E-Learning Tool Evaluating for Both Trainer and Trainee in PAAET Basic Education College using NetOp during COVID-19 Effect

Amal Almutairat[1]*, Mariam Almie[2]*

[1]PAAET, Basic Education College, Ardiya, Kuwait
am.almutairat[at]paaet.edu.kw

[2] PAAET, Basic Education College, Ardiya, Kuwait
ma.almie[at]paaet.edu.kw

*These authors are equally contributed to this work.

Abstract: *With an increased use of modern ICT methodologies in teaching, additional research is needed to evaluate their effects on students' learning. To ensure the effective teaching and learning, there was introduces software programs one of them is NetOp. The purpose of this paper is to empirically investigate how the Internet-based computer laboratory using NetOP at BEC (PAAET). This paper summarizes both teachers' and students' experiences in the teaching-learning process using NetOp in a computer laboratory. Teaching and learning in a computer lab have advantages and disadvantages for both teachers, and students. However, in this paper we have shown that the benefits of the computer laboratory using NetOp outweigh its drawbacks and conclude that it has been successfully used both for teaching and learning of in BEC before Covide-19 pandemic.*

Keywords: E-learning, NetOp, COVID-19, BEC, PAAET.

1. Introduction

The technology evolution has its significant demonstrating on our normal daily live, learning and teaching. Students learn in differing ways and the way information is presented to them affects their ability to learn. Consequently, the learning style must be differentiated. In this regard [1] identify three learning styles to support students in their learning process:

Visual learners learn best through seeing things such as images, demonstrations, facial expressions, and body language of the instructor to fully understand the content of the lesson.

Auditory learners learn best by hearing things through verbal lectures, discussions, talking things through and listening to what others have to say.

Tactile/Kinaesthetic learners learn best through experiencing, reflecting, interacting, and doing things. These learners prefer to actively explore the physical world around them and would benefit from manipulating real objects and/or acting on them in a simulated environment.

However, students need to utilize the different learning styles interchangeably during the learning process for them to have an effective learning experience [2].

In addition to the above-mentioned learning styles, there are learning theories which concerned with the actual process of learning, occurs inside a person [3]. There are basically three main perspectives in learning theories: Constructivism [4], Cognitive [5], and Behaviourism [6].

The ways through which instructors deliver instructions and learners access these instructions are referred to as Learning methods. Several learning methods have been described including traditional learning, e-Learning, blended learning, mobile learning, and personalized learning.

Traditional learning refers to face-to-face sessions, through which the teacher delivers course material to students in the same place and at the same time.

E-Learning, on the other hand, refers to the use of ICTs to transform and support the learning process ubiquitously.

Blended learning makes use of a combination of various learning methods that include face-to-face classroom activities, live e-Learning, and self-paced learning [7].

Mobile learning is defined as learning or delivery of content that is facilitated by the use of portable technologies such as mobile phone, PDAs, or iPods [8].

Personalized learning is a learning approach that facilitates and supports individualized learning [9].

In the past decade, the term "e-learning" has been commonly used, various definitions have been formulated to refer to the same educational experience. Such as:
- The use of information and communication technologies (ICTs) to transform and support the learning process ubiquitously [2].
- The acquisition and use of knowledge which is distributed and facilitated primarily by electronic means. Such electronic means may include internet, intranet, extranet,

CD-ROM, video tape, DVD, TV, and personal organizers [10]. E-Learning can be carried out in several ways which include computer based asynchronous, and synchronous learning [11].

- Instructions delivered via all electronic media including the internet, intranet, extranet, satellite broadcasts, audio/video, interactive TV, and CD-ROM [12].
- Learning facilitated by internet and www technologies, delivered via end-user computing that creates connectivity between people and information and creates opportunities for social learning approaches [13].
- Distance education using the internet and/or other information technologies [14].
- In addition [2] Define e-learning as a learning method that uses ICTs to transform and support teaching and learning process ubiquitously.

E-Learning has transformed the traditional teaching and learning models and strategies [9],[15].

To take the actual learning its place, e-learning technologies must be used. These e-learning technologies include:
- CD-ROM media have been used to deliver learning material to students on distance programs [5].
- Learning Management Systems (LMS) are a whole range of information systems and processes that contribute directly or indirectly to learning and to the management of that learning [16]. They are primarily developed to provide online learning services for students, teachers, and administrators. Examples of LMS include (KEWL 2005) and (Blackboard 1997)
- Content Management Systems (CMS) such as (Moodle 1999) are developed to facilitate the collaborative creation of content, organization, control and to manage the publication of documents in a centralized environment. Learning Content Management Systems (LCMS) are mostly web-based systems that combine the management and administrative functionalities of LMS and CMS to author, approve, publish, and manage learning content. An example of such technologies is the Macromedia Course Builder (2008).

Multimedia Communities and Virtual Worlds They provide an enrichment of the educational experience that is compelling, informative, and fun [17].
- Learning objects as defined by [18] are digital resources that can be reused to support learning.
- Game authoring technologies aim at enhancing and facilitating the students' learning process through built-in simulations and interactions [19].

Technology in general has not only improved knowledge storing methods and learning techniques but has also acted as a catalyst to combat the barriers of inflexible organizational structures [20]. As a result, many higher education institutions have adopted e-Learning in their curricula. E-learning has changed the higher education and make it more flexible. Additionally, successful implementations of eLearning environments require an understanding of the technology and pedagogy integration for learning to take place effectively [21], [12].

To have a successful impact of e-learning, the following issues must be cited:
- Identifying pedagogies underlying online courses [22].
- Improving ICT skills [23].
- Technology use [24], [25].
- Management support [26],[27],[28].

The purpose of this paper is to bridge this gap by describing how the use of computer technology and software (particularly Netop), have influenced the teaching-learning process, and to share our experience with computer laboratory during the last ten years combining teachers' and students' points of view.

2. Methodology

Teaching and learning in a computer lab have advantages and disadvantages for both teachers, and students. According to [29] there is an important change in teaching and learning in higher education and colleges. E-Learning implementation is an area in progress that continues to evolve with time and technologies [2]. This paper explores one of the e-Learning methods in higher education. The purpose of this paper is to bridge gap by describing how the use of computer technology and software (particularly NetOp), have influenced the teaching-learning process of Basic Education College (BEC) student taught at high education level at Public Authority of Applied Education in state of Kuwait (PAAET), and to share our decay exceeded experience with computer laboratory combining teachers' and students' points of view. In addition to COVID-19 pandemic effect on both NetOp users' teachers and students in BEC, PAAET. It provides a general overview of using NetOp in (PAAET). Thereafter, it analyses its implementation for both teacher and students in (BEC). It investigates some implementation aspects for Netop within higher education.

On Information and Technologies courses (IT) although computer classrooms add to teaching and make it better classroom, the instructor in computer faces challenges to increase the efficiency of teaching. Such as controlling students and concentrate their focus during the lecture into the information given. In IT courses the computer classrooms increase the teaching efficiency. The instructor needs to control and manage the classroom. As shown in [29] the benefits of the computer laboratory outweigh its drawbacks and conclude that the computer laboratory has been successfully used both for teaching and learning. This paper summarizes our ten years' experiences in teaching at higher education. We performed an anonymous evaluation survey. The evaluation survey was made of two part for each students and teachers. One survey at the beginning of the course before using the Netop, and the other part of the survey after using Netop. However, since we started our research at the end of 2019 beginning of 2020 when the COVID-19 pandemic started it is not feasible to perform an experimental design. An alternative method was not possible due to COVID-19 quarantine. This kind of evidence of Netop drawback due to its intranet limitation. The computer labs provided students with the practical experience of using

computer software to perform calculations and conduct realistic simulations. Our ten years' experience in teaching in a computer lab shows that the choice of a suitable computer package is a very important issue for teaching-learning process. Among the available software Netop. Which controls what students are using their PCs for during classes and gives a powerful tool for virtual and networked teaching. With this tutorial software it is possible to share any screen with the class, follow students as they work and give them help where and when it is needed. NetOp allows to monitor all students at once or individually from teacher's own desk and take over a student's computer easily to provide assistance. Teacher can follow all students' activities in real-time and allow or deny automatically specific programs and web addresses. It is also possible to control what applications have been used, distribute, and collect documents from students and create and perform regular tests with immediate individual feedback.

3. Results and Finding

E-Learning field researchers still argue that the development of e-Learning has not been tested by time and is still in its infancy [30],[31]. While e-Learning presents numerous opportunities to support learning, e.g., [22] notes that creating an e-Learning experience involves "a serious commitment to understanding the different features of this medium and the ways it can be used most advantageously to impart learning".[2] While some universities have achieved considerable benefit in the adoption of e-Learning [13], others are still struggling to realize the attainment of the minimal educational value [27].This is the case despite that skilled and interested personnel as well as increasing number of students in many cases force universities to embrace this education venture.

At early 2006 the Public Authority for Applied Education and Training (PAAET) has started using the Netop program. At that time, it started with Ver3 then it was upgraded until Ver6. During the last 14 years combining both teachers and students, who worked in this program. it is installed on more than 7000 devices and exceed 250 laboratories in colleges and institutes. In February 2020, a survey conducted to evaluate ninety-five students. Those students were taking IT courses in Basic Education College labs. In these labs NetOp installed and used to manage the labs.

Results of students' survey
1) 88 % students are using the computer in their study subjects
2) 27 % students are having difficulty in using the computer
3) 88 % students are requested to submit the assignment by computer in their study subjects
4) 17 % students are having difficulty in to submitting the assignment by computer
5) 85 % students are having the teachers to solve the difficulty quickly.
6) 87 % students are having the teachers to solve the difficulty clearly.

general, software programs enabling teachers to see the

screens of students and to show their screens to the students can be called computer laboratory control (CLC) software. Examples of such programs include Netop School, Netop Remote Control, NetSupport School, iTALC, etc. [32]. Laboratory control systems (LCSs) allow students to conduct their class activities over a teacher-centered computer.

The teacher can watch what students are doing and help when necessary without going to the students on their computers. It helps teachers to evaluate student behaviors. NetSupport lab was designed to improve the learning process by enabling users to watch and control their monitor screens [32]. An LCS, for example in NetSupport, allows teacher to watch students' classroom activities over a teacher-centered computer.

An LCS can manage all computers and operations in these computers [32]. The system facilitates communication and is cost effective [32]. Using educational technologies effectively provides cooperation, communication and innovative for pedagogic approaches. It fosters student interest in lessons and improves their interaction with each other. A network is established. An LCS also has chatting and messaging capabilities. The teachers and students can chat or communicate through written messages. They can find solutions to problems by means of written messages.

In addition, LCS gives management for teachers in a computer laboratory classroom. These systems help teachers to manage their classes or schools and assign certain student specific tasks. In laboratory environments where the number of students can be high, it can be difficult and time-consuming to deal with students on a one-by-one basis. In an environment designed with an LCS, teachers can help their students by entering students' computers over their own computers without moving around the classroom. International research on the educational environments designed based on an LCS system shows that LCS programs enhance student-student and student-teacher interaction, facilitate the remote control of students, and enable teachers to control and monitor their students individually [32].

Such a system can also help in storing student information and developing class reports. The system offers alternative options to store student profiles and involve students in the platform [32].

As well established, the main goal of education is not only to instill desired behaviors in students, but also to prevent undesired learning outcomes from occurring. Through an LCS, the teacher can see the incorrect operations of students and intervene immediately. In this way, possible erroneous learning can be corrected without delay. In addition, LCS-based classroom environments are cost-effective and access to forbidden sites can be controlled.

Explanations supported by graphs and handwritings. As [33] put it, in traditional laboratory environments, it may become very difficult for students to see the exercises shown on the projector.

It fosters students' problem-solving skills through. It directs

students to more enhanced production by allowing them to customize their multi-media notes and generating a platform for students to share their products. It helps students to evaluate their learning styles more effectively. [34] reported that LCS programs such as NetSupport lab provide students with opportunities to learn individually. Moreover, it was reported that the LCS makes a positive contribution to learning how to learn [35].

Also, through this system, administration of online exams is very easy. In addition to the findings reported, it reduces the possibility of cheating, saves time and improves informal communication [36],[37].

4. Conclusion

This paper tried to investigate the experiences of teachers and opinions of students towards Internet based computer laboratory in the teaching and learning. The main finding is although Netop is a good tool, but due to its Intranet limitations it is not adopted in COVID-19 pandemic has its drawback to its Intranet limitations. Which restricted its use to labs sighted only inside PAAET. Covide-19 pandemic forces the education process including universities to adopt and improve their e-learning skills and methods. While the Covide-19 shadow on all over our life. It heavily enforces e-learning effective use to continue the learning and education for the students in effective and efficient way. Strategic use of educational technologies facilitates and fosters learning and teaching.

Moreover, due to COVID-19 the lesson learned is expect the unexpected. Thus, we must think of the extreme and ridiculously unexpected situations to build on them some of our teaching and learning systems. Future research should therefore seek to further investigate these aspects and to explore suitable approaches for effective implementation of e-Learning to support learning.

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Author Profile

Amal Almutairat received the B.S. degrees in Computer Science from Science College of Kuwait University in 1996. During 1996-2008, she stayed in Ministry of Finance as programmer. From 2008 till now she Train in Basic education College in PAAET of Kuwait.

Mariam Almie received the B.S. and M.S. degrees in Computer Engineering from Computer Science and Engineering College of Kuwait University in 1997 and 2001, respectively. During 1998-2008, she stayed in Ministry of Education as teacher and computer engineer. From 2008 till now she Train in Basic education College in PAAET of Kuwait.