

The Role of E-Learning in Enhancing the Egyptian Business and Universities Performance Post Covid -19 Pandemic

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Abstract:

Despite its reported great potential, in practice, e-learning still fails to dominate the industry. The lack of literature on e-learning philosophy, makes unlocking its potential a real challenge. This calls for debating and examining the theoretical underpinnings of e-learning, and its effect on students and instructors; especially during the pandemic. From the study, it will be concluded how e-learning affects not only students and professors, but also on the business side, on employees and customers. Accordingly, this study's primary goal is to examine the role of e-learning in enhancing the Egyptian business and universities performance post Covid -19 Pandemic.

A qualitative research approach was used, in which four different focus group discussions (FGDs) were conducted with a sample of 37 participants in order to gain deep insights from an intentionally selected group of individuals; Students and teachers regarding their personal experiences with e-learning during the

pandemic at the College of Management and Technology, Arab Academy for Science and Technology, and Maritime Transport in Egypt. Students and teachers were selected as employees and customers of universities. Focus group discussions were held with 22 students (10 and 12, respectively) and 15 teachers (8 and 7, respectively).

Literature has been rich in studies on e-learning from a practical view. Yet, this study is considered novel; as it provides a link between e-learning theories and practice. The study also shows how a pedagogic research study can be utilized to improve the learning process and to assist in curriculum development and course management.

Keywords: Learning Theory, E-Learning, Higher Education Institutions, Focus group, COVID-19.

1. Introduction

The deadly and contagious Corona Virus, also known as Covid-19, has had a huge effect on the world economy. The education sector has also been shaken by this catastrophe, and this fear will probably extend to the whole global education system (Mitchell et al., 2021; Khoshaim et al., 2020; Patrinos et al., 2022). Due to the Covid-19 pandemic, several schools and universities had to shut down. Concerns have been raised that semesters might be lost because of the several affected locations

throughout the world. In a number of schools, colleges, and universities, in-person instruction has been phased away. During the pandemic, experts stated that it is doubtful that regular instruction will resume soon (Verma et al., 2020). In other words, in a world that is always evolving, we must provide the future generations with legitimate possibilities and choices. The educational system must give instructors the option to emphasize online learning by providing them with appropriate training programs designed to advance their technical and online pedagogical skills (Oprea et al., 2023).

Business professionals are particularly well-suited to pursue online training that may help them stay competitive in a workplace that is always changing since they have busy lifestyles, family obligations, rigid work schedules, and little free time. An educated workforce may be maintained by taking courses that are well-written and structured, delivered by trained instructors, and taken by experienced workers. Business is expected to utilize e-learning programs as a replacement for in-person conferences and meetings as the success of these programs' spreads. By cutting down on training time, enhancing student retention, and facilitating better knowledge applications, interactive online learning can be more cost-effective than in-person instruction (Kimiloglu et al., 2017).

Many countries and educational institutions have taken numerous steps to combat the Covid-19 pandemic in an effort to limit the global education industry's damage. These steps and efforts, however, will not substantially alter the education sector. At the end, the COVID-19 pandemic's acceleration of digital transformation will reshape the education service. In fact, once the virus's transmission has slowed, some of the measures and procedures implemented during the pandemic may become commonplace (Kang, 2021).

COVID-19 has shocked the world, where there was no choice; and the world had to rely on the power of technology in different fields during this time. Consequently, physicians have used it to do research in order to find a vaccine. Some companies reconsidered their supply chains and transferred supply chains closer to where they are needed in order to avoid ceasing production in future (Magableh, 2021; Orîndaru et al., 2021).

The COVID-19 has complicated and unexpected ramifications that affect everything from financial institutions to tourism, manufacturing, and transportation to healthcare and pharmaceuticals, as well as local and international trade. To slow the spread of the virus, so many commercial operations have been suspended. Despite this, the COVID-19 epidemic has caused the majority of organizations to struggle with how to better train their staff and improve their output. Therefore, firms

in this emerging era are left with little choice but to implement E-training programs within their organization. However, experts, academics, and stakeholders have questioned whether running E-training programs is viable for organizations, particularly SMEs, due to the expense required in setting up and maintaining an E-training system. Due to this, several research have been done to determine how E-training systems affect workers' performance (Selase and Avenorgbo, 2021).

Technology acceptance, including the Internet of Things (IOT), has grown by 42%. 55% of participants—more than half—have boosted their use of cloud computing, while 52% have sped up the rollout of 5G. Web conferencing climbed by 35%, and AI and machine learning both had increases of 51%. The illness outbreak has led to other improvements as well (Ndiaye et al., 2020).

The education industry has also been creative in implementing a variety of technology-based strategies as alternatives to the traditional classroom, including video conferencing and online learning platforms for delivering lessons, as well as sharing study materials and worksheets through school-based networks. In certain nations, school classes and instructional materials were broadcasted through radio and national television, particularly in under-resourced communities with limited technology infrastructure (Daniel 2020). Additionally, Higher Education Institutions (HEIs) were constantly

looking for new technology to aid in enhancing student views, communication, educational quality, critical thinking, and self-learning, as well as boosting teacher responsibility and student happiness in higher education.

After the emergence of the Covid-19 epidemic and the dangers the world witnessed, many researchers resorted to studying the impact of this epidemic on many areas to provide quick and clear solutions to draw a road map for learning how to deal with the consequences of this epidemic. The research included focusing on the study of e-learning in the field of universities and schools, despite its great impact on the field of business. Hence, this paper decided to fill this research gap and integrate the impact of e-learning on universities with its impact on the business field in terms of business performance and employee satisfaction, as well as adding its impact on the intentions of adopting e-learning systems in the business field.

However, some scholars have been interested in various aspects and issues related to e-learning. To give an overview of the current e-learning, many reviews of the literature have been undertaken (Orîndaru et al., 2021; Ndiaye et al., 2020). Yet, e-learning theory has been receiving negligible attention despite the growing body of research highlighting the fact that it considered as effective as conventional learning techniques. Asserting the absence of a well-established theory will accordingly impede the

development of e-learning (Donnelly et al., 2012; McCutcheon et al., 2015).

Accordingly, and to fill the research gap in the field of e-learning at the present time, the current study aims to examine the role of e-learning in enhancing the performance of Egyptian companies and universities after the Covid-19 pandemic. This is because e-learning represents a very important situation after the need for it during the Covid-19 Pandemic, so the impact of e-learning on student satisfaction and university performance must be studied, as well as on the business side, employee satisfaction and corporate performance, and these effects can be exploited for the development of the university education sector in general.

2. Research Problem

Despite the obvious potential benefits of e-learning, the challenges and pitfalls have also been perceived from a variety of perspectives. It is unlikely that the practice of e-learning will advance unless the theoretical foundations of e-learning are thoroughly studied, in order to give a proposed philosophy for the growth process of e-learning, due to the paucity of academic literature devoted to the philosophy of e-learning (Picciano, 2017). The lack of a guiding theory has become quite apparent and an important issue in e-learning (Andrews, 2011; Serdyukov, 2015; Ruth and Kaspar, 2017; Kibuku and Orwa, 2018 and

Kibuku et al., 2020a). In other words, the foundation of any practical discipline relies heavily on theoretical concepts, which also influence the healthy development of the discipline. However, there is no clear guiding philosophy defined specifically for e-learning in previous or current e-learning projects. As a result, the current study assesses the impact of COVID-19 on the education system from the point of view of the two primary stakeholders, namely teachers as university staff and students as university customers. It identifies e-learning concerns in an attempt to relate well-known theories to e-learning practice. Therefore, the research questions for this research are as follows:

- I. What impact does the infrastructure and methods of e-learning have on the productivity of employees in SMEs?
- II. How do the workers feel about the infrastructure and practices of e-learning?
- III. What are the difficulties or barriers that E-learning will face in COVID-19?

3. Research Aim and Objectives

The main objective of the current study is to examine the role of e-learning in enhancing the Egyptian universities and companies' performance post Covid -19 Pandemic. It also examines the possibilities imposed by the main theories of E-learning and identifies the extent of the impact of applying these

theories on the field of education and business after the Covid-19 Pandemic. Accordingly, the objectives of the study can be summarized as follows:

- I. To explore the E-learning theories and their rationale
- II. To examine the possibility of applying E-learning to the current situation after the Covid-19 pandemic
- III. To investigate the role of e-learning in enhancing the Egyptian universities and companies' performance post Covid -19 Pandemic

4. Importance of the Research

In addition to other business experts outside the education sector, this study will have a significant impact on e-learning stakeholders, including e-learners and educators, companies, employees, e-learning providers, researchers and legislators. In addition, it will provide theory as a guide for the design and implementation of e-learning projects. If and when practitioners adopt it, communication and teamwork in e-learning will be beneficial for both learner and teacher. The theory will be available to those who make choices and formulate policies in the context of online learning. The results of the study will add to the body of knowledge already possessed by aspiring academics and researchers in the field of e-learning. When designing e-learning

systems with an emphasis on collaboration and interaction, designers will have a theory of reference to draw upon.

5. Literature Review

The SARS-CoV-2 coronavirus, a new coronavirus, is the cause of the illness COVID-19. On December 31, 2019, World Health Organization (WHO) first learnt about this new virus in Wuhan, People's Republic of China (Picciano, 2021). The COVID-19 outbreak was deemed a worldwide public health emergency by WHO on January 30, 2020. (WHO, 2020). On January 27, 2020, Kerala was the site of India's first COVID-19 report. Severe acute respiratory syndrome was the precursor to this Corona family virus, which is the third generation (SARS) (Andrew et al., 2020).

The widespread institutional and behavioral shock caused by the Covid-19 pandemic has affected many aspects of human activity, including education. On April 9, 2020, more than 1,500,000,000 children from primary to tertiary levels will be unable to attend school, having an enormous impact on the students (Cui et al., 2019). Affected countries and communities have been obliged to seek immediate repairs in various digital learning platforms as a result of significant and sudden closures (Mariselvi and Haridha., 2021). The more serious problems about national educational policy and theoretical foundations and

premise have been pushed aside by the fast shift from classroom to online teaching.

COVID- 19 pandemic is global health issue and it is complicating how various tasks are carried out (Picciano, 2021). It has a big influence on education, driving a quick transition of all teaching and learning processes to online learning environments (Pokhrel and Chhetri, 2021). While educational settings continue to struggle with the issues of digitization and digital transformation and seek the best methods to adapt with the stakeholders, instructors, and students (Almendingen et al., 2021).

Many changes to the workplace had already started before COVID-19, but the epidemic has sped up the process. Organizations must plan for more digital transformation, plan for the growth of virtual human resources, and make use of learning resources. Numerous studies have also observed that the efficiency of corporate operations is closely related to the performance of top-notch personnel, who are themselves equipped through efficient training. E-learning is a useful tool for the development of human resources that the organization might use in the COVID-19 term to fulfil its objectives (Bennett and McWhorter, 2021).

Businesses must use cutting-edge online technology to teach individuals more quickly and efficiently if they want to

stay competitive and remain relevant in the context of the developing labor market infrastructure. Particularly during the COVID-19 epidemic when working online, businesses need to pay attention to the aspects of e-training to keep employees engaged and to retain the greatest potential employee performance (Agrawal et al., 2020).

4.1 Theory

Starting from the notion that creating an online education theory would be a challenging, if not impossible endeavor, Terry Anderson looked into the subject. He acknowledged that many theorists and practitioners saw online learning as a viable choice in the field of education, but he remained unconvinced. "a division of learning generally" (Aruleba and Jere, 2022; Picciano, 2017).

Recent occurrences show that e-learning has gained more importance as one of the greatest solutions for education (Anderson, 2011). It has become a popular educational paradigm, thanks to the widespread use of information and communication technology (ICT) in educational settings, to transmit information for teaching and learning. E-learning utilizes a variety of informational services, technologies, and systems (Radha et al., 2020). Additionally, the usability and user experience (UX) of information technology and services impact the e-learning process on a social as well as technical level (Ratheeswari, 2018).

However, e-learning cannot be fully developed without paying attention to learning and e-learning theories. Before diving into these theories, it is worth delving into the definition of the term theory. Nikou and Maslov defined theory in 2021 as a collection of interconnected ideas, definitions, and claims that offer a systematic understanding of phenomena by defining relationships among variables with the aim of explaining and foreseeing the occurrences (Kerlinger and Lee, 2000). It serves as both the primary endpoint and the origin of study. Theoretical foundations are important for undertaking research. Good theory advances knowledge, leads researchers toward important challenges, and provides knowledge and comprehension of the study topic and field (Kivunja, 2018). Thus (Yahya et al., 2019) stated that knowledge generation is founded in theory cited by (Compeau and Olivera, 2014).

Briefly said, e-learning modernizes the ideas of correspondence learning and instructional television as a sort of educational technology for the twenty-first century. It adopts the concepts of learning that are unique to correspondence study, namely the independence from geographic and chronological constraints. It makes good use of contemporary technology—the computer, Internet, the utilization of video and audio, and many communication channels—as well as the advantages of two-way contact between the teacher and the student—to offer an interactive and media-rich learning package. The student is released from the

traditional restrictions of time, distance, and cost. In addition, mediated by modern technology, e-learning has grown in popularity with businesses, universities, students, employees, and professionals precisely because it is an effective teaching method adaptable to a variety of learning contexts (Lalic et al., 2017).

4.1.1 Learning Theories

The goal of learning theory is to clarify and support the process of learning. The areas concerned include education, psychology, sociology, neurology, and others (Recker, 2021). Four of the most widely used learning theories are: behaviorism, cognitivism, constructivism and humanism.

Behaviorism is one of the oldest learning theories, having been utilized by educators to teach and train learners (Klement and Dostál, 2016). This point of view contends that there is a perceptible shift in behavior brought on by environmental factors. In light of this, the focus of this theory is entirely on getting pupils to respond and identifying any behavioral changes as a result of behaviorism, which placed a strong emphasis on examining and categorizing many aspects of the learning process (Picciano, 2017). It is also still utilized in e-learning courses to classify topics into distinct categories through drag-and-drop exercises (Klement and Dostál, 2016). In this theory, feedback is critical to help in the evaluation of correct behavior (Thurlings et al., 2013). The focus of

behaviorism is on what can be seen, rather than on the mind. There are some dimensions related to this theory are classified into two types: classical conditioning and operant conditioning. Classical conditioning is a behavioral training technique in which a neutral stimulus is paired with a naturally occurring stimulus. Eventually, even when the naturally occurring stimulus is not present, the neutral stimulus elicits the same response as the naturally occurring stimulus. The other type is Operant conditioning also known as instrumental conditioning that involves reinforcements and punishments (Kwon and Silva, 2020).

Therefore, behaviorism can be an effective theory to apply in a pre-test setting to gauge how much pupils already know about a subject and, consequently, where to start education. Other options include tests on the readings from the previous evening, or something less formal like introducing polls or clicker-based questions in the middle of a lecture to gauge students' understanding (Ertmer and Newby, 2013).

However, some instructors believed that not all learning resulted in behavioral change. Since Jean Piaget promoted the "stages of human cognitive development," which are the foundation of cognitivism (Piaget, 1970), which holds that the human mind is a transparent box that reveals internal mental processes and how memories are used to process external inputs, cognitive theory was created. These include contrast, abstraction,

thought, concentration, and contemplation (Pange and Pange, 2011; Yilmaz, 2011; Bognar, 2016).

Learning necessitates many kinds of memory, motivation, and reasoning, claims cognitivism. Furthermore, it asserts that data is stored in memory using a node pattern that results in a network of nodes connected by relations (Schneider et al., 2021). Given the variety of learner characteristics, cognitivism argues that instructional strategies should take these variances into account and involve all the senses (Alzaghoul, 2012; Modtritscher, 2006). This theory is useful to e-learning in the creation of learning materials and activities in order to accommodate the diverse cognitive learning styles of the users (Modtritscher, 2006).

The idea of how people think was explored in greater detail by many other scholars, which led to additional research (Heyes, 2012). By emphasizing the time elapsed between the presentation of an external stimulus and the student's response, cognitive theorists backed the notion that the mind plays a significant role in learning. Cognitivism has become one of the most widely accepted learning theories because it explains how the brain works and the stages of cognitive development that underpin learning and knowledge acquisition (Picciano, 2017).

The cognitive learning theory also has an impact on pupils since they might learn more by knowing how they think. Teachers can offer opportunities for students to ask questions, make mistakes, and reflect out loud. These tactics can assist students in better understanding their own cognitive processes and applying that information to greater learning opportunities (Celiköz et al., 2019). Three essential components of cognitive learning are also; Knowing: The most crucial element of understanding anything is understanding why we are learning it. When it comes to remembering and using knowledge, memory comes in second. The ability to apply knowledge in the actual world or to acquire the necessary problem-solving skills is one of the most crucial talents (Celiköz et al., 2019; Kendeou et al., 2014). Concept mapping and the use of metaphor are two aspects of education that adopt a more cognitivist approach. Feedback is crucial to this theory since it offers suggestions for how to tackle the problem differently in the future (Ertmer and Newby, 2013).

According to the Constructivism philosophy, instructors and students' complex interactions during the teaching and learning process should be articulated and explained. Constructivism contends that rather than merely soaking up knowledge from instructors, students understand via critical enquiry and create new knowledge by actively participating in learning events (Dewey, 1938; Bandura, 1977; Mayes and de Freitas, 2004; Pange and Pange, 2011). Also, they discovered

that most professors who begin with a constructivist approach end up providing a lot of guidance (Shah, 2019). Constructivism in online learning proposes that teachers provide educational materials and experiences that combine online group collaboration activities to encourage online learners to participate in the learning and knowledge discovery process independently (Alzaghoul, 2012; Modtritscher, 2006).

Social presence in learning, Vygotsky and Bruner expanded constructivism to include social constructivism (Vygotsky, 1978; Bruner, 1984). They said that group learning, also known as "situated learning," which enables students to co-create information and understand the real world they live in and experience, is beneficial (Bruner, 1984; Kalpana, 2014; Vygotsky, 1978).

A method of knowing is recognized as social constructivism is one in which students or learners create their own knowledge and understanding via social interaction with others. It mixes the cooperative or collaborative and sociocultural models of learning. According to Vygotsky, the principal proponent of social constructivism that one can acquire a deeper understanding than they are capable of their own through contact and assistance from more experienced peers. The distinction between talents displayed on one's own and with social help is known as the Zone of Proximal Development (ZPD). Scaffolding, or significant advice from more qualified peers or

experts, is thought to improve student abilities within the ZPD. According to the social constructivism paradigm, pupils are prioritized over teachers. In other words, students actively construct their own understanding through social engagement with their peers, learning is most effective.

Another theory close to the previous one is Humanism Theory; a concept of self-actualization is central to humanism. It is at the summit of the hierarchy of needs; it's the feeling that all of one's needs have been met and that one is the best version of oneself (Lestari and Wardari, 2019). By offering a secure and pleasant learning environment, sufficient dietary needs, and the encouragement they need to succeed, educators can help kids satisfy their emotional and physical needs. The use of this principle is crucial in helping different student types incorporate their personal experiences into their learning. The humanistic theory method draws on social abilities, emotional intelligence, creative abilities, and practical abilities (Javadi and Tahmasbi, 2020).

From the business side, The World Wide Web (WWW), which has experienced rapid expansion, is now a well-liked platform for the delivery of electronic services (e-services), such as services for electronic learning (e-learning). A key factor in determining the success of an e-learning programme is the users' intention to keep using the service. While using the e-learning service for the first time (accepting it) is a crucial first step

towards realizing e-learning success, actual e-learning success also depends on continuing usage (as opposed to first use or "acceptance") following initial use. For academics and practitioners, it is obvious that knowing the elements influencing users' intentions to keep using the e-learning service is a crucial topic (Yan et al., 2021).

Technology-driven distant education (e-learning) is intriguing because of how convenient it is and how it gets around some of the drawbacks of conventional learning methods (Udo et al., 2011). The rising popularity of e-learning has also led to a rise in study interest in figuring out what exactly makes ICT interactive tool implementations successful. The adoption and continued use of ICT interactive tools by students, like that of any other information system, is essential to their success (Hernandez et al., 2011). Prior research shed some light on this problem by highlighting extrinsic (i.e., motivated by particular ICT or web-based course characteristics, such as perceived ease of use, perceived usefulness, and perceived flexibility) and intrinsic (i.e., rooted in emotional feelings and motivated by pleasure, enjoyment, and fun of the activity) motivators that result in successful usage outcomes (Lin and Lu, 2011).

In as business research, Hernandez et al. (2011) concluded that because the desire to help others has a significant influence on attitudes, educators should consider flexible methods to

support members' altruistic aid of others when creating the e-learning system (e.g., file sharing, information sharing, and action guidance). In the end, encouraging more optimistic attitudes ought to lead to improved present utilization and higher intents to continue utilising the technology, so insuring system success over the long run.

4.1.2 E-Learning Theories

The impact of technology is the main topic of this section. The use of technology to assist a purpose for which it was not originally designed is referred to as technology adoption. Technology differs from theories in that they encompass invention, access, acceptability, usage of technologies, and interactions between the users (Gregor, 2006). ICTs of all kinds are used in e-Learning, thus it's critical to comprehend how these tools are embraced and applied at the person (teachers and students) and organizational levels.

Attuquayefio and Addo (2014) contend that the successful implementation of e-learning initiatives is based on the application of technology, which guides planning for ICT integration and adoption in learning. They also contend that certain prerequisites must be met in order for ICTs to be creatively used in teaching and learning. The availability of the required ICTs, technical assistance, professional and pedagogical

training, as well as the modification of instructors and students' unfavorable attitudes and perceptions towards ICT integration in teaching and learning, are some of these prerequisites.

E-learning is a type of technology that allows teaching and learning through a computer and the Internet. It connects instructors and students who are at two different geographical areas (Coman et al., 2020). Internet and multimedia technological breakthroughs are to blame. E-learning solutions make it simpler to organize and access learning information online. Despite widespread enthusiasm about technology's role in education, particularly its role in improving teacher learning in ways that are consistent with the developments in learning sciences and contemporary socio-cultural perspectives, little changes have occurred. In addition, it redefines the role of the instructor and modifies the nature and focus of the educational process. Constructivism shifts with learning. Web-based training promotes a constructivist approach by making learning more authentic and self-directed (Kumar and Sharna, 2021).

E-learning has evolved to reflect learning theories and continues to have a significant impact on how educational content is prepared when it comes to the application of pedagogical-psychological techniques to learning through computers and computer networks (Korysheva et al., 2020). Some educators mentioned that in the world of e-learning,

technology has taken precedence over pedagogy. In other words, technology should be viewed as a tool for delivering educational information rather than the foundation of e-learning.

E-learning theory demonstrates how the usage and design of educational technology may improve efficient learning by drawing on cognitive science ideas (Sweller et al., 2019). In order to guide learning in the digital age, Siemens (2005) and Downes (2008) established the current philosophy of learning known as connectivism theory. It places a focus on using modern technology to connect e-students and e-instructors (Foroughi, 2015; Siemens, 2005). It places a strong emphasis on the networks created by contemporary technology to connect e-learners and e-tutors. Additionally, it emphasizes how knowledge is organized across all technologies.

Also, the use of e-learning systems redefines the role of the instructor and changes the purpose and subject matter of the educational process. As learning progresses, it shifts away from a behavioristic linear model and toward a constructivist strategy. Web-based training promotes a constructivist approach because learning is a more real-world and self-directed process (Vikas Kumar, 2021).

Moreover, a theory related to connectivism and constructivist is Active Learning Theory. The most popular learning theory in use today in e-learning systems is this one.

Learning by doing is the most effective learning method. According to the active learning hypothesis, in order to learn more effectively, students should be actively participating in the learning process. Interactivities, gamification, tests, and exercises are all part of the active learning idea in online learning. A greater knowledge of the subject matter may result from the increased student involvement (Pange, Pange 2011). Gamification, which incorporates active learning theory and can be provided through online learning is one common strategy to boost student motivation. (Mizokami, 2018).

Furthermore, the existing traditional theories of learning can be merged, modified, and/or directly applied to e-learning, according to many academics (Pange, Pange 2011). The most popular theories utilized in the creation and delivery of e-learning are cognitivism and constructivism.

Another traditional theory; behaviorism which less frequently used than cognitive load theory and constructivism, it is also applied to e-learning. According to behaviorism, learning takes place in relation to external stimuli. Experiences and interactions with the world help to learn new things (Schunk 2012). Instructional designers should create e-learning materials to make knowledge and actions easier to understand and every material should be divided into manageable chunks or segmented

tasks. More challenging information becomes available to pupils as they become proficient with the basic material.

A further traditional theory that can be used in the online environment is online social constructivism. There are some characteristics could be taken into consideration when determining how an online social constructivist approach to pedagogy might function. Social negotiation should be a part of education. Also, skills and content must be applicable to the learner. Learning should take place in genuine, practical settings. Instead, then being instructors, teachers typically act as mentors and learning facilitators.

Multiple viewpoints and content representations should be encouraged by teachers. The learner's prior knowledge should be taken into consideration while defining the course's content and skills. Students should be evaluated in a formative way to shape their future educational experiences. The development of self-regulation, self-mediation, and self-awareness in students should be promoted.

The notion of three distinct "presences"—cognitive, social, and instructional—was developed by certain writers as the community of inquiry theory for online learning settings (Garrison et al., 2000; Garrison, 2009). In online and mixed learning settings, the three elements' overlap and connections promote the development of collaborative learning spaces where

teachers and students may exchange knowledge and viewpoints (Anderson et al, 2001). The community of inquiry model, which makes use of wikis, blogs, and discussion boards, has grown to be one of the most well-liked formats for online and hybrid courses that aim to foster close collaboration between students and instructors (Fiock, 2020).

Another study (Harasim, 2017) recommended an online collaborative learning (OCL) theory to use the Internet resources to create learning environments that encourage cooperation and knowledge sharing. Also. students are encouraged to use conversation to address problems together (Badr, 2020). Due to the flexibility of online learning, students may work and study simultaneously while studying at their own speed and convenience. The adaptability of online learning is particularly important for Egyptians who must fulfill their financial commitments to their families (Ismail and Kinchin, 2019; El Gamal and El Aziz, 2012).

Though less frequently theory is digital media theory. The main focus in this theory is the range of media types available for teaching and learning. It emphasizes on hardware (computers, handheld devices, recording devices, etc.) rather than software or content, is reminiscent of Marshall McLuhan's idea that "the medium is the message" (McLuhan 2003: 23). Additionally,

digital media theory looks at the crucial issues of access and accessibility (Andrews 2011).

Selase and Avenorgbo (2021) aimed to evaluate the impact of e-training on workers' performance in SMEs during COVID-19. In light of the COVID-19 epidemic, the paper describes how SMEs have handled training and development tasks. It used a quantitative technique to complete the study's goal. In terms of data gathering, the study performed a survey to gather information from the staff of the various SMEs. The data was descriptively evaluated, and frequency analysis was used to interpret the results. To ascertain the nature of the effect and link between e-training and employee performance, correlation and regression analyses were also conducted. The results showed a strong correlation between employee performance and the infrastructure and techniques of electronic training.

In 2021, Rachael n. Kibuku developed a theory that explains how people engage (interaction) and work together (collaboration) during online learning. The significance of the theories that have shaped e-learning in the past is acknowledged in this research, which makes no assertions that they are no longer required or relevant. Contrarily, these beliefs have undergone extensive testing and have shown to be effective as best practices. As a result, some elements have been taken and included into the developed theory along with the new

discoveries. The author of this study believes that it has made a significant contribution to academia, e-learning practitioners, service providers, researchers, and policymakers.

6. Methodology

The main aim of the study is to examine the role of e-learning in enhancing the Egyptian universities and companies' performance post Covid-19 Pandemic. Therefore, an interpretivist philosophical aspect was chosen as the most appropriate for the current study, as the researcher's position is to understand and interpret the participant's responses. The study also adopted the inductive qualitative approach to gain the full benefits from the gathered data. The data collection was performed with the same respondents in two online focus groups.

In general, e-learning theories are derived from learning theories. However, there is no cohesive e-learning theory. The contribution of surroundings, tools, and forms of communication to the social and individual resources that people draw on to form and communicate ideas is the focus of theoretical explanations of technology assisted learning. The lack of established theory in e-learning can be considered as a barrier to further e-learning growth.

For a variety of reasons, this study used an online focus group qualitative design to identify the effectiveness of e-learning to enhance learning among Higher Education Systems.

To begin with, this design allows for an interactive and in-depth investigation of respondents' experiences. Second, the group method can assist participants in clarifying viewpoints that may not be apparent in a one-on-one interview. It can also reveal a wide range of people's views on a topic, as well as perceptual discrepancies between individuals and groups. As a result, focus group discussions were the best option for efficiently addressing the study's objectives. The discussions happened online as a result of the ongoing Covid-19 pandemic and social isolation. Additionally, this approach was economical. It also ensured a thorough examination of the participants' perspectives, expectations, and challenges, and was timed to create recommendations for improvement.

According to (Prince and Davies, 2001), Focus groups should have 6 and a maximum of 12 people (Gundumogula, 2020). The study included purposive, theoretical, and interviewing techniques. Purposive sampling method was used for the study to guarantee that there is a significant diversity of viewpoints among groupings from the college. Four separate focus groups with two conducted with students, 10 and 12 consecutively, and two conducted with instructors (Service providers), 8 and 7 respectively, at Arab Academy for Science and Technology and Maritime Transport (AASTMT) and the College of Management and Technology (CMT). The NVivo - version 12 software, a tool for qualitative analysis, was used to examine the responses.

Thematic analysis, which displays the relative value of each theme identified by the investigation, was used to conduct the analysis. The analysis involves the first coding, which identifies the codes using a word cloud and a word frequency table. As a result, the codes and themes are categorized, and a mind map is shown illustrating the research variables.

7. Discussion and Findings

In-depth focus group discussions were conducted with students and decision makers (instructors) who used e-learning. The focus group discussion started with short briefing about the focus group protocol before the actual focus group sessions. Also, the study interviewed the respondents to understand how learning theories affect practically the e-learning and see any benefit from differentiated theories, may do different work. Every focus group was videotaped, precisely transcribing, and thematically analyzing using the common framework for content analysis (Vaismoradi and Snelgrove, 2019).

One of the factors that made them eligible for the purposive sample was the fact that they are users of the MOODLE platform, which has been designed to offer educational content to e-learners. The research was interested in examining how well the usability, affordance, and interactivity of the e-learning systems were created.

This study is one of the earliest attempts to address the gap between the growing use of learning theories in practice and the lack of research in this area. This study was carried out to examine the theories included into the instructional procedures in an online classroom.

Based on the support of educational institutions for e-learning, social construction, motivational and cognitive theories, e-learning platforms can be adopted. Analyzing digital learning platforms to see if they support learning theory pedagogy is facilitated with the help of mapping these platforms with components of the learning theory. The cloud-based learning systems' pedagogical approach will completely benefit the learning community in education at all levels (Kumar and Bhardwaj, 2020). Implementation of e-learning tools in university premises may be beneficial to the entire learning community among the most popular cloud-based educational platforms.

The following are the results of the focus groups:

Thematic analysis will be used in the investigation. A technique for examining qualitative data called thematic analysis involves assessing a data collection (such as the transcripts of in-depth interviews or focus groups) and searching for patterns in meaning in order to identify themes. In order to derive meaning from the data, thematic analysis entails an active reflective

process in which the researcher's own experiences are essential. The data are analyzed using the NVivo 12 application, and the findings of the qualitative analysis are presented. The data were assessed using thematic analysis.

7.1 Theme Of E-Learning Platforms

This study will focus on e-learning platforms that were highly utilized due to COVID. When it comes to ease and collaboration, e-learning platforms can be quite beneficial to the teaching and learning process (Nayar and Kumar, 2018). The first theme created from the codes that were mentioned in the focus groups is called e-learning platforms, and it incorporates codes like Technological Applications, Collaborative Network, Virtual Learning Platforms and E-Learning Platforms Advantages. The scripts for the e-learning platforms theme are displayed in Figure 1.

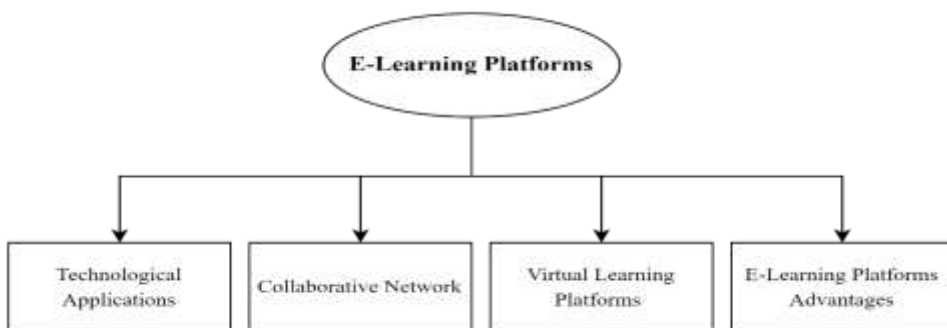


Figure 1: Theme Of E-Learning Platforms Mind Map

Technological Applications: There are now several e-learning platforms available, and these can increase engagement and passion in the classroom. While many of them are based on modern technology applications, many of them have drawn inspiration from conventional pedagogies for their efficacy.

One of the students confirmed that *“An interactive website that enables data input and interaction-based delivery of intended outcomes is known as an e-learning web application. With an active internet connection, we may use a web browser from a distance to access the app”*.

Students also agreed that *“We may engage in interactive tasks in a digitally linked classroom like taking a test, responding to a question, giving a lecture, solving a math problem, and more with the use of web applications”*.

Teacher investigated the same topic and this appear in the following evidence: *“Google Classroom allows us to manage assignments and build a community-based learning environment for our students online. It's a comprehensive online application that enables us to set up courses, assign and mark homework, give comments, and communicate with students”*.

Moreover, one of the instructors claimed that *“We can give students a productive online learning experience using e-learning web applications”*.

Collaborative Network: By increasing engagement and learning results, the incorporation of such platforms into the normal classroom will help students improve their sense of self-efficacy, confidence, and competence. Peer participation and interaction on these platforms will boost the students' engagement since they provide teachers and students with a collaborative network (Kumar and Sharma, 2016).

In the focus group which held with instructors, one of the types of evidence states that *“Higher education's increased emphasis on collaborative-constructivist approaches to learning has sparked a surge in interest in online learning communities”*.

Another evidence claimed that *“Community is thought to be necessary for learners to participate in collaborative learning activities. Online learning is distinguished from traditional distance education by collaborative learning activities”*.

One of the instructors investigates that *“To better comprehend the dynamics of online learning communities, the Community of Inquiry was created, and it is now widely accepted. Understanding the intricate dynamics of a community of inquiry requires an understanding of the composition and interactions of social, cognitive, and instructional presence”*.

Virtual Learning Platforms: E-learning platforms are an important element in the quarantine period, and this is because

education in this period turned to virtual education, and there were many different e-learning platforms used by Egyptian universities, and one of the most important sites on which most universities relied was Google Classroom.

Instructors in the focus groups claim that *“The COVID-19 pandemic outbreak has led to the adoption of online learning systems by all universities and other educational institutions”*.

From the students’ opinion, they also agree with that *“Online learning has undergone an impressive transformation with the arrival of e-learning web applications”*.

E-Learning Platforms Advantages: These platforms offer some unique features that help with learning theories but may be missing some other essential elements.

Students clarify that *“We are in charge of the information you are learning just as we are in charge of our time. The benefits of online classes include a wide range of subjects that are relevant to our interests and education we otherwise couldn't pursue due to the demands of our studies' program curriculum”*

However, the instructors claim that *“The academic advancement of pupils is enhanced through e-learning web apps. It has made it possible for us, students, and parents to keep in touch from*

anywhere in the globe by overcoming the limitations of time and location”

They also add that “90% of students believe that online education is superior than classroom instruction. We can keep our students engaged in the online learning environments with e-learning web applications”

In addition, they add that “E-affordability learning's is one of its main advantages. The cost-savings made by educational institutions on student and also to us lodging and transportation led to the price decrease.”

Accordingly, it was found that learning platforms and easy access to educational materials through online classes were an essential component of the educational process during the pandemic. However, online and virtual learning platforms are still very important due to their relevance with the modern world, and students and teachers are interested in taking advantage of the convenient and time management tools that e-learning provides. Considering that students and teachers are the owners of interests within the university, it can be said that the application of e-learning for employees helps to develop their performance, and facilitates their training methods and ease of communication, as well as ease of access to videos or educational materials.

7.2 Theme Of E-Learning Preparations

All participants from both stakeholders believed that the online sessions were very beneficial. Both teachers and students believe that online lectures save time and are more convenient. The second theme created from the codes that were mentioned in the focus groups is called e-learning preparations, and it incorporates codes like Preparing Trainings, Transformation of educational process, Behaviorists, Sensory Memory and Cognitive Theory and Remembering Information. The scripts for the e-learning preparations theme are displayed in Figure 2.

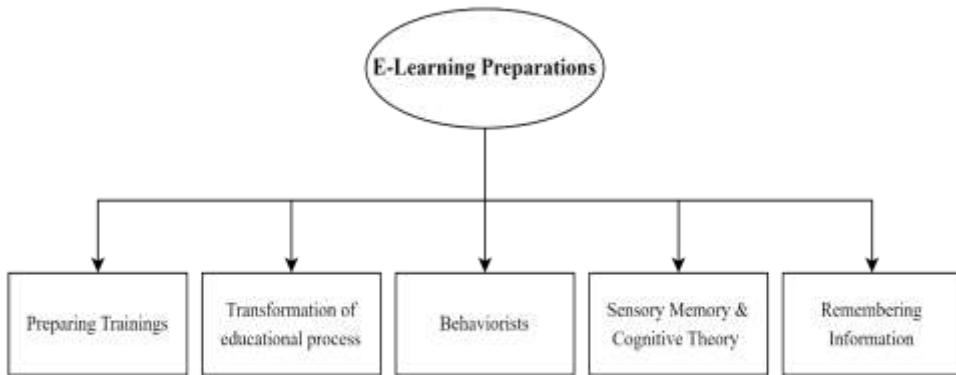


Figure 2: Theme Of E-Learning Preparations Mind Map

Preparing Trainings: Even before the program's formal end, instructors prepared the students for the digital transformation and the use of technology in the classroom using e-learning theories.

Teacher investigated the same topic and this appear in the following evidence: *“The university prepared some special preparatory trainings for us before the educational platforms started to understand how to deal with them”*.

Moreover, they also investigate that *“There were reports that we met with some trainers that included all faculty members as well as administrators to understand the digital transformation”*.

In addition, in the student focus groups, they claim that *“Our professors prepared us for the shift to digital learning and the use of technology in the classroom even before the program's official closure”*.

And they also clarify that *“There were a number of introductory videos that were provided to us by the university to understand the digital transformation that will happen to us in the coming periods, and they were very helpful”*.

Transformation of educational process: In 2020, especially in the Corona pandemic, education was transferred to electronic platforms, and this is due to the decision to close colleges and educational institutions.

Teachers claim that: *“After the spread of the Corona pandemic, all institutions, including educational institutions, were closed,*

and the educational process shifted to electronic and virtual education via the Internet”.

They also add that *“The transformation of the educational process into a virtual one was difficult at first, but there were previous preparations before these circumstances and training to prepare for this transformation, and this made it easier for us to deal with it”.*

In addition, they investigate that *“Having a foundation and preparations for digital transformation was an important element for dealing with this change”.*

Behaviorists: The behavioristic approach is to guide students toward predetermined learning outcomes. When learners achieve these expected results, which are designed to match the learning objectives of the e-learning course, learning is regarded to have occurred.

Instructors confirmed that *“we are all behaviorists. We all employ behavioristic ideas extensively in the instructional Design for e-learning, even if we don't realize it. This occurs because behaviorism, no matter how out-of-date it may appear, is undeniably ingrained in the human mind. It is a natural element of our activities and reactions”*

Student also confirm that *“Who wouldn't want to study our observable and measurable behavior and assist us accordingly to enhance their learning from an educational standpoint? Other*

than an attempt to measure our performance and modify the instruction to the audience's learning needs, what are tests and assessments in general? These rules apply to e-learning as well”

In addition, in the focus group of students, they add that *“As a result, the goal of a behavioristic-oriented e-learning instructional design strategy must offer us with the right stimuli, that is, opportunities to indicate that they are able to exhibit desired behaviors that demonstrate that learning has occurred”*

They also add that *“We advanced through the stages, behavior strategies appeared to grow increasingly significant, culminating in a high-achieving youngster who learned best when the teacher divided things into manageable stages”*

Sensory Memory and Cognitive Theory: The focus of cognitive theories is on the idea that how and what people think drives the arousal of emotions, and that some ideas and beliefs lead to unhealthy emotions and dysfunctional behavior while other ideas and beliefs lead to good emotions and adaptive conduct.

Based on students’ opinions: *“According to the cognitive theory, we receive text and video-based e-learning through our sensory memory (ears and eyes). Working memory processes selected words and video, which is subsequently combined with earlier knowledge stored in long-term memory. Thus, this theory is suitable to e-learning”*. Furthermore, students thought that *“we*

learnt best when they didn't have to recall "too much" information to test the cognitive load theory".

Remembering Information: Electronic platforms helped to remember information, and this is through recording lectures and preserving educational resources. Instructors gave a favorable response to remembering information, implying that "*students think of learning as the same as 'remembering'*". Also, students were more enthusiastic about minimizing the quantity of material they needed to remember. One student said, "*There are too many school courses, and having to remember everything all of the time could prevent you from progressing*".

Accordingly, it was found that educational preparations helped both teachers and students understand and adapt to the online system. The training programs and video tutorials have been of great help to those new to e-learning. However, online lectures have saved time for both teachers and students. New learning skills are developed by teachers in order to adapt to the new teaching system. New approaches have been developed during the pandemic to understand new technologies. As we explained earlier, the adoption of e-learning in the field of business facilitates the process of receiving training and developing employees, as well as the ease of knowing the results of employee development and monitoring them by senior management.

7.3 Theme Of Teachers' Improvement

Both teachers and students believe that online lectures save time and are more convenient. Likewise, the application of e-learning had a great return on the teachers, and this is because it will entrust them with developing their educational skills in explaining and adding new information and its context in an effective manner. The third theme created from the codes that were mentioned in the focus groups is called teachers' improvement, and it incorporates codes like Single Digital Workspace, Intuitive Analytics and Challenges Face Teachers. The scripts for the teachers' improvement theme are displayed in Figure 3.



Figure 3: Theme of Teachers' Improvement Mind Map

Single Digital Workspace: Teachers may create and share their lessons in a single digital workspace by keeping all of their resources in one location. By speeding up everyday duties in an orderly manner, both students and teachers will benefit from constant learning.

Teacher status that *“After the Corona pandemic, electronic platforms were provided to us by the university, and these platforms were like a library that included all the educational materials for each of our teachers and was very useful unlike the papers, so it was considered as a single digital workspace that includes all educational materials and resources and includes recorded lectures for us and a reference for all students”*.

Students investigate that *“I think it was an important development for the teachers and a benefit for us as it was a single digital workspace featuring lectures and resources for our curricula”*

Moreover, they also claimed that *“The university's platform includes the curricula, which makes it easier for us to study. These platforms were considered a digital workspace that makes it easier for us to access the educational curricula”*.

Intuitive Analytics: To evaluate student performance and learning outcomes, intuitive analytics are integrated into online teaching and learning systems. The analytics give teachers access to information about their students' participation, engagement, interaction, and social contribution. Such information can help teachers in their ongoing attempts to educate and inspire students to work more productively. After using these tools, the pupils' cognitive abilities and competence will improve.

One of the instructors' statuses that *"These educational electronic platforms have helped us a lot, and this is because they include Intuitive analytics for students, and this in turn helps us to develop our educational performance for our students"*.

They also add that *"The educational platforms evaluate the performance of the students, and this is done through Intuitive analytics of their performance, their success, and their scores on the tests that we take, as well as evaluating them, by the dates of their presence on the platforms at the specified time"*.

In addition, they add another evidence, which is *"Changing our education methods, is based on the Intuitive analytics that the platform provides us"*.

Challenges Face Teachers: Teachers find that it was very difficult at first for a variety of different reasons, some of which are: lack of face-to-face interaction with students, low student participation during lectures, difficulty with assessments, and a technical problem. This appeared in the following evidence:

"Low student engagement during lectures, challenging assessment, and a technological issue are all factors that prevent face-to-face interaction with students from happening", "The lack of face-to-face engagement with students might happen after the understanding between us and the students, which is why I believe that virtual education presents us with a dilemma"

“There is a challenge we face during e-learning, which is the low participation of students during lectures, as most students turn off the sound and this reduces their participation, and in the case of a request that they all open the sound, we face a problem in the clash of voices with each other”, “Based on the foregoing, we are facing a problem in setting evaluations of the year’s work for students based on our personal evaluation of them, and we are satisfied with the evaluation of the platform” and “We also encounter many technical problems during the online lectures”.

Educators play a critical role in online network learning as students were more interested in the constructivist approach when instructors are acting more like 'guides' than older students. Furthermore, all respondents believe that more direct instruction helps them learn better. When questioned about this, an instructor stated, *"Some learners may not enjoy who teachers act as guides since it puts pressure on them in class to figure things out for themselves"*

Accordingly, it was found that teacher improvement during the epidemic period was an important component of the smooth and rapid passage of the educational system from the epidemic. Teachers' keeping pace with the rapid developments in the field of e-learning and online courses formed the cornerstone to reassure students and help them complete the educational process. However, the teachers faced some challenges due to the

lack of a frank face-to-face encounter with the students, and they also experienced the communication difficulties that traditional classrooms had. Based on the results, from the business side, it can be said that the adoption of e-learning has an impact on the overall performance of the organization and this is because it helps not only employees but also senior management and decision-makers in the development of increasing awareness of technology, expanding their adoption of technology in different aspects, and facilitating communication with Employees, monitor their development and work to improve their performance through deficiencies in education programs and based on their requirements and results as well.

7.4 Theme Of Students Advanced

Learners of today desire material that is current, portable, flexible, and customized. This demand is met by the online learning environment, where students may study at their own pace and according to their needs. Let's examine the benefits of online learning analytically. The fourth theme created from the codes that were mentioned in the focus groups is called students advanced, and it incorporates codes like Feedback and Rewarding, Punishment and Interactivities Operation. The scripts for the students advanced theme are displayed in Figure 4.

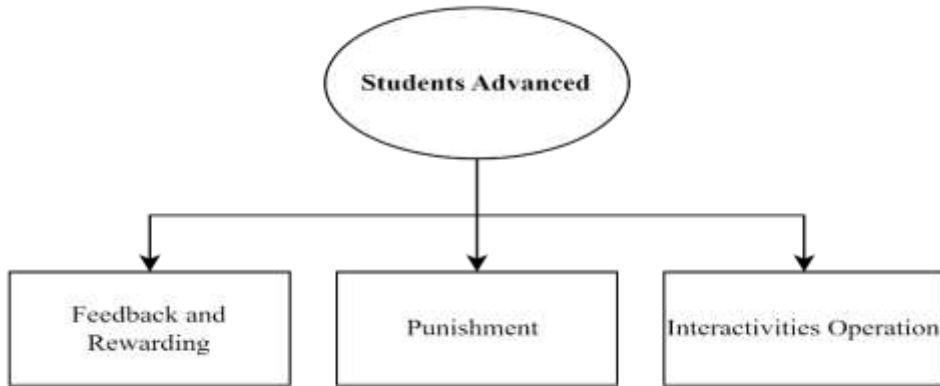


Figure 4: Theme of Students Advanced Mind Map

Feedback and Rewarding: Feedback and Rewarding is considered to be an effective tool for developing students and improving their performance, based on what was shown by the results of the focus group analysis of students and teachers.

Two lecturers believed that *“rewarding and feedback are essential so it is more beneficial to praise each student individually and describing what they did well so that they understand which learning activities earned them praise”*.

Student added that *“There are some educational platforms abroad that evaluate the performance of students and give them opinions about their performance in the recent period and how their grades differed, and one of them rewards them, and this thing I think is very effective to our performance”*.

Furthermore, they claimed that *“When getting an evaluation from the platform about our performance in recent times, this serves as an incentive for us to develop, and from my point of view, I think it is the most important element in our development”*.

Punishment: While punishment is considered as a tool that deviates from the development of students, reduces their performance, and this is based on what the results of the focus group analysis of students and teachers showed. However, electronic platforms for learning have limited the element of punishment for students, and this can be considered a positive aspect of electronic platforms.

This was emphasized with what a student said about punishment; As he said *‘Punishment has no effect on how we learn, but failure does’*

Interactivities Operation: Interactivity may be defined as any interaction between the learner and the module in which the learner provides input and the module advances depending on that input. So even a straightforward click, drag, or word input may be interactive. And on the higher end of the interactive range are simulations, games, augmented reality, and virtual reality.

Students confirmed that *“we apply active theory of e-learning because we required to be familiar with the operation of*

interactivities such as applying online quizzes and using a smart board program for active learning enabled us to make better and faster decisions by providing a systematic means to produce, retrieve, update, and manage data”

Accordingly, it was found that the advanced students were creatively encouraged by the teachers during the online courses in the epidemic period. Reward and feedback systems have not been neglected in e-learning systems. Teachers have been keen to reward and praise diligent students. Punishment was limited due to the online system; However, this did not affect the students' failure or success. Teachers and students worked together to create interactive group learning online. Accordingly, it can be said that the application of e-learning within companies will enhance the loyalty and satisfaction of employees, and their constant endeavor to develop their skills, including generating a competitive spirit among employees, so that each employee strives for excellence.

7.5 Theme Of Online Collaborative Learning (OCL)

Online group learning under the direction of an instructor is the basis for the notion of online collaborative learning, or OCL. Instead of memorizing the right answers, OCL students are encouraged to work together to solve difficulties via dialogue. The fourth theme created from the codes that were mentioned in

the focus groups is called online collaborative learning, and it incorporates codes like Encourages Students, Impact on Attitude and Feedback and Assessment Activities. The scripts for the online collaborative learning theme are displayed in Figure 5.

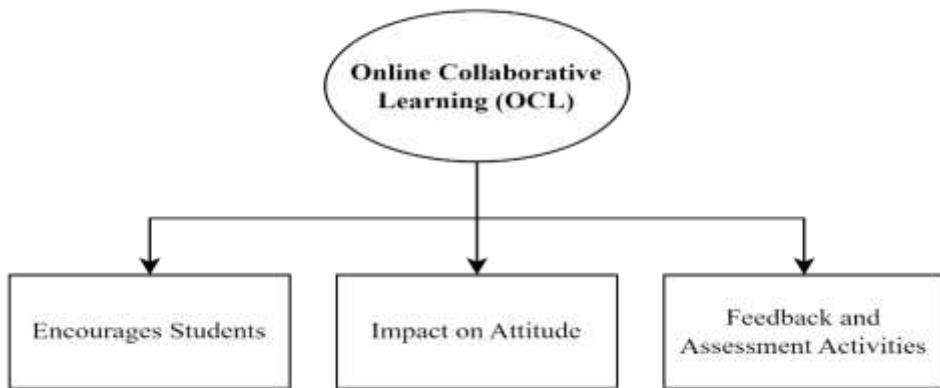


Figure 5: Theme of Online Collaborative Learning (OCL) Mind Map

Encourages Students: In OCL, students are urged to work together to find solutions to issues via debate rather than memorization of the right answers. Student claimed that *“a high degree of OCL encourages people to be optimistic about technology”*. Moreover, another student claimed that *“As a result, involving us in OCL programs may help to lessen technical apprehension while also increasing technological self-confidence and liking”*

Impact on Attitude: This code was shown in some of the evidence that appeared in the focus groups, whether with students or with teachers, and these evidences were represented in the following:

“In OCL situations, motivation in particular, and satisfaction, have significant impact on attitude change”, “However, in a highly collaborative workplace, all aspects of attitudes toward technology are influenced, whereas in a low-collaborative context, only one aspect of attitudes toward technology is affected—the liking of technology”, “The foundation of collaborative learning is the idea that by working together and utilizing one another's abilities, we may enhance their educational experiences” and “Our accountability for one another's behaviors and duties in collaborative learning settings encourages collaboration”.

Feedback and Assessment Activities: Students may usually go on from anywhere they have internet access and participate in class discussions whenever they want (up to a point). In contrast to previous models, the OCL model places dialogue at the center of learning while seeing textbooks and other resources as supplemental. This contrasts with conventional online courses, where readings could serve as the core content and conversations serve as the supplementary content. Traditional online course

participants may have a propensity to skip discussions because they view them as extra effort that isn't directly related to their mark.

Teachers clarified that *“The vast majority of research indicates that when assessments are carried out through cooperative peer-to-peer communication, engaged involvement, and interactivities, online peer assessments can promote a student-centered approach. Giving constructive criticism is a skill that must be learned in eLearning in order to assist learners digest new knowledge. Collaborative evaluations and peer-to-peer feedback exercises help learners become more prepared for practical scenarios”*.

Student also added that *“Online teachers must see evaluations as both an evaluation of learning and a method for learning”*.

Moreover, they claimed that *“Effective interactions depend on the planning and design of joint activities. We motivation, which is cultivated in we by placing us in real-world assessment settings, is one advantage of assessment and feedback activities”*.

Accordingly, online collaborative learning was found to be the dominant element during the pandemic period, and proved to be effective and beneficial in saving time and protecting students, teachers, and that of staff. It is noted that both students and teachers were keen to learn modern technologies and use them to complete the educational process when the epidemic occurred and they had to use e-learning tools. Moreover, the fruitful cooperation that has

arisen between students and teachers can be observed in the electronic environment which will lead to excessive use of this method in the future. Therefore, considering students as employees in the field of business, the adoption of e-learning enhances the performance of employees and increases their skills.

8. Conclusion

As the current study aims to examine the role of e-learning in enhancing the Egyptian universities and companies performance post Covid -19 Pandemic. Despite its reported great potential, in practice, e-learning still fails to dominate the industry. A total Four separate focus groups with two conducted with students, 10 and 12 consecutively, and two conducted with instructors (Service providers), 8 and 7 respectively, at the College of Management and Technology (CMT), Arab Academy for Science and Technology and Maritime Transport (AASTMT) and thematic analysis was done to the collected data through using one of the most popular programs of qualitative analysis, which is NVivo 12. According to the analysis, five main themes are developed from the interviews, which are; Theme Of E-Learning Platforms, Theme of E-Learning Preparations, Theme of Teachers' Improvement, Theme of Students Advanced and Theme of Online Collaborative Learning (OCL). Each one of the above themes consists of number of codes, which are; Theme Of E-Learning Platforms (Technological Applications, Collaborative

Network, Virtual Learning Platforms and E-Learning Platforms Advantages), Theme Of E-Learning Preparations (Preparing Trainings, Transformation of educational process, Behaviorists, Sensory Memory and Cognitive Theory and Remembering Information), Theme Of Teachers' Improvement (Single Digital Workspace, Intuitive Analytics and Challenges Face Teachers), Theme Of Students Advanced (Feedback and Rewarding, Punishment and Interactivities Operation), Theme of Online Collaborative Learning (OCL) (Encourages Students, Impact on Attitude and Feedback and Assessment Activities). Finally, Figure 6 shows the mind map representing a summary of all the points that arise from the focus groups responses.

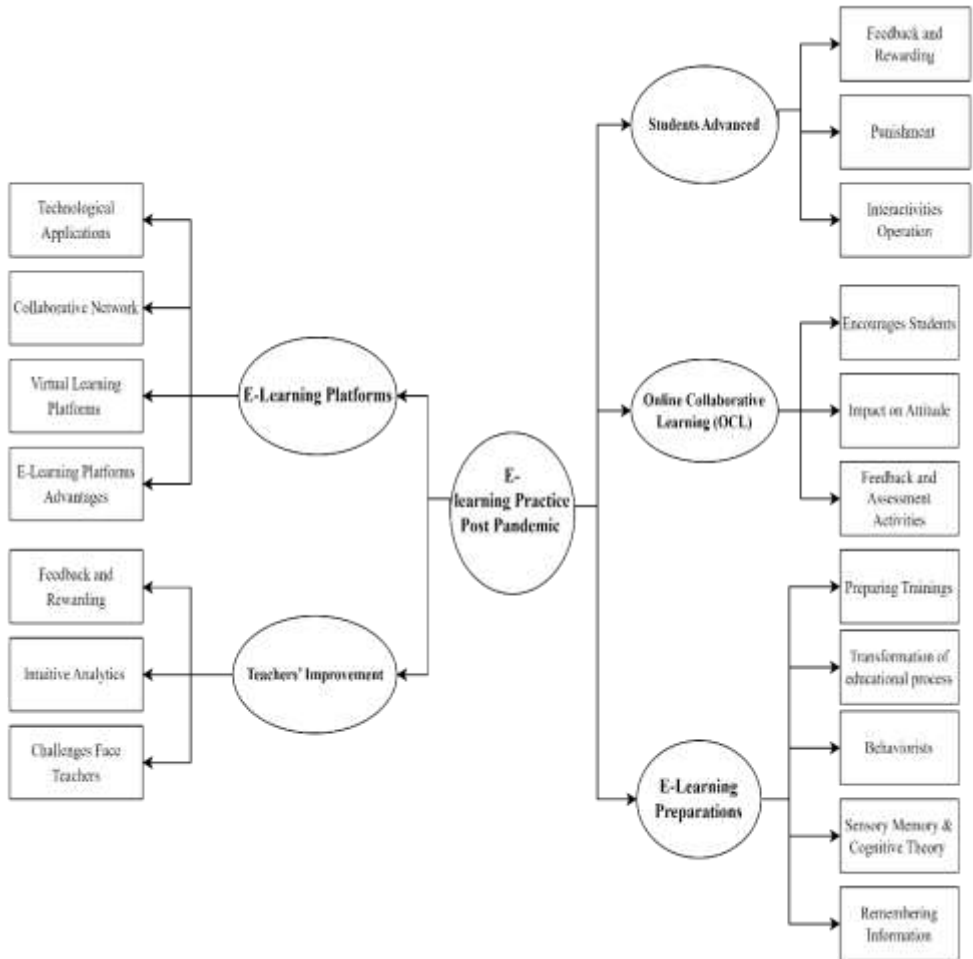


Figure 6: Mind Map

Each theory presents a different angle on education and the elements that enable online learning. Professionals in e-learning must use a range of e-learning strategies while keeping in mind

the learning theories they support in order to help modern learners better understand, acquire, and retain the content. New theories will continue to have an influence on and modify educational practices and procedures in the future in order to close the gap between theories and practices.

Also, the findings may help teachers consider the theoretical foundation on which they plan for effective learning in the classroom across different stages. Instructors must provide good interactive online instructions to encourage students to build their own knowledge. Because these new areas of research have an impact on e-learning practice, e-learning efforts must stay up to date on developments in these new areas of research. These theories support the creation of many learning modalities that enable learners to participate in ways that they choose, based on their interests or abilities, while simultaneously providing them with learning challenges. They have major pedagogical consequences.

This study paves the way for academics; especially after the pandemic that we have been facing for over two years. This research highlights the fact that instructors were more concerned with adopting the Internet-based communications technologies, while overlooking how to apply this and what are the rules to do so. It also emphasizes the importance of the continuous enhancement of the educational content and the learning experience. Moreover, the investigation helps stakeholders

maintain the balance between theory and practice, and advise decision makers to be entrepreneurial, and realize the necessity of stakeholders' collaboration as a key success factor for e-learning in HEIs. On the other hand, the study also acts as a guideline for practitioners (employers or HR companies); especially as recruitment is becoming increasingly skill-oriented, rather than relying solely on a person's qualifications. Accordingly, the need for greater problem-solving, creative thinking, teamwork, and collaborative leadership skills will be dramatic in the upcoming years. Moreover, most of the job opportunities are expected to be for knowledge workers who can easily work in a technology-driven environment. This creates a calling need for linking the industry with academia in order to prepare graduates for the job market.

Additionally, how technology is used to improve teaching will be greatly influenced by the preference or choice of one theoretical technique. Because of COVID, connectivism is the first theoretical effort to thoroughly reexamine the effects of the Internet and the emergence of new communications technologies on education. However, what it is done in the past may not be enough to meet the requirements and expectations of today's learners. Social learning approaches present intriguing opportunities for extending and improving e-learning design, development, and deployment. E-learning theory may become

even more viable and appealing for learning if they take advantage of the benefits of social learning perspectives.

Based on the results of the focus groups analysis, it can be said that the application of e-learning within companies, not only within educational institutions, helps to enhance the skills of employees, and facilitates the possibility of targeting them with appropriate training that helps them develop their skills. Among them, it can be said that the adoption of e-learning helps companies in developing their overall performance, and this is because they provide extensive reports to management about employees and their performance in trainings, as well as reduce the cost of training on them, and this is due to the ease of availability of training materials on the platforms. It also increases the technological awareness of institutions, and paves the way for the adoption of different technologies in different fields of work.

9. Future Research, Recommendation and Limitation

The guidelines listed below can be used to maximize the advantages of e- learning and improve companies' performance as competitiveness.

- Since e-learning significantly improves employees' performance, the study advises that the problems identified in this study be taken into account and fixed in order to increase the efficacy and efficiency of the e-learning system.

- According to the study, an E- learning system needs significant funding not just for the first phases of development and deployment but also for ongoing maintenance. It is advised to maintain SMEs' technological tools up to date so that workers can do their tasks accurately, effectively, and efficiently.
- The report once more suggests improving information and communication technologies. Once more, the report advises advancing information and communication technology culture by formulating and carrying out more often technology-focused training programs.
- In addition, the study suggests that giving training programs for new software applications to employees is essential to enhancing their performance due to the software's essential function in the learning process. In order to improve individual employee performance through more effective performance evaluation, managers of the various SMEs should develop training methods and standards.
- The study's last recommendation is that training should be given periodically to make sure that workers have the commitment needed to alter procedures and innovate, improve performance, and have a passion for their work, which will lead to greater individual and organizational performance.

The intriguing results of this study can be expanded upon by future research to bring even more value. Despite the fact that the study provides valuable knowledge about e-learning theory in the Egyptian context. However, it claims that e-learning necessitates the development of a new learning paradigm. Also, it opens the door for later research in Egypt. Additionally, due to the rapidly rising number of mobile users in developing nations, particularly in Egypt, future study may be able to ascertain the ability of the recently accepted mobile learning emerging technology. The report recommends more investigation into the difficulty's universities have when attempting to educate through online learning owing to a lack of resources and the ICT and pedagogical expertise of teachers. The research also recommended quantitative testing in higher education settings and online learning environments with a variety of social and technological circumstances in order to broaden the applicability of the concept.

The study was limited to the instructors and students, who were used as key informants to provide information, which limited the framework to their beliefs without taking into consideration other stakeholders like e-learning providers, researchers, and policymakers as well as other business professionals outside the education sector.

The current research contains limitations, as is true with the majority of studies. To start, this investigation was carried out

at a single college. As a consequence, the study model might be used in other universities to determine whether it produced any different findings. Second, doing the study with a bigger sample size could allow for generalization and possibly yield more precise results. Additionally, employing a mixed methods approach may enhance the inquiry. For example, decision-makers at educational institutions may be interviewed or students may be polled using structured questionnaires to provide a more comprehensive understanding of the issue at hand.

According to the study, future research should cover a longer time span and use a bigger sample size. Due to the timeframe of the data collected for the study, the constraint may be seen in the timing. Employees with less experience are not taken into consideration because the scope of this research is restricted to choosing a sample of highly experienced supervisors. Therefore, rather than concentrating on a particular industry, it is also advised to undertake additional study, including the sector with employees and managers in diverse company sectors. The study's focus is also narrowed to Egypt, a developing nation, and it excludes the perspectives of other Middle Eastern experts from consideration. So as to explore the impacts of this new paradigm on other nations and generalize the findings, it proposed concentrating on more emerging countries, particularly those in the Middle East.

References

1. Agrawal, S., De Smet, A., Lacroix, S. and Reich, A., 2020. To emerge stronger from the COVID-19 crisis, companies should start reskilling their workforces now. McKinsey Insights (Issue May).
2. Almendingen, K., Morseth, M. S., Gjølstad, E., Brevik, A., and Tørris, C. (2021). Student's experiences with online teaching following COVID-19 lockdown: A mixed methods explorative study. *PLOS one*, 16(8), e0250378.
3. Anderson, T., Rourke, L., Garrison, D.R., and Archer, W. (2001) Assessing teaching presence in a computer conferencing environment. *Journal of Asynchronous Learning Networks*,5 (2).
4. Anderson, T. (2011). The theory and practice of online learning (2nd ed.). *AU Press*.
5. Andrews, M. A., Areekal, B., Rajesh, K. R., Krishnan, J., Suryakala, R., Krishnan, B., ... and Santhosh, P. V. (2020). First confirmed case of COVID-19 infection in India: A case report. *The Indian journal of medical research*, 151(5), 490.
6. Aruleba, K., and Jere, N. (2022). Exploring Digital Transforming Challenges in Rural Areas of South Africa through a Systematic Review of Empirical Studies. *Scientific African*, e01190.
7. Badr, B. A. A. B. (2020). The Effect of Online Collaborative Learning on Developing English Majors' Speaking Skills and Social Presence. *مجلة كلية التربية في العلوم التربوية*, 44(4), 159-226.
8. Bennett, E.E. and McWhorter, R.R., 2021. Virtual HRD's role in crisis and the post Covid-19 professional lifeworld: Accelerating skills for digital transformation. *Advances in Developing Human Resources*, 23(1), pp.5-25.
9. Çeliköz, N., Erişen, Y., and Şahin, M. (2019). Cognitive learning theories with emphasis on latent learning, gestalt and information

- processing theories. *Journal of Educational and Instructional Studies in the World*, 9(3).
10. Coman, C., Țîru, L. G., Meseşan-Schmitz, L., Stanciu, C., and Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability*, 12(24), 10367.
 11. Compeau, D. R., and Olivera, F. (2014). From 'theory light' to theorizing: a reaction to Avison and Malaurent. *Journal of Information Technology*, 29(4), 346-349.
 12. Cui, J., Li, F., and Shi, Z. L. (2019). Origin and evolution of pathogenic coronaviruses. *Nature reviews microbiology*, 17(3), 181-192.
 13. Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91-96.
 14. Donnelly, P., Benson, J., and Kirk, P. (2012). How to succeed at e-learning. *John Wiley and Sons*.
 15. El Gamal, S. and El Aziz, R. (2012), "Improving higher education in Egypt through e-Learning programmes: HE students and senior academics perspective", *International Journal of Innovation in Education*, Vol. 1, No. 4, pp. 335-360. <https://doi.org/10.1504/IJIE.2012.052738>.
 16. Ertmer, P. A., and Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 26(2), 43-71.
 17. Fiock, H. (2020). Designing a community of inquiry in online courses. *The International Review of Research in Open and Distributed Learning*, 21(1), 135-153.

18. Garrison, D. R. (2009). Communities of inquiry in online learning. In Encyclopedia of distance learning, Second edition (pp. 352-355). *IGI Global*.
19. Garrison, D.R., Anderson, T., and Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3),87-105.
20. Gundumogula, M. (2020). Importance of focus groups in qualitative research. *International Journal of Humanities and Social Science (IJHSS)*, 8(11), 299-302.
21. Harasim, L. (2017). Learning theory and online technologies. *Routledge*.
22. Hernandez, B., Montaner, T., Sese, F.J. and Urquizu, P., 2011. The role of social motivations in e-learning: How do they affect usage and success of ICT interactive tools?. *Computers in human behavior*, 27(6), pp.2224-2232.
23. Heyes, C. (2012). New thinking: the evolution of human cognition. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 367(1599), 2091-2096.
24. Ismail, N., and Kinchin, G. (2019). Can Online Collaborative Work Offer a Solution to the Over Crowded Classes in Egyptian Universities?. *International Journal of Management and Applied Research*, 6(2), 48-67.
25. Javadi, Y., and Tahmasbi, M. (2020). Application of humanism teaching theory and humanistic approach to education in course. *Theory and Practice in Language Studies*, 10(1), 40-48.
26. Kang, B. 2021. How the COVID-19 Pandemic Is Reshaping the Education Service. The Future of Service Post-COVID-19 Pandemic, Volume 1 Jungwoo Lee Spring H. Han Editors Rapid Adoption of Digital Service Technology.

27. Kendeou, P., Van Den Broek, P., Helder, A., and Karlsson, J. (2014). A cognitive view of reading comprehension: Implications for reading difficulties. *Learning disabilities research and practice*, 29(1), 10-16.
28. Kerlinger, F. N. and Lee, H. B. (2000). Foundations of behavioural research. 4th Edn. Belmont, CA: *Cengage Learning*.
29. Khoshaim, H. B., Al-Sukayt, A., Chinna, K., Nurunnabi, M., Sundarasan, S., Kamaludin, K., and Hossain, S. F. A. (2020). Anxiety level of university students during COVID-19 in Saudi Arabia. *Frontiers in psychiatry*, 11, 579750.
30. Kimiloglu, H., Ozturan, M. and Kutlu, B., 2017. Perceptions about and attitude toward the usage of e-learning in corporate training. *Computers in Human Behavior*, 72, pp.339-349.
31. Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education*, 7(6), 44-53.
32. Klement, M., and Dostál, J. (2016). Theory of learning and e-learning. In *INTED2016: 10th International Technology, Education and Development Conference*.
33. Korysheva, S., Ganishina, I., Pashukov, S., Aipova, M., Tkachenko, N., and Podnebesnaya, E. (2020, March). Psychological and Pedagogical Features of E-Learning in Higher Educational System: Analysis of Experience and Prospects of Development. In "New Silk Road: Business Cooperation and Prospective of Economic Development" (NSRBCPED 2019) (pp. 913-917). *Atlantis Press*.
34. Kumar, V., and Sharma, D. (2021). E-Learning Theories, Components, and Cloud Computing-Based Learning

- Platforms. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, 16(3), 1-16.
35. Kwon, H. R., and Silva, E. A. (2020). Mapping the landscape of behavioral theories: Systematic literature review. *Journal of Planning Literature*, 35(2), 161-179.
36. Lalic, B., Majstorovic, V., Marjanovic, U., Delić, M. and Tasic, N., 2017. The effect of industry 4.0 concepts and e-learning on manufacturing firm performance: evidence from transitional economy. In *Advances in Production Management Systems. The Path to Intelligent, Collaborative and Sustainable Manufacturing: IFIP WG 5.7 International Conference, APMS 2017, Hamburg, Germany, September 3-7, 2017, Proceedings, Part I* (pp. 298-305). Springer International Publishing.
37. Lestari, J. W., and Wardani, E. (2019). Humanistic psychology study of Abraham Maslow on the main character in *Tiba Sebelum Berangkat* novel by Faisal Oddang. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 2(1), 110-118.
38. Lin, K.Y. and Lu, H.P., 2011. Why people use social networking sites: An empirical study integrating network externalities and motivation theory. *Computers in human behavior*, 27(3), pp.1152-1161.
39. Magableh, G. M. (2021). Supply chains and the COVID- 19 pandemic: A comprehensive framework. *European Management Review*, 18(3), 363-382.
40. Mariselvi, D., and Haridha, R. S. P. (2021). Impact of COVID-19 on Education, Employment, Economy and Mental Health Issues. *COVID-19: Crisis, Effects, Challenges and Innovations; Office for Civil Rights: Washington, DC, USA*, 75.

41. McCutcheon, K., Lohan, M., Traynor, M., and Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of advanced nursing*, 71(2), 255-270.
42. Mitchell, F., Nørreklit, H., Nørreklit, L., Cinquini, L., Koeppe, F., Magnacca, F., ... and Liboriussen, J. M. (2021). Evaluating performance management of COVID-19 reality in three European countries: a pragmatic constructivist study. *Accounting, Auditing and Accountability Journal*, 34(6), 1345-1361.
43. Mizokami, S. (2018). Deep active learning from the perspective of active learning theory. In *Deep active learning* (pp. 79-91). Springer, Singapore.
44. Ndiaye, M., Oyewobi, S. S., Abu-Mahfouz, A. M., Hancke, G. P., Kurien, A. M., and Djouani, K. (2020). IoT in the wake of COVID-19: A survey on contributions, challenges and evolution. *Ieee Access*, 8, 186821-186839.
45. Nikou, S., and Maslov, I. (2021). An analysis of students' perspectives on e-learning participation—the case of COVID-19 pandemic. *The International Journal of Information and Learning Technology*, 38(3), 299-315.
46. Oprea, O. M., Bujor, I. E., Cristofor, A. E., Ursache, A., Sandu, B., Lozneau, L., ... & Matasariu, D. R. (2023). COVID-19 Pandemic Affects Children's Education but Opens up a New Learning System in a Romanian Rural Area. *Children*, 10(1), 92.
47. Orîndaru, A., Popescu, M. F., Alexoaei, A. P., Căescu, Ş. C., Florescu, M. S., and Orzan, A. O. (2021). Tourism in a post-COVID-19 era: Sustainable strategies for industry's recovery. *Sustainability*, 13(12), 6781.

48. Patrinos, H. A., Vegas, E., & Carter-Rau, R. (2022). An analysis of COVID-19 student learning loss. Policy Research Working Paper. May
49. Picciano, A. G. (2017). Theories and frameworks for online education: Seeking an integrated model. *Online Learning*, 21(3), 166-190. doi: 10.24059/olj.v21i3.1225
50. Picciano, A. G. (2021). Theories and frameworks for online education: Seeking an integrated model. *In A Guide to Administering Distance Learning* (pp. 79-103). Brill.
51. Pokhrel, S., and Chhetri, R. (2021). A literature review on impact of COVID-19 pandemic on teaching and learning. *Higher Education for the Future*, 8(1), 133-141.
52. Prince, M., and Davies, M. (2001). Moderator teams: an extension to focus group methodology. *Qualitative Market Research: An International Journal*.
53. Radha, R., Mahalakshmi, K., Kumar, V. S., and Saravanakumar, A. R. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. *International journal of control and automation*, 13(4), 1088-1099.
54. Ratheeswari, K. (2018). Information communication technology in education. *Journal of Applied and Advanced research*, 3(1), 45-47.
55. Recker, J. (2021). Information Systems Research as a Science. *In Scientific Research in Information Systems* (pp. 17-30). Springer, Cham.
56. Schneider, S., Beege, M., Nebel, S., Schnaubert, L., and Rey, G. D. (2021). The cognitive-affective-social theory of learning in digital environments (CASTLE). *Educational Psychology Review*, 1-38.
57. Selase, E. and Avenorgbo, M., 2021. The Effect of E-Training on the Performance of Employees in Small and Medium Scale Enterprise

- amidst the Covid-19 pandemic. *Acta Universitatis Bohemiae Meridionalis*, 24(2), pp.34-48.
58. Shah, R. K. (2019). Effective constructivist teaching learning in the classroom. Shah, RK (2019). Effective Constructivist Teaching Learning in the Classroom. *Shanlax International Journal of Education*, 7(4), 1-13.
59. Shaikh, U. U., Karim, S., and Asif, Z. (2017). Re-Thinking Vygotsky: Applying social constructivism to asynchronous online courses utilizing the power of crowdsourcing. PACIS 2017 Proceedings. 233.<http://aisel.aisnet.org/pacis2017/233>.
60. Sweller, J., Van Merriënboer, J. J. G., and Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, 31(2), 261–292.
61. Thurlings, M., Vermeulen, M., Bastiaens, T., and Stijnen, S. (2013). Understanding feedback: A learning theory perspective. *Educational Research Review*, 9, 1-15.
62. Udo, G.J., Bagchi, K.K. and Kirs, P.J., 2011. Using SERVQUAL to assess the quality of e-learning experience. *Computers in Human Behavior*, 27(3), pp.1272-1283.
63. Vaismoradi, M., and Snelgrove, S. (2019). Theme in qualitative content analysis and thematic analysis. *In Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 20, No. 3). DEU.
64. Verma, A., Gunjawate, D. R., Kumar, S. B., Bharath, C. S., and Ravi, R. (2020). COVID-19–what do we know and how are we dealing with it? A quick online cross-sectional study in India. *Journal of Health Research*. <https://doi.org/10.1108/JHR-06-2020-0231>.

65. World Health Organization, 2. (2020). Coronavirus disease (COVID-19): situation report, 171.
66. Yahaya, M. L., Oyediran, O. S., and IB, J. (2019). Is there any need for Theory in Research? International Research Journal of Engineering and Technology (IRJET), 6(3), 845-854.
67. Yan, M., Filieri, R. and Gorton, M., 2021. Continuance intention of online technologies: A systematic literature review. International Journal of Information Management, 58, p.102315.