sayed, 2011conducted a study aimed at investigating the application of augmented reality methods in the field of education by using augmented reality by presenting the work of the student augmented reality card as a technological application in the field of education. The researcher used the semi-experimental method, and the tribal and dimensional test and a technical trend measure were prepared.

Perez-Lopez & Contero conducted a study aimed at using augmented reality technology to deliver multimedia content to support the digestive and circulatory education and teaching process at the primary school level in Spain and its impact on knowledge retention. The study used the semi-experimental curriculum, and a student test was prepared after each lesson and through the study, and the sample consisted of (39) students from the fourth grade.

The Jimenez, Redel-Macias, Pinzi & Dorado, 2015researchers developed a virtual environment that can simulate real laboratory processes, effectively enhancing teaching through an easy-to-use and attractive interface. Such programs illustrate the virtual studio practice characterization of basic biofuel properties, with step-by-step simulation of reality. The computer application displays virtual learning features for virtual labs, such as integrative design and self-assessment tests. VL Its ingenuity and simplicity, using various multimedia resources. This tool was positively evaluated, achieving an average score of 6 out of 7 points. Val's proficiency VL in learning demonstrated the final result of the final exam of 8 out of 10 VL points.

The study Lodge, etal., 2020showed that developments in emerging learning techniques are already having a significant impact on education by changing students and dynamic teachers at all levels of education. Learning science has played and will continue to play a pivotal role in providing the basis for these techniques and in determining how best to deploy a mix of teachers and machines to promote learning. These investigations are based solely on technical solutions but must be driven by a basic understanding of how students learn. So, although teachers are unlikely to be replaced by robots anytime soon, it seems unlikely that researchers in learning science will also do so.

The problem of study and its questions

The problem of studying is the inaction of many educational institutions in higher education to create an electronic learning system, use it in education in the appropriate working environment and learning science, and learning science has played a pivotal role in providing the basis for these e-learning systems and techniques, the working environment is an influential factor in learning, and to determine the best ways in which a mix of teachers and machines can be deployed to promote learning. Although it has not received the attention of other emerging technologies, we will highlight and investigate the impact of the work environment and learning science in the electronic learning systems used in education from the point of view of the faculty at the University of Kuwait, according to the researcher's knowledge, the study may be the first of its kind in Kuwait, and at the Arab and foreign academic level. Through the researcher's knowledge, he found a rarity in related studies such as Lodge, etal. 2020 Abdul-Kader, 2011;Mustafa, 2007), related studies, such as "Jackson& Helms, 2008;Mohammed, 2011; El Sayed, 2011; Jimenez, etal., 2015" Work Environment and Learning Science in E-Educational Systems Used in Education

Study objectives

The objectives of the study are:

1- Learn about the work environment and learning science in the e-learning systems used in education.
2- To investigate the view of the faculty at the university in Kuwait on the impact of the working environment and learning science in the electronic learning systems used in education.

The importance of study

The importance of the study lies as follows:

1- To investigate the impact of the work environment and learning science in the electronic learning systems used in education from the point of view of the faculty at the University in Kuwait.
2- The study may help researchers highlight the work environment and learning science in e-learning systems and the impact of its use on education, and the need to disseminate it in universities to facilitate students' learning easily and with high flexibility.
3- It may help the learner to learn and enhance his or her abilities through learning and practice through the work environment and learning science in e-learning systems, which will facilitate the learning and learning process.
4- The faculty and developers of the university curriculum may benefit from the development of educational programs and university electronic courses within the framework of the appropriate work environment and learning science to help develop and acquire students learning skills and recognize the importance of the role of e-learning systems in the learning process.

Study terms

- Working environment: "An area that includes methods, methods, tools and elements, and interactive relationships between individuals within the environment of the institution, ocean or hall, etc., and its success depends on the prevailing working environment, the climate of good work encourages the creation of a positive working environment that works to stabilize individuals in decision-making, policy making, and the feeling of a high degree of mutual trust" (Hariri, 2017: 199).
- Learning Science: "Scientific study of the process of organizing educational attitudes that the learner goes through to achieve cognitive or motor goals" (Beliar, 2004:1).
- E-learning systems: "Learning and learning management software, in terms of presentation of courses, interactions, exercises, exercises, test results presentation, electronic duties... Etc.(Clarey, 2007: 23).

Study limits

1- Objectivity: The study was limited to highlighting the impact of the working environment and learning science in the electronic learning systems used in education from the point of view of the university's faculty..
2- Location: Faculty of Basic Education Department, Education Technology Department, General Authority for Applied Education and Training, Kuwait.
3- Time: First semester 2020/2021./2021.
4- The study is defined by its tools used and the sincerity and consistency of these tools.

- Method and procedures

Curriculum

The study adopted the descriptive survey method, which is concerned with presenting the measured phenomenon as it is, as this approach is appropriate for the objectives and purposes of the current research and its variables.

Study Community

The study community is made up of all the 680 faculty members of the Faculty of Basic Education in the General Authority for Applied Education and Training in Kuwait for the 2017/2018 academic year.

Study sample

The research sample consisted of (288) members and faculty members of the Faculty of Basic Education, and the sample included (169)

males and (119) females, randomly selected for the first academic year2022/2021.

Table (1)
Iterations and percentages by study variables

	Categories	Iteration	Percentage
Sex	Said	169	58.7
	Female	119	41.3
	Total	288	100.0

Study tool

The researcher prepared a questionnaire to reveal the role of e-learning management systems in the learning process from the point of view of the faculty in the Faculty of Basic Education in the General Authority for Applied Education and Training in Kuwait, and after reviewing previous research and studies that the researcher was able to obtain related to its Work Environment and Learning Science in E-Educational Systems Used in Education rarity(Lodge, etal., 2020; Abdul-Kader, 2011;Mustafa, 2007).
Believe the building.

To extract the evidence of the construction sincerity of the scale, the coefficients of correlation of the paragraphs of the scale with the overall grade were extracted in a survey sample from outside the sample of the study consisted of(30)faculty members, since the correlation coefficient here represents a sign of sincerity for each paragraph in the form of a coefficient of correlation between each paragraph and the total grade, and the coefficients of the correlation of paragraphs with the tool as a whole ranged from (0.55-0.89),and the following table shows this..

Table (2)
Correlations between paragraphs and overall grade

Paragraph No.	Link coefficient With the tool.	Paragraph No.	Link coefficient With the tool.	Paragraph No.	Link coefficient With the tool.
1	.61(**)	8	.56(**)	15	.84(**)
2	.84(**)	9	.57(**)	16	.89(**)
3	.79(**)	10	.59(**)	17	.66(**)
4	.56(**)	11	.63(**)	18	.65(**)
5	.74(**)	12	.55(**)	19	.75(**)
6	.82(**)	13	.61(**)	20	.71(**)
7	.71(**)	14	.64(**)		

*Function statistically at the indication level (0.05).
**Function statistically at the indication level (0.01).

It should be noted that all correlation coefficients were statistically acceptable and functional, so none of these paragraphs were deleted.

Believe the study tool

The researcher made sure of the sincerity of the tool to measure the apparent honesty by presenting it to a number of arbitrators specialized in the curriculum and education technology in order to make sure to measure the appropriateness and affiliation of the paragraphs, the clarity of the phrase and the

integrity of its formulation, and make proposals for modification or addition or deletion, the arbitrators have made the observations and appropriate opinion, and have been introduced and made formal adjustments in the drafting, and output of the questionnaire in its final form.

The stability of the study tool

To ensure the stability of the study tool, the test-retest method was verified by applying the scale, and reapplied two weeks later to a group outside the study sample of (30) faculty members, and then the Pearson correlation coefficient was calculated between their estimates at (0.84).

The stability factor was also calculated in the manner of internal consistency according to the Cronbach Alpha equation, which was (0.79), and these values were considered appropriate for the purposes of this study.

Search execution procedures

To achieve the objectives of the research, the following steps and procedures were followed:

- Identify a random sample of the entire community for faculty members in the Faculty of Basic Education.
- Prepare the search tool and present it to the arbitrators to take advantage of their observations and take them.
- The researcher distributed the questionnaire to an exploratory sample of the faculty in the general body of applied education and training, and then after extracting honesty and stability the questionnaire was distributed to the sample.
- The researcher unloaded the surveys and performed statistical analysis using appropriate statistical treatments to present and discuss the results and make recommendations.

Statistical treatment

In the light of the study's questions, the researcher used the appropriate statistical treatments through analysis on the SPSS program, the researcher has used mathematical averages and standard deviations, the coefficient of internal consistency Cronbach alpha and the stability of replays and repetitions, in addition to analyzing the four-way contrast to show the variables of the study, and the use of the Chevy method of dimensional comparisons of the effect of variables.

- View and discuss the results

Question 1: "What is the impact of the working environment and learning science on the e-learning systems used in education from the point of view of the faculty at the University of Kuwait?" .

To answer this question, mathematical averages and standard deviations of the impact of the working environment and learning science in the e-learning systems used in education have been extracted from the point of view of the faculty at the University of Kuwait, and the table below shows this.

Table (3)

Arithmetic averages and standard deviations for paragraphs related to the impact of the working environment and learning science in the electronic learning systems used in education from the point of view of the faculty at the university in Kuwait ranked downwardly according to the arithmetic averages

Rank	Number	Paragraphs	Average arithmetic	Standard deviation	Percentage
1	1	The good design of the e-learning environment helps to develop the educational service.	4.22	.806	%84.4
2	5	The learning environment allows users and teachers to participate, communicate and manage the entire learning process electronically.	4.17	.907	%83.4

Rank	Number	Paragraphs	Average arithmetic	Standard deviation	Percentage
3	6	The learning environment facilitates the easy placement of teaching materials from lectures and examinations on the system site.	4.14	.878	%82.8
4	9	The learning environment offers the full advantages of dealing with advanced technology.	4.11	1.065	%82.2
5	4	The right work environment provides the possibility of collaborative education and training.	4.10	.763	%82.0
6	11	University staff want to create and modify educational content constantly and develop ways to devise ways to improve the educational service in accordance with environmental factors.	4.06	.873	%81.2
6	19	The learning environment includes interactive tools that allow users to interact and participate outside the system in proportion to the educational process.	4.06	1.000	%81.2
8	8	The working environment helps to easily manage, follow and evaluate the learning process anywhere, anytime.	4.05	.876	%81.0
8	12	The learning environment increases students' interaction with their colleagues, teachers and trainers.	4.05	.864	%81.0
10	2	The work environment and learning contribute to managing, documenting, tracking and reporting on the courses or training programs and students.	4.03	.879	%80.6
11	13	The staff of the educational institution improve the methods and methods of work to ensure that they are successful in complying with environmental factors.	4.02	.887	%80.4
12	7	The learning environment helps store and manage the content of courses and all their activities electronically.	4.01	.889	%80.2
13	14	The learning environment makes it easy to send, share, and add comments to the learning environment.	4.00	.920	%80.0
14	10	The work and learning environment facilitate content preservation in the latest version and displays information in a usable format.	3.99	.926	%%79.8
15	15	Discussion forums allow communication, discussion, exchange of opinions and questions and answers among learners and enrich students' information.	3.97	.898	%79.4
16	16	The learning environment helps teachers create assignments with the possibility of uploading them to the course page and setting the end date for student delivery.	3.95	.925	%79.0
16	18	The learning environment determines the results immediately after the test performance has ended.	3.95	.927	%79.0
18	3	The system interface allows the user to navigate easily and easily to access different learning materials.	3.93	.895	%78.6
18	17	University teachers conduct the necessary tests for the online lesson before publishing it electronically.	3.93	.925	%78.6
18	20	The learning environment provides a number of calendar tools that help teachers assess learners' performance and measure their progress in the learning process.	3.93	.919	%78.6

Rank	Number	Paragraphs	Average arithmetic	Standard deviation	Percentage
		College degree	4.03	.560	%80.6

Table 3 shows3 17 20 " that the arithmetic averages ranged from (3.93-4.22),where)poverty no.1, which states "good design of thee-learning environment helps to develop the educational service" in the first place and with an average calculation of(4.4.22) 22)) And by a percentage of In first place With an average calculation of (4.22 (84.4%),%), Poverty came poverty came number(5) which states "the learning environment allows participation and communication between users and teachers and the management of the entire educational process electronically" in the second place and with a mathematical average of(4.17)) and a percentage It was83.4%),%)and poverty was the number (6) which states that "the learning environment facilitates the placement of educational materials from lectures and examinations in the system site easily" in the third place with a mathematical average of(4.14)) and a percentage of (82.8%) While the text "The system interface allows the user to navigate easily and easily to access different learning materials", "university teachers conduct the necessary tests for the electronic lesson before publishing it electronically", and "the learning environment%)، provides a number of calendar tools that help Teachers evaluate the performance of learners and measure their progress in the learning process "in the last place and with a mathematical average of(3.93)) and a percentage of In the last place and with my average calculation reached ((78.6%).%). The average arithmetic for the instrument as a whole(4.03)) was high, with a percentage of. (80.6%).%)

The results of the current study showed that the mathematical averages impact of the working environment and learning science in the e-learning systems used in education from the point of view of the faculty at the university in Kuwait ranged from (3.93-4.22)4.22)to a high degree, and the total score (4.03)came high. Poverty No. 1,1 which provides for "good design of thee-learning environment that helps to develop the educational service", came in first place with a mathematical average of4.22and a percentage of(84.4%), and poverty came in first place. Number(5) which states "the learning environment allows participation and communication between users and teachers and the management of the entire educational process electronically" in the second place and with a mathematical average of (4.17)) and a percentage of(83.4%),%)and poverty came number (6) which It states that "the learning environment facilitates the placement of educational materials from lectures and examinations in the system site easily" in the third place and with a mathematical average of(4.14)) and a percentage of (82.8%),in addition to the result for the rest of the paragraphs came high and high percentages.

The researcher attributes the finding that one of the advantages of e-learning systems is the provision of content in the electronic environment taking into account the personal orientation of the student, within the scope of the development of the e-learning environment of contemporary higher education institutions in the context of good work and learning environments electronically, where the work is based on theoretical and experimental research methods. Personal learning is directed to discovery, taking into account and developing students' individual abilities, mastering their thinking and perception, achieving a high level of awareness and knowledge, and providing the conditions of allocation a high-tech learning environment that allows students to study with respect to their skills and abilities. Technology in general appears to be involved in fundamental structural changes that can be an

integral part of significant improvements in productivity and the teaching and learning process, as it is used to support both teaching and learning, teaching innovations have led to changes in the structure, content, methods and forms of teaching, and the role of the e-learning environment when introduced. Also, teaching management is inextricably linked to the specific effects necessary to implement the objectives of the educational process: support within its limits (performance) or transition to a new state (development), the system of teaching management methods in the conditions of the modern educational environment includes all functional stages, and because it takes into account the individual needs of students, it seems that creating the right environment in participating education electronically is easy from the task of presenting the lesson in The right image, the knowledge of many students studied, and the realization of the process of participating learning, by providing simulations and tools applications and conditions, so the impact of the work environment and learning science is shown in the e-learning systems used in education. As well as shifts in learning methods from the teacher-oriented model to the self-guided learning model, the current result was agreed with a study (Mustafa, 2007; Jackson & Helms, 2008; Abdul-Kader, 2011;Mohammed, 2011; El Sayed, 2011).

Question 2: "Are there statistically significant differences (= 0.05) on the impact of the working environment and learning science in the e-learning systems used in education from the point of view of the faculty at the university in Kuwait due to the sex variable?

To answer this question, mathematical averages and standard deviations of the impact of the working environment and learning science in the electronic learning systems used in education were extracted from the point of view of the faculty at the university in Kuwait according to the gender variable, and to show the statistical differences between the mathematical averages the "T" test was used, and the grandfather and below explained this.

Table (4)
Arithmetic averages, standard deviations and the "T" test of the impact of sex on the impact of the working environment and learning science in the e-learning systems used in education from the point of view of the faculty at the University in Kuwait

		Number	Average arithmetic	Standard deviation	Value "T"	Degrees of freedom	Statistical significance
Sex	Said	169	4.03	.559	-.109	286	.913
	Female	119	4.04	.564			

Table 4 shows that there are no statistically significant differences(= 0.05) attributable to the effect of sex.. The researcher attributes the finding that the university's faculty is sufficiently convinced of the impact of the working environment and learning in e-learning systems in education, the importance of using technology, its innovations, its tools and e-learning systems, and their awareness of the extent to which it affects the learning process if there are appropriate skills and capabilities to use it and a technological learning environment, as well as the necessary educational competences, and that the good working and learning environment in e-learning systems affects changing the attitudes of students and e-teaching staff. The current study was agreed

with the study(Al-Adly and Muhammad Ali, 2013).

Recommendations:

The researcher recommends the researcher recommends the following:

1- Create a plan to build the right learning environment when creating the right e-learning environment, conduct successful traditional lessons, study new ideas in educational methods, design a database of scientific contents, and then apply the e-learning environment.
2- When building the work environment in e-learning, organize the contents of the e-lesson.
3- Taking into account the ease of access to learning materials, evaluation and follow-up to learners.

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