

Educational Technology: A Way To Enhance Student Achievement At The University Of Bahrain

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ABSTRACT

Educational Technology can empower teachers and learners, promote change and foster the development of twenty-first century skills. Improving education quality is a priority for most developing countries in which governments are facing a challenge to identify efficient ways to use their scarce resources and raise the quality of education. Data to support these beliefs are still limited, especially in the Kingdom of Bahrain and the other Gulf countries. Therefore, the current research aims to investigate the current situation regarding using Educational Technology at the University of Bahrain from the following aspects: the Educational Technology adopted by the university in the teaching and learning processes, obstacles facing the adoption of educational technology and the effects of Educational Technology on student achievement and academic staff teaching effectiveness. The results show that at the University of Bahrain, student learning and achievement have been affected when the teaching and learning processes are enhanced by Educational Technology. Educational Technology has motivated the students to get more involved in learning activities through which they become more active and more interested in learning. Moreover, the academic staff believe that adopting such technologies can enhance their communication with the students, reduce the teaching pressure caused by the course material preparation and make the lecture material available at the time of the discussion. However, the findings demonstrate some impediments facing both the students and instructors in adopting Educational Technology at the University of Bahrain, such as the insufficient ICT infrastructure and computing facilities, lack of sufficient technology budget and IT investment, and technical support.

Keywords: *Educational Technology, Enhance Student, Achievement, Bahrain*

INTRODUCTION

Education Technology is defined as “the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources” (Richey, 2008). Educational Technology can be used by all educators who want to incorporate technology in their teaching as well as educational administrators. The emergence of different educational tools and software has motivated many learning organizations to integrate them into the curriculum as they can have a great impact on student learning (Hawkins et al., 1996). Recently, Educational Technologies have been considered as a crucial factor in improving the quality of education and enhancing the level of student educational learning performance (Bialo and Sivin-Kachal, 1995). Educational Technology has demonstrated a significant positive effect on student achievement and the teaching and learning processes as a whole (Bialo and Sivin-Kachala, 1995).

The Kingdom of Bahrain has been the leader of educational progress within the region, establishing the Gulf’s

first public education system in 1919 and giving its female population equal access to the Kingdom's educational resources (Bahrain Economic Development Board, 2011). In the Kingdom of Bahrain, a shift has taken place from teaching students how to use technology to focusing on using technology to support the delivery of the materials and content, as well as improving the learning outcomes of individuals as they seek to promote higher levels of motivation among students. The Ministry of Education works hard to improve the education process that the population goes through, and provides accessible, responsive, high quality education oriented services for the public. As such, a new Quality Assurance Authority for Education and Training (QAA) was launched in February 2009, which aims to raise the accreditation standards and inspections for the education system, and rank the performance of the system through regular national exams.

As the main part of the educational system in the Kingdom of Bahrain, the University of Bahrain, which is the only national learning organization, pays considerable attention to utilizing state-of-art technologies to facilities their own progress, particularly in the teaching and learning. For instance, Educational Technology has become increasingly commonplace in classrooms. All the classrooms are occupied by a data show device and a personnel computer to enable computer-based instructions. An open area lab consisting of more than 200 personnel computers is open to the students for the whole day to study and practice their learning material. In addition, there are four rooms in which a smart board is available for workshops for the students and the academic staff. Moreover, the University of Bahrain has made consistent progress in expanding Internet access in the instructional rooms. The Internet can be accessed by the students everywhere in the university through the Wireless network and the Wi-Fi. The University of Bahrain also established the E-Learning Centre in 2004 to provide high quality educational output that will contribute to producing a highly qualified generation. Moreover, the university has set a strategic plan to investigate new and more updated technology in the education process, such as teleconferencing, a collaborative environment for enhancing student team working, and social networking.

It is generally believed that technology can empower teachers and learners, promote change and foster the development of twenty-first century skills. Improving education quality is a priority for most developing countries in which governments are facing the challenge to identify efficient ways to use their scarce resources and raise the quality of education. Data to support these beliefs are still limited, especially in the Kingdom of Bahrain and the other Gulf countries. Therefore, this research aims to investigate the current situation regarding using Educational Technology at the University of Bahrain according to the following aspects: the Educational Technology adopted by the university in the teaching and learning processes, obstacles facing the adoption of educational technology and the effects of Educational Technology on student achievement and academic staff teaching effectiveness.

This paper consists of four sections; the next section highlights the research background. The research method and data collection are discussed in the third section. In the fourth section, the data analysis and results are discussed. The final section presents the conclusion of the study.

RESEARCH BACKGROUND

Educational Technology and Its Effect on the Teaching and Learning Processes

The definition of Educational Technology or Instructional Technology, as it is sometimes called (Earle, 2002), is difficult (Molerda, 2003). To define Educational Technology there is a need to distinguish between Educational Technology as a theory and as a field of practice and to focus on either the process or the system approaches (Molerda, 2003). Educational Technology has been defined as solutions to instructional problems that involve social as well as machine technologies with concern for improving the effectiveness and efficiency of learning in educational contexts (Cassidy, 1982, Gentry, 1995). Bruce and Levin (1997), however, perceive educational technology as a means of media with four different focuses: media for enquiry (for example, data modelling, spreadsheets, hypertext, etc.), media for communication (for example, e-mail, graphics software and simulations), media for construction (for example, robotics, CAD, control systems) and media for expression (for example, interactive video, animation software, music composition). Cox et al. (1999(2)) show that many educators perceive technology as a tool for improving the presentation of material for making lessons more fun for the learners and for making administration more efficient. According to the Association for Educational Communications and Technology (AECT) (2004), Educational Technology can be defined as "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources".

There is a widespread belief that Education Technology can enhance teaching and learning practices (Higgins, 2003), and create an "ideal" learning environment (Newhouse, 2002, Marshall, 2002, Honey and McMillan, 2005).

Hence, it becomes an integral part of both the teaching and learning process. Educational Technology can have the greatest impact on improving student learning and achieving measurable educational objectives (Nutball, 2000, Hawkins et al., 1996). In addition, it can empower teachers and learners, transforming teaching and learning processes from being highly teacher dominated to student centred (Higgins, 2003; Trucano, 2005). This transformation will increase the teaching gain for students and improve the quality of learning. Moreover, Educational Technology may provide students with valuable skills that are recommended by the market. Thus, such technology creates opportunities for learners to develop their creativity, developing cognitive skills, critical thinking skills, information reasoning skills, communication skills and other higher order thinking skills (Trucano, 2005, Means et al., 1994, Chigona and Chigona, 2010). Technology is a valuable tool that can help in the encouragement of collaborative learning as well as increase learner performance by effectively improving teaching and learning abilities (Chigona and Chigona, 2010, Means et al., 1994). It can also help learners to explore education beyond classrooms by providing access to a wide range of resources and information, promoting scientific inquiry and discovery and allowing students to communicate with experts (Means et al., 1994). According to Honey (1999), Educational Technology provides opportunities for problem solving and alignment with the curriculum framework and existing instructional resources, built-in assessments and procedures to match technology resources with learner needs, students their own control of pacing the educational programming and the involvement of teachers in the development of educational programmes. Bixler and Askov (1994) stated that effective technology empowers learners and helps them take responsibility for their own learning. Cradler and Bridgforth communicated the output of a forum wherein 70 US educational decision-makers and practitioners met, discussed and prioritized the benefits and issues related to educational networking. The conclusion was that networking technology is a powerful communications tool, which when utilized can support innovative teaching, encourage active learning, help relieve the professional isolation of teachers and can enable users to become active researchers and learners.

While there are strong beliefs that educational technology has a positive impact on the educational environment, some argue that it may be hard to shift from the traditional way of teaching to a technological one. Cost, culture and other educational and environmental factors are among the reasons for not adopting Educational Technology by many educational organizations and institutes.

The Effects of Educational Technology on Achievement and Performance of Students

Previous studies revealed the positive impact of technology on enhancing the achievement and performance of students and in gaining significant improvement and changes in all areas (Kulik and Kulik, 1991; Kulik, 1994; Rutz et al., 2003; Sivin-Kachla, 1998; Baker et al., 1994). For instance, many studies of the comprehensive effort to integrate technology into schools show an increase in test scores related to the use of technology. Kulik (1994) aggregated 500 individual research studies of computer based instruction students. The results of the aggregation demonstrated that students who used computer-based instruction scored better than those in the control condition without a computer. Students also gained more knowledge in less time because the classes became more enjoyable and interesting after the introduction of computers (Kulik, 1994).

Similarly, Sivin-Kachla (1998) found that students studying in a technology rich environment achieved higher marks in all subject areas, gained a positive attitude towards learning, were able to generate new ideas and built self-confidence. The US Department of Education conducted a scientific study in 2001 to assess the impact of technology using two types of student achievement measures – measure assessed reading achievement and assessed mathematics achievement. A significant impact was revealed in the students' scores. Moreover, in a study conducted in Pittsburgh, in which an intelligent tutor – software used to support the curriculum – was used as part of the regular curriculum for ninth-grade algebra (Koedinger et al., 1999). The results of the study demonstrated that 470 students in the experimental classes outperformed students in comparison classes by 15% on a standardized test and 100% on test targeting the curriculum focused objectives (Koedinger et al., 1999). Moreover, in their evaluation of Apple Classrooms of Tomorrow (ACOT), Baker et al. (1994) conducted research in five schools across the nation to assess the impact of adopting interactive teaching and learning technology with an aim to encourage teachers to use computers to support student initiative projects and to assess multiple resources and cooperative learning. The research findings revealed that technology had a positive impact on the attitude of students towards learning. It also changed the teachers' teaching practices towards more cooperative group work and less lecturing load (Schater, 1999).

Recent studies conducted by Banerjee et al. (2005) and Barrow et al. (2009) revealed that adopting an instructional computer program can improve student achievement. Banerjee et al. (2005) found that by integrating the mathematics curriculum with educational technology, the mathematics scores of the fourth-grade students in Vadodara, India were increased. In addition, Barrow et al. (2009) analysed the effect of an instructional pre-algebra and algebra program on student's test scores in the US, while Rutz et al. (2003), examined the impact of using instructional technology on optimizing the learning styles and process types. They found that using web-based material to

supplement the in-class experience can improve student achievement. Murphy et al. (2001) found evidence of a positive relationship between using discrete educational software and student achievement in reading and mathematics.

Previous studies on the integration of the technology in education have tackled student achievement from a basic aspect, such as the scores, but have ignored many other aspects of student achievement and performance. Therefore, despite thousands of impact studies, the impact of technology used on student achievement remains difficult to measure and open to much reasonable debate (Trucano, 2005).

Factors That Affect the Adoption of Educational Technology in Teaching

Any activity mediated by technology will be influenced by many factors. A number of studies have shown that there are a wide range of factors that influence educators in adopting their teaching with technological tools (Cox et al., 1999, Mumtaz, 2000, Mansoon, 2000). Among these factors are the quality of the ICT resources, incentive to change (Cox et al., 1999, Mumtaz, 2000), instructor's readiness to adopt and use technology, instructor's confidence, knowledge and ability to evaluate the role of ICT in teaching and learning, technical support, students' acceptance and attitude to the use of IT, effective training and personal development (Mansoon, 2000), leadership and the availability of IT resources (Balash et al., 2011, Cushman et al., 2006; Choudrie et al., 2005; Frank et al., 2004 and Sherry et al., 2000). Peeraer et al. (2010) identified other factors that are related, especially to ICT, which include access to computers, intensity of computer use, ICT skills and ICT confidence. Means et al. (2001) mentioned that factors, such as lack of technology infrastructure, technical support and high quality digital content, can affect technology implementation in urban schools. Balsh et al. (2011) identified institutional support as one of the important factors to be considered in adopting Educational Technology. They discussed institutional support from the lack of policy and planning of using the educational technology and the lack of a reward system or appreciation reward for using such tools.

Factors that may influence the adoption of Educational Technology have been categorized into three groups: personal attitude, socio-cultural and environmental (Yaghi 1996, Chigona and Chigona, 2010). Factors such as socio-cultural and instructor's attitude towards using ICT have been considered by Snoeyink and Ertmer (2002) to have a vital impact on the adoption of educational technology. Naimova (2008) identified social factors, such as sex, age and socioeconomic status, while familiarity with computer and language were identified as critical items of the cultural factors. Muller (2007, 2008) considered the instructor's attitude towards computing important and argued that this factor is critical to the effectiveness of integrating ICT into the curriculum. If instructors are not comfortable with technology, then low expectations from technology can be perceived. Moreover, the confidence of the instructors in using educational technology will impact their attitude towards using ICT and indicate their level of engagement with ICT, and, therefore, will impact their decision to adopt the educational technology in their curriculum (Cox et al., 2003, Snoeyink and Ertmer, 2002). In addition to the attitude of the instructors, Naimova (2008) identified the attitude of administrators as one of the factors that may affect the adoption of Educational Technology. He argued that the lack of support from administrators may hinder the implementation of technology in the classroom. In most cases, the administrators believe that computers and other IT cannot be used by those who are not IT knowledgeable and skilled (Naimova (2008), Yaghi, 1996).

RESEARCH METHODOLOGY AND DATA COLLECTION

This research aims to investigate the current situation regarding the use and adoption of Educational Technology by the University of Bahrain. To achieve this purpose both survey and experiment were conducted. A random sample of 250 students and 100 academic staff from different colleges and departments were selected for the survey. In addition, an experiment was conducted with the help of 30 students from the Department of Information Systems to investigate the impact of different Educational Technologies on their performance. The students were asked to attend three lectures, which were conducted using the traditional technique (white board), PowerPoint and smart board. At the end of the lecture, the students were requested to complete a short questionnaire indicating their perception concerning the impact of the technology used in the lecture.

Data analysis and results

Demographics

The demographic characteristics of the participants, both students and academic staff, are demonstrated in Table (1) and Table (2), respectively. The results in Table (1) show that the majority of the participating students were junior female (62%, 72%), Bahraini (94%), and between 17 and 22 years old. Moreover, the results demonstrate that most of the participants were from the College of Business (36%) (The College of Business is considered to be the biggest college in the University of Bahrain in terms of number of students).

Table 1: Selected characteristics of the sample (students)

Demographic information	%	Demographic information	%
Gender		College	
Male	28%	IT	16%
Female	72%	Science	10%
Age		Business	36%
17-22	95%	Engineering	9%
23-28	5%	Other	29%
Nationality		Class level	
Bahraini	94%	Freshman	36%
Non-Bahraini	5%	Junior	62%
		Senior	27%

The results in Table (2), however, show that the majority of the academic staff that participated in the survey were female (54%), non-Bahraini (56%), with an age range of between 36 and 50 (38%). In addition, the results show that most of the participants were from the College of Information Technology (38%) with experience of more than 15 years (42%).

Table 2: Selected characteristics of the sample (Academic staff)

Demographic information	%	Demographic information	%
Gender		College	
Male	46%	IT	38%
Female	54%	Science	22%
Age		Business	22%
23-35	6%	Engineering	4%
27-35	28%	Other	14%
36-50	38%	Years of experience	
Above 51	28%	Less than 5	18%
Nationality		5 - 10 years	18%
Bahraini	44%	10-15 years	22%
Non-Bahraini	56%	More than 15	42%

DESCRIPTIVE ANALYSIS

THE OVERALL ABILITY OF STUDENTS TO USE EDUCATIONAL TECHNOLOGY

The overall ability of the students to use technology at the University of Bahrain was investigated (Table 3). The results in Table (3) show that almost most of the students are able to use Educational Technology at the University of Bahrain. Thus, the results show that 46% of the participants are able to use Educational Technology without any assistance while 47% are able to use it with minimal assistance.

Table 3: The ability of students to use Educational Technology

Students' ability	%
Without assistance.	46%
Need minimal assistance when using technology.	47%
Need a lot of assistance when using technology.	7%
Never use technology.	0%

INTEGRATION OF EDUCATIONAL TECHNOLOGY IN TEACHING ACTIVITIES BY ACADEMIC STAFF

The frequency of integrating Educational Technology in teaching activities by academic staff was demonstrated and the results are demonstrated in Table (4). The results show that 44% of the participants are integrating Educational Technology in all of their courses, while only 2% never integrated Educational technology in their courses.

Table 4: Integrating Educational Technology in teaching activities

Educational Technology in teaching activities	%
Educational Technology is integrated in all of my courses.	44%
Educational Technology is integrated in most of my courses.	28%
Educational Technology is integrated in some of my courses.	26%
I never integrate Educational Technology in my teaching activities.	2%

IMPORTANCE OF COURSE REQUIREMENTS BEING AVAILABLE ONLINE

Both students and academic staff were asked regarding their perception concerning the importance of some of the course requirements to be available online. The results are shown in Figure (1). The results in Figure (1) reveal that both students and the academic staff believe that it is very important for lecture notes and students work (assignments and projects) to be available online (77% and 71%, respectively). However, there is a clear contradiction in their perception concerning the importance of the course grades, video archive of lectures, course syllabus, and class discussions.

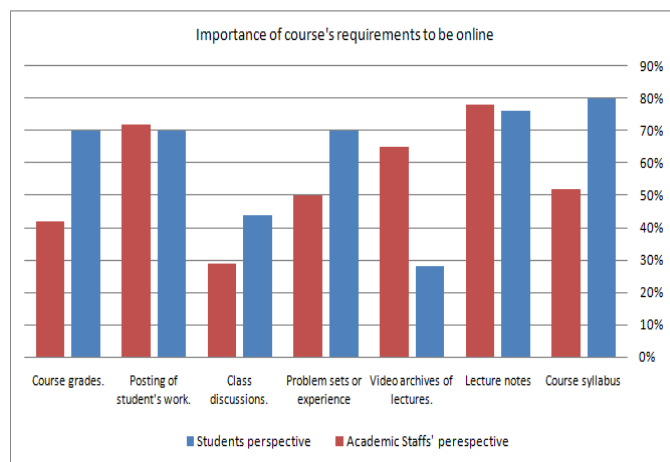


Figure 1: Perception of students and academic staff concerning the importance of course requirements being available online

PERCEPTION CONCERNING THE BARRIERS FOR IMPLEMENTING EDUCATIONAL TECHNOLOGY AT THE UNIVERSITY OF BAHRAIN

The perception of students and academic staff concerning the barriers for integrating Educational Technology in their learning and teaching activities was investigated. The results are shown in Table (5) and Table (6). The results in

Table (5) show that all students believe that the major barriers for integrating Educational Technology in their learning activities are the insufficient computing facilities (57%) followed by the difficulty of gaining access to the technical recourses in the University of Bahrain labs and classrooms (41%).

Table 5: Student perception concerning the barriers for integrating Educational Technology in their learning activities

Barriers	%
Insufficient computing facilities (labs, technology-equipped classrooms).	57%
Gaining access to the technical resources at the University of Bahrain is too difficult or inconvenient.	41%
Lack of assistance when facing technical problems.	40%
I'm not interested in using technology.	21%
Do not perceive any barriers.	9%

However, the results in Table (6) demonstrate that the insufficient computing facilities (64%) and the computing infrastructure (58%) are the most encountered barriers facing the academic staff in integrating Educational Technology in their teaching activities.

Table 6: Perception of academic staff concerning the barriers for integrating Educational Technology in their teaching activities

Barriers	%
Lack of time to integrate Educational Technology in teaching activities.	44%
Lack of funding to purchase the equipment and software needed.	32%
Insufficient computing infrastructure (servers, bandwidth, storage capacity).	58%
Insufficient computing facilities (labs, technology-equipped classrooms).	64%
Not enough training offered in the areas that interest you	32%
Not enough assistance with technical problems.	40%
Not interested in using technology.	2%
Do not perceive any barriers.	6%

THE EFFECT OF ADOPTING EDUCATIONAL TECHNOLOGY – PERSPECTIVE OF STUDENTS AND STAFF

As most of the students and academic staff at the University of Bahrain perceive the importance of Educational Technology, Table (3) and Table (4), the effect of these technologies should be investigated. Therefore, the perception of students and academic staff concerning the effect of Educational Technology on the overall performance of the students and instructor was investigated, as shown in Table (7) and Table (8), respectively.

Table 7: The effect of adopting Educational Technology - perspective of students

Effects	Disagree	Neutral	Agree
Increase academic achievements (e.g., grades).	18%	36%	46%
Encourages student's collaboration.	24%	33%	43%
Improves student's communication and interpersonal skills (e.g., ability to be a group member).	20%	25%	55%
Motivates the students to get more involved in learning activities.	20%	29%	51%

The results in Table (7) demonstrate that more than half of the participating students believe that Educational Technology can improve their communication and interpersonal skills (55%) and motivate them to get more involved in learning activities (51%). In addition, the results in Table (8) demonstrate that the majority of the participating academic

staff (> 70%) believe that Educational Technology can enhance the instructor's communication skills (74%), increase the competency among other academic staff (74%) and reduce the pressure of the lecture preparation on the instructor (72%).

Table 8: The effect of adopting Educational Technology on student performance - perspective of academic staff

Effects	Disagree	Neutral	Agree
Enhance their communication skills.	8%	18%	74%
Increase the competency among other academic staff.	8%	18%	74%
Give the teachers the opportunity to be learning facilitators instead of information providers.	22%	40%	38%
Reduce the pressure of the lecture preparation on the instructor.	14%	14%	72%
Destroy student's social development.	48%	32%	20%

EXPERIMENT ANALYSIS AND RESULTS

In section 3, it was mentioned that two of the adopted Educational Technologies in the University of Bahrain were selected: smart board and power point. They were compared with the traditional way of teaching using a whiteboard. The comparison was done to examine the perception of the students on the adoption of such technologies as a teaching tool, the effect of these technologies on their communication skills, performance and understanding, as shown in Table (9), Table (10) and Table (11).

PERCEPTION OF STUDENTS CONCERNING THE ADOPTION OF POWERPOINT, SMART BOARDS AND WHITEBOARD AS TEACHING TOOLS

The results in Table (9) indicate that the smart board is the most enjoyable technology (70%) whereas PowerPoint is the most boring technology to be used (80%). Moreover, the respondents believe that PowerPoint and whiteboard can make the lecture material easy to follow (40%, 40%, respectively) while they require extensive note taking (30% and 70%). In addition, PowerPoint is perceived by the participants to be a teaching technology that does not allow enough participation in the lecture (65%).

Table 9: Perception of students concerning adopting PowerPoint, smart board and whiteboard as teaching tools

Description	Power Point	Smart Board	White board
Enjoyable	20%	70%	10%
Easy to follow.	40%	20%	40%
Boring	80%	10%	10%
Does not allow enough participation.	65%	0%	35%
Required extensive note taking.	30%	0%	70%

PERCEPTION OF STUDENTS CONCERNING THE EFFECT OF USING POWERPOINT, SMART BOARDS AND WHITEBOARD ON THEIR COMMUNICATION SKILLS

The results in Table (10) demonstrate that students believe that both PowerPoint and whiteboard decrease the communication between the instructor and the students (50%, 40%, respectively) while the smart board increases the interaction among the students (80%) and enhances the ability of students to work in a group (65.5%).

Table 10: Perception of students concerning the effect of PowerPoint, smart Board and whiteboard on their communication skills

Effect	Power Point	Smart Board	White board
Make the content and delivered materials of the lectures more clear	35%	40%	25%
Helps the students to remember the information easily.	50%	50%	50%
Increases the student's attention by limiting any disruption opportunities.	40%	40%	20%

PERCEPTION OF STUDENTS CONCERNING THE EFFECT OF USING POWERPOINT, SMART BOARDS AND WHITEBOARD ON THEIR PERFORMANCE AND UNDERSTANDING

The results in Table (11) demonstrate that more than 30% of the participating students believe that smart boards and PowerPoint can make the content and the delivered materials of the lectures more clear by offering images, colours and many other features. Moreover, they can increase the attention of students by limiting any opportunities for disruption (40%, 40%, respectively)

Table 11: Perception of students concerning the effect of PowerPoint, smart board and whiteboard on their performance and understanding

Effect	Power Point	Smart Board	White board
Decreases the communication between the instructor and the students.	50%	10%	40%
Increases the interaction between students.	5%	80%	15%
Enhances the students' ability to work in a group	25%	65.5%	9.5%

DISCUSSION AND CONCLUSION

The current study was conducted to investigate the effect of using Educational Technology on the achievement and performance of students at the University of Bahrain. It has been revealed by the results that at the University of Bahrain the learning achievement of students is affected when the teaching and learning processes are enhanced by Educational Technology. It motivates the students to become more involved, active and interested in learning. In addition, Educational Technology promotes the collaborative communication and interpersonal skills of students, and, consequently, changes their attitude to learning. The experiment has demonstrated that effective technology, such as smart board and PowerPoint are very enjoyable, help in best utilizing the lecture time, limit disruption by students, provide outstanding methods for presenting the lecture materials, and enhance the concentration and engagement of the students.

Most of the academic staff and instructors at University of Bahrain are integrating their teaching with Educational Technology due to its easy access and availability. They are mostly using Moodle, LMS (Black board), PowerPoint and some collaborative tools, such as Microsoft Groove and Dropbox, as a teaching assistance technology. The academic staff and instructors realize that adopting such technologies can enhance their communication with the students, reduce the teaching pressure caused by the course material preparation and make the lecture material available at the time of the discussion. The integration with Educational Technology will enable them to build teaching competencies, and, therefore, will impact their teaching effectiveness and performance.

Although, the importance of Education Technology has been acknowledged by the University of Bahrain, there are some impediments facing both the students and instructors in adopting Educational Technology. The insufficient computing facilities and infrastructure, lack of sufficient technology budget and IT investment, technical support and excessive budgeting and resources consumption needed for training programmes are among the obstacles facing the university in adopting Educational Technology.

The results of the current study have established the positive impact of Educational Technology in enhancing the performance of the students and the overall teaching and learning processes that have already been proved by many studies (Rutz et al., 2003, Koedinger, 1999, Baker et al., 1999, Sivin Kachla, 1998). However, educational organizations should be aware that the achievement of their learning effectiveness and desired outcomes will not be achieved just by purchasing updated software and hardware (John and Sutherland, 2005, Peeraer, et al., 2010). Educational Technologies can be found to be less effective and even inefficient teaching supportive tools if adopted without appropriate alignment with the nature of the course, course objectives and learning outcomes, lecture type and material, students learning styles and teaching styles (Balash, et al., 2011, Trucano, 2005). Therefore, before taking a decision to adopt certain Educational Technology, the educational organizations need to develop strategic planning in which their vision and mission, together with the teaching and learning processes needs, should be identified and embedded in their strategy (Balash et al., 2011). Moreover, the internal and external environment need to be assessed to identify those factors that assist in achieving their objectives and goals for adopting Educational Technology as well as the barriers and obstacles for their achievement.

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