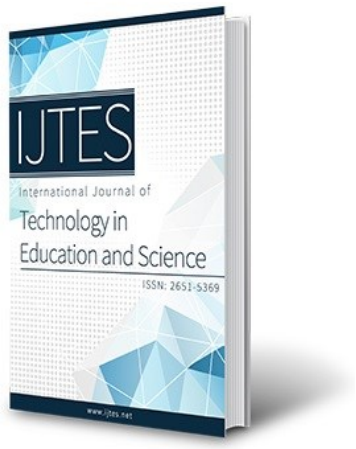

www.ijtes.net

E-Learning: From an Option to an Obligation

Nina Abdul Razzak
Education & Training Quality Authority, Kingdom of Bahrain

To cite this article:

Abdul Razzak, N. (2022). E-Learning: From an option to an obligation. *International Journal of Technology in Education and Science (IJTES), 6*(1), 86-110. https://doi.org/10.46328/ijtes.314

IJTES
International Journal of Technology in Education and Science
2022, Vol. 6, No. 1, 86-110 https://doi.org/10.46328/ijtes.314

E-Learning: From an Option to an Obligation

Nina Abdul Razzak

Article Info

Article History

Received:
29 July 2021
Accepted:
30 November 2021

Keywords

E-learning
Quality assurance
COVID-19
Higher education
Kingdom of Bahrain

Abstract

Post COVID-19 outbreak, higher education practices changed considerably around the world. In Bahrain, institutions of higher learning as well as the country's education quality authority have been challenged in different ways because of the pandemic and have been compelled to resort to e-learning and virtual approaches to quality reviews, respectively. This paper presents an analysis of e-learning in higher education in Bahrain and related quality assurance processes pre-and-post COVID-19. This is in addition to arriving at conclusions about what the next relevant steps forward are. The research method followed in this paper is qualitative, taking the form of a small-scale inquiry cast from a quality assurance perspective, that is social context-dependent and focusing on a specific case (e-learning in Bahrain pre-and-post COVID). It, thus, provides an interpretivist perspective in terms of knowledge. The data analysis points to a need for the establishment of a comprehensive set of guidelines for higher education institutions in Bahrain, to develop their own 'Quality Assurance in E-Learning' models. These models are simultaneously ones that can facilitate more accurate and in-depth quality evaluations by the Kingdom's quality authority.

Introduction

Worldwide, the COVID-19 pandemic has managed to impose challenges of high magnitude on educational institutions, at large, and on institutions of higher learning, specifically. Policymakers and quality assurance (QA) agencies have also been impacted in considerable ways. As, presenting an analysis of e-learning in general is a wide-scale task beyond the scope of this paper, the focus here will be limited geographically to the case of the Kingdom of Bahrain (the researcher's context). The area of concentration will be higher education institutions' (HEIs) implementations of e-learning, with their internal QA practices and the related external QA processes impacting them, as exercised by the country's sole QA authority- the Bahrain Education & Training Quality Authority (BQA).

The purpose of this investigation is to analyze and evaluate, from a QA perspective, pre-and-post COVID practices (namely e-learning) taking place in HEIs, to arrive at conclusions about what the next steps needed by HEIs and the BQA should be. The sequence followed in this paper consists of a general overview of e-learning and QA in e-learning; a description of the contextual background of the study with a related literature review account; an explanation of the study's methodology; a summary and discussion of the main findings pre-and-

post COVID; a list of resulting implications and recommendations; and, finally, conclusions and future research considerations.

An Overview of E-Learning

There is an enormous body of research with respect to e-learning (Orill, Hannafin, & Glazer, 2004). Researchers find this body of literature fragmented and somewhat lacking consistency with respect to the use of common terms (Nichols, 2003). This lack of consistency is clearly evident in the multiplicity of definitions and synonyms one finds for the term *e-learning*. For example, one synonym for it is web-based instruction. Other synonyms are online learning and teaching, distance education, distance learning, flexible learning, and technology-rich instruction.

As for the definitions of e-learning, Pattnayak and Pattnaik (2016), as an example, explain that it is "the learning activity utilizing information transfer and knowledge utilization with particular attention to computer-based technology…[It] is also defined as the use of information and computer technologies to develop learning experiences" (p.156). Whereas Ahmad and Tarmudi (2012) define it as "instructional content or learning experiences that are delivered or enabled by electronic technology, such as web-based learning, computer-based learning, and virtual classrooms". Similarly, Restuati et al. (2021) view it simply as 'learning that is done online electronically using computer-based media and a network' (p.615). However, the definition preferred by the researcher considers e-learning as an educational experience comprised of teachers and students learning how to use electronic-based ICT, teachers teaching using the same ICT, and students learning with and through this ICT (Abdul Razzak, 2014).

Based on an analysis of e-learning across the years, it seems that its definition is a dynamic one, which changes with the times, depending on their latest technologies and adopted teaching and learning (T&L) models. Regardless of the definition accepted, however, what is probably more important is the effective and consistent implementation of e-learning in ways that ensure the successful achievement of desired student learning outcomes. Since a specific model is needed at the core of any technology-related system or process for it to be successful and capable of overcoming major challenges (Alias et al., 2011), then there is also a need to develop appropriate models for e-learning, in general, and for 'QA in e-learning', in particular.

Quality Assurance in E-Learning

Definitions

Quality can be defined as "a set of properties, attributes, and conditions related to a specific object or process that allow comparing with a set of benchmarks" (Davok, 2007 as cited by Casanova, Moreira, & Costa, 2011). As for 'QA in e-learning', scholars explain that it has two main dimensions: (1) *quality through e-learning* and (2) *quality of e-learning* (Teodora, Mioara, & Magdalena, 2013). The former "refers to the quality of education in general by means of the use of e-learning tools"; whereas the latter refers to the quality of the e-learning itself (cited in Misut & Pribilova, 2014, p.313). A comprehensive model for 'QA in e-learning', therefore, will

encompass both. These definitions and explanations in the above scholars' works combined *(i.e., Alias et al., 2011; Casanova, Moreira, & Costa, 2011; Teodora, Mioar, & Magdalena, 2013; and Misut & Pribilova, 2014)* all point to the analysis that follows next, which forms part of this paper's conceptual framework.

Analysis of 'QA in e-learning' Models

The purpose of a model for 'QA in e-learning' is to set standards on the basis of which the e-learning system could be assessed and evaluated. Such standards would also act as criteria to be met when designing e-learning activities, courses, or programs, so as to ensure their efficiency and organization, and thus internally ensure their quality before they are delivered (*i.e., quality of e-learning*). By meeting such standards, educational institutions would be able to minimize- in advance- challenges and barriers that normally accompany e-learning. They would also be able to avoid possible flaws in its implementation and enhance achievement of intended learning outcomes (*i.e., quality through e-learning*). When quality is assessed during the e-learning delivery process, it is usually done through users' (mainly students') evaluation and judgment of the excellence and quality of what they are being offered through e-learning (Alias et al*., 2011)*.

In other words, quality assessment relies on students' satisfaction levels toward the e-learning offerings. Although students' perceptions and judgments, along with feedback from instructors, are an important source of information for evaluating and improving quality of the e-learning system, researchers are of the view that such sources of feedback should be treated as a supplement to the QA model's standards and not as a substitute for them (Alias et al*., 2011)*. As, the QA standards compel the educational institutions and their instructors to be proactive with respect to ensuring quality in e-learning whereas the users' feedback is more for the institutions to utilize in a reactive manner.

An important issue to discuss at this point involves the nature of 'QA in e-learning' models and their suitability for educational institutions in general. Considering that educational institutions vary in many different aspects, including level, focus, vision, goals, values, offerings, clientele, size, practices, traditions, and challenges, then it is only logical to assume that there is no one-size-fits-all model that can accommodate the needs of every institution. Thus, naturally, e-learning in HEIs will require a different model from schools or vocational centers. HEIs themselves even will differ among each other in the models that fit their particular e-learning systems. Consequently, when thinking of developing a 'QA in e-learning' model for a specific HEI, or for a set of HEIs within the same geographical area and under the auspices of the same educational authority and system, it is crucial to first take into consideration several factors. These include the HEIs' specific characteristics (vision, mission, graduate attributes, teaching philosophy, etc.) and conditions with respect to the e-learning platforms they adopt, and the e-learning preparations and implementations they have in place.

For some time, there was in the scholarly literature a research gap with respect to how to evaluate the *quality of e-learning* dimension in HEIs, along with a need for holistic models to be used for such evaluations and at the same time for enhancing the e-learning experience (Casanova, Moreira, & Costa, 2011; Jara & Mellar, 2009). Along the same lines, the sudden shift of e-learning education from being an option to an obligation around the

world, due to the COVID-19 pandemic, has revealed, in many cases, a similar gap in terms of the practices implemented in HEIs to evaluate the *quality of e-learning*. In contrast, evaluating the dimension of *quality through e-learning* was and continues to be globally focused on by HEIs themselves and by QA and/or accreditation agencies, mainly due to an increased awareness about quality assurance and enhancement of education in general.

Contextual Background and Literature Review

Quality Reviews of Higher Education in Bahrain

At the time of writing this paper, there were in the Kingdom of Bahrain thirteen HEIs in total (two public and eleven private) operating under the authority of the Ministry of Education (MoE) that had undergone QA reviews conducted by the Directorate of Higher Education Reviews (DHR) of the BQA. The BQA "was originally established by the Bahraini government to ensure rigorous academic standards that meet international good practices in the Kingdom, by executing institutional and academic reviews at all education levels including schools, training/vocational, and higher education providers (Albaloshi, 2013)" (Abdul Razzak, 2018, pp.30, 31).

The BQA reviews of the HEIs are highly structured in nature and are of two types: program reviews and institutional reviews, with follow-up visits for any program or institution that fails to meet BQA standards. To date, BQA reviews have been conducted for all academic programs offered by these HEIs (as part of the first program review cycle) and the results of the reviews, which are evidence-based findings, are documented in reports that are published on the BQA website. During the BQA reviews of Cycle One, the programs were evaluated based on the following four indicators, as described in the DHR's *Programs-Within-College Reviews' Handbook* (Bahrain Education & Training Quality Authority, 2014, pp.8-12):

- Indicator One *(Learning Program)* focuses on the program's fitness for purpose in terms of mission, relevance, curriculum, pedagogy, intended learning outcomes, and assessment;
- Indicator Two *(Efficiency of the Program)* evaluates the program's efficiency in terms of the quality of admitted students, resources available, staffing, infrastructure, and support for students;
- Indicator Three *(Academic Standards of the Graduates)* looks at the graduates' attributes to check the extent to which they are compatible with equivalent programs locally, regionally, and internationally; and
- Indicator Four *(Effectiveness of Quality Management and Assurance)* examines what arrangements are in place for managing the program and ensuring its quality, to give confidence in the program.

An important aspect in these reviews involved, as demonstrated in the indicators above, an emphasis on T&L policies, procedures, strategies, and implementations. Considering that e-learning falls under the T&L category, it too was focused on to some extent during the reviews. This was done basically through: an examination of the e-learning systems and platforms used by each academic program; the frequency of their use by students and instructors; the ways they were being used and for what purposes; the types of reports that were generated by them; and the types of strategic decisions and actions that had been taken based on these reports to enhance the

academic programs' delivery. It is necessary to clarify here that at the time of these reviews (which was before the COVID-19 outbreak), there were no academic programs that were being offered entirely online/virtually by any of the HEIs; all programs (except for those of the Arab Open University) were operating mainly face-to-face with some e-learning incorporated in them, with some "traditional courses being offered and attended in the institution [and] some learning management system (LMS) (e.g. Moodle, Blackboard, WebCT, etc.) being utilized to support the learning process" (Abdul Razzak, 2018, p.39).

Review of the Literature on E-Learning in Bahrain

When reviewing the literature on e-learning in Bahrain, one finds a scarcity of research, with minimal empirical studies conducted on the topic. However, from what is available, it is easy to deduce that even before the pandemic, e-learning was a priority for most HEIs (Al-Ammary et al., 2016). This was indicated through the availability, in many cases, of more than one LMS having been in use within the same institution. Blackboard, however, was the LMS with the greatest number of academic staff users in the largest HEI in the country. Additionally, there was, generally, a high satisfaction level with the learning management systems adopted; although, the achievement and performance level in e-learning processes at these institutions continued to be average (Al-Ammary et al., 2016). This is mainly because the use of e-learning in these HEIs was quite limited, in the sense that most of the time it was being used in basic ways, such as for uploading and downloading documents, other resources, and assignments (Al-Ammary et. al., 2016). Other uses such as communication and online assessment were not yet that common. With respect to communication, users preferred channels such as social media and mobile applications over the LMS (Abdul Razzak, 2018, p.40). As for online assessment, it was always considered insecure and difficult because monitoring students' performance online is quite challenging. Students' assessment, therefore, was fundamentally carried out in the classrooms through traditional means, which is consistent with international research findings on blended learning. Such findings confirm that online assessment is uncommon in the electronic mode of learning; and where it exists, it usually is ineffective due to the lack of competencies of the actors involved, namely the instructors (Khan & Khan, 2019; Harvey, 2002; Jara & Mellar, 2009). In some cases, also the issue is that of students lacking the required technological competence for such assessments (Ndibalema, 2021; Khan & Khan, 2019).

In addition, the researcher (Abdul Razzak, 2016) had discovered in her research on Bahrain that some faculty members had not yet reached the comfort level at which they could design *basic* online activities. Consequently, they were -logically speaking- incapable of utilizing online teaching methods that promote students' higher-order thinking skills (HOTS), such as: critical thinking, problem solving, creativity, and innovation, which are in their nature complicated and difficult to design, irrespective of whether implemented offline or online. In the same vein, scholars have explained that this faculty discomfort toward e-learning design could probably be due, in part, to the rapid growth of e-technologies, in general, and those available for educators, in particular, which leaves them "often ill-prepared to take advantage of these new e-technologies" (Coldwell-Neilson et al., 2012, p.17).

Faculty members' incompetence in designing and delivering e-learning that promotes students' HOTS has always been considered as a serious disadvantage for HEIs worldwide. This is because, as Coldwell-Neilson et al. (2012) explain, the increasing value placed on innovation and creativity along with other similar HOTS is "one of the key trends that are driving the adoption of technology in the classroom" (p.20). In other words, one of the main purposes for introducing e-learning in the first place was to enhance students' HOTS, in general, and innovation and creativity, in particular. For this reason, scholars emphasize that when designing an e-learning environment and developing e-content, we must do all that is needed to avoid restricting innovation and divergent thinking and, instead, offer problems and challenging situations, which provide students with opportunities to be innovative and entrepreneurial in the process of learning (Assareh & Bidokht, 2011). Researchers also emphasize that there needs to be innovation in either the methods or models used by instructors in e-learning or else students' motivation and achievement of learning outcomes may be impacted negatively (Restuati et al., 2021; Liani & Rustiana, 2016).

To sum up, therefore, e-learning before COVID-19 was widespread in HEIs in Bahrain (Jabli & Qahmash, 2013) and was having a somewhat positive impact on students' learning and communication skills, as a study by Mohammed (2010) had shown. However, in many ways, its implementation often still mirrored "pre-ICT educational cultures and settings", by not enhancing key skills needed for success in the 21st Century (Abdul Razzak, 2018, p.40). HEIs in the country were, therefore, not meeting what Pattnayak & Pattnaik (2016) call "the greatest educational challenge of today", which is comprised of "not only helping learners to acquire a desired set of knowledge and skills, but also enabling them to learn how to succeed by working creatively…" and innovatively to contribute to the development of the knowledge society (p.160). This is because to meet the challenge, HEIs are required to build students' knowledge production capacity, which as explained by Luckin (2008), "requires active, student-focused, inquiry-based education [promoting HOTS] to be available via ICT" (cited by Wiseman & Anderson, 2012, p.610).

That being said, it is important to mention that the HEIs in Bahrain actually adopt strategies, goals, and policies that do emphasize T&L methods that can develop and enhance competencies needed for knowledge acquisition, creation, and implementation that would contribute to sustainable development of innovation at the national level (Abdul Razzak, 2018). This is the case and was so even prior to COVID-19. However, as was indicated through a study by Al-Ammary et al. (2016), the problem with e-learning before the pandemic was that it seemed to lack proper alignment with the overall institutional strategies and objectives of most HEIs. A similar situation is found in other countries of the world (e.g., Tanzania) where policies for e-learning, online assessments, and related educational training and professional development exist and are highly emphasized, while paradoxically at the same time practices relevant to them are given little attention (Ndibalema, 2021). This misalignment, therefore, is what was partly compromising the quality of e-learning in Bahrain before COVID-19 in terms of its contribution to the production of new knowledge and, as a result, to the creation of a knowledge society, which is an integral part of the Kingdom's economic vision 2030.

When it comes to higher education, this national vision entails supporting students to acquire knowledge and skills related to their areas of specialization. Not only that, but also supporting them to develop, create, and

apply new knowledge and to work on developing their country to compete globally (Abdul Razzak, 2013). This requires enhancing students' cognitive skills, commonly referred to as HOTS. If such skills are developed well in students, this can empower them to construct new knowledge, innovate and become lifelong learners, which contributes to bringing about the knowledge-based society aimed for by the government of Bahrain. For this reason, it was and continues to be important to ensure the proper alignment of e-learning practices in HEIs with their strategies, goals, and policies that focus on the production of new knowledge.

Advantages and Effectiveness of E-Learning

Other than assisting in enhancing students' HOTS, international research studies point to other key advantages of e-learning for students, which include strengthening their independent learning competencies; enhancing their self-discipline; and improving their access to education (Pavel et al., 2015). E-Learning also has the potential to promote students' and educators' online research and develop skills related to the accessibility of online resources (Paudel, 2021). As Restuati et al. (20201) put it, technology integration in education has the potential to generally improve the quality of teaching and learning, in addition to the potential of creating "quality and competitive human resources" (p.614). Just like there are advantages to e-learning, however, there are also obstacles, commonly known as barriers. Among the main barriers identified by UNESCO (2009) are a few common mistakes that are committed in the introduction of ICT into T&L, such as: adopting e-content from other parts of the world and failing to customize it, and/or using low quality content that has poor instructional design.

Researchers agree that for e-learning to serve as a mediator or a tool that enhances student achievement of learning outcomes, it must be well-designed by the instructors, whose discourse and interaction with the students must also be well-organized (Shea et al., 2003). As for the students, it is important that they be aware of the communication competencies needed in an ICT-mediated learning environment and they and the instructors must share the same competencies in ICT use and communication (Restuati et al, 2001; Casanova et al., 2011). To be effective, planning for e-learning must focus on T&L strategies that are directly linked to student-centered approaches emphasized by the constructivist paradigm of instruction (Restuati et al, 2001; Hosnan, 2017; Hannafin & Land, 1997). This implies that students in such a flexible learning environment will be in more need of guidance, to be able to plan their individual learning and assume a more independent role than they normally would have in a traditional learning setting (Reichert & Tauch, 2005). Finally, researchers agree that in addition to student-centered and active learning techniques (e.g. problem-based learning, cooperative learning, role play simulations), for e-learning to be effective, it must involve sufficient and meaningful interaction between instructors and students; reciprocity and cooperation between the learners in the online learning environment; respect for the diverse needs of the students; provision of prompt feedback from the instructors; communication of high expectations for the students; and instructors' guidance in terms of tools and resources (Shea et al. 2003; Casanova et al., 2011).

Training instructors in how to design and deliver effective instruction is also a must, just as keeping them up-to-date with remote-learning best practices is (ElSaheli-Elhage, 2021; Dorn et al. 2020). This is in addition to

continuously addressing educators' digital literacy challenges in systematic ways, and especially in exceptional times like the pandemic; for, it was evident during the sudden shift to e-learning that the required digital proficiency varied among educators within the same institution (ElSaheli-Elhage, 202; Tomczyk, 2020).

With respect to quality in e-learning, it is related to all aspects supported by ICT, including all processes, products, and services (Pawlowski, 2007). Scholars (Casanova et al., 2011) add that to evaluate e-learning provision, five essential dimensions should be taken into consideration, which are: the expectations and perceptions of the stakeholders involved; the competencies needed by the students and the instructors; the learning environment and the learning resources; the T&L and assessment strategies and practices; and the related logistics and support in terms of equipment needed, tools, helpdesk, and training. Now that the contextual background of the study has been expounded and a review of the related literature has been provided, it is time to turn next to explaining the research methodology that was used to describe and evaluate, from a QA perspective, e-learning in Bahrain pre-and-post the COVID-19 pandemic.

Methodology

According to Leininger (1992), the main goal of qualitative research is to fully understand a phenomenon in context and to provide an in-depth account of it. For this reason, the qualitative study at hand aimed at thoroughly examining the issue of e-learning in HEIs in Bahrain from a QA perspective and evaluating its pre-and-post COVID practices. The reason behind selecting this social context-dependent and "small-scale inquiry of a specific case" [as Flyvbjerg (2001, p.392) calls it], as the main research approach for this study, lies in the researcher's interest in carrying out an in-depth analysis of some e-learning aspects and practices within HEIs in Bahrain, which eventually can provide an interpretivist perspective and understanding in terms of knowledge. Her main concern was not that of establishing generalizations or causal or temporal connections; rather, her research focused on 'understanding behavior in its specific social context' (Bryman, 2004, p.53) and doing so from a QA lens.

To carry out this examination, the data sources and collection techniques below were used:

- An analysis of BQA/DHR program review reports from the last DHR completed review cycle (years 2013-2018) was carried out, with a focus on e-learning as a T&L method; its consistency of implementation; how it was utilized; its contribution to the achievement of student learning outcomes and the development of HOTS and innovation and creativity; and how it was quality assured. From 12 HEIs that had undergone program reviews between those five years, a total of 84 reports were analyzed, nine of which were of graduate and 75 of undergraduate programs. The search for the data in the reports included an emphasis on terms such as 'e-learning', 'MOODLE', 'Blackboard', 'Learning Management System', 'innovation', 'higher-order thinking', 'critical thinking', 'creativity', 'problem-solving', 'independent learning', and 'lifelong learning'. A template (see Table 1) was used to organize the data extracted from the review reports for each HEI, with the HEIs being represented in numbers from 1-12 instead of being explicitly named.

- An analysis of the researcher's field experiences between the years 2016 *(the year she joined the BQA)* and 2018 *(last year of the first cycle of reviews)* was conducted, where these experiences had included an examination of e-learning platforms and systems in use in HEIs; samples of e-learning activities, resources, and content; and interviews with faculty members and students. Since field notes taken at the time of the BQA reviews are not supposed to be used for purposes other than the reviews, the researcher abstained from using them as a source of data for this research study and, instead, relied solely on jotting down her own reflections of the field experiences she had been through over the two years. These written reflections, which were in narrative format, constituted part of the data that was analyzed for this research study.
- An analysis of the researcher's reflections on the results attained post-COVID outbreak through the 2020 BQA/DHR evaluation of e-learning practices and applications in HEIs in Bahrain was undertaken. The evaluation had relied on a variety of data sources, namely: HEIs' self-evaluation results; HEIs' faculty and students' e-learning experience surveys; a review of e-learning practices in a sample of HEIs; and a benchmarking exercise of the BQA institutional and program review frameworks against local and international guidelines related to e-learning.

Table 1. Template for Data Extracted from 2013-2018 BQA/DHR Program Review Reports *(Pre-COVID)*

HEI	No. of Undergraduate Reports	No. of Graduate Reports	Programs' Fields/Areas of Discipline (E.g., Business Studies; Interior Design; Engineering, etc.)	E-Learning Status
1				
2				
3 . . .				
12				

Using each of the techniques described above proved to be advantageous for different reasons. In the case of the BQA/DHR reports, they are rich in evidence-based data, which enhances their credibility and reliability while the reflections on field experiences pre-and-post COVID yield a great depth of understanding (Babbie, 2013), which aligns well with the research purpose and intention that the researcher set out with in this study. Once the data from the 84 review reports was recorded in the template above and once all the reflective narratives were collated into one document, the data was categorized into clusters of meaningful ideas. This step of categorization was followed first with an interpretation of single instances, with special attention being given to any discrepant cases, and next with a process of identification of patterns and underlying themes. Several important themes emerged, which were subsequently made sense of *(i.e., interpreted)* through a process of synthesis and generalization, with the aim of drawing conclusions that could have implications on the larger

scheme of things with respect to e-learning quality in HEIs in Bahrain. These themes are presented and discussed in the subsequent section.

Findings and Discussion

The themes that emerged from the analysis of the collected data, along with their corresponding descriptions and implications, are listed and discussed below, taking into consideration pre-and-post COVID practices and conditions.

Theme One: Purpose of Adopting E-learning as a T&L Method within the Academic Program

The focus in this theme is on whether the e-learning in the academic program that the DHR/BQA reviewed was adopted as a matter of an institutional policy, strategy, or plan and for what reason/s.

- *Pre-COVID*

The analysis of the data extracted from the 2013-2018 review reports revealed that there was only one case in which there had been no explicit policy or strategy on e-learning within the institution for academic programs to follow. This was despite the university's adoption of Blackboard. With no guiding policy or strategy, individual teachers were choosing their own approaches to e-learning. In all remaining institutions, e-learning in the form of blended learning was included in the T&L policy, strategy, or philosophy of each university and for similar reasons, such as to encourage independent study; make students' more responsible for their own learning; develop students' self-study skills; turn students into lifelong learners. The reference to e-learning in institutional policy is consistent with previous findings (Al-Ammary et al., 2016), which had concluded that e-learning is a priority for HEIs in Bahrain.

Nevertheless, despite the inclusion of e-learning among the T&L strategies of HEIs, one observation that reoccurred in several review reports is that the references made to e-learning were always minimal and did not live up to the potential that such a mode of learning entails. For example, one report mentioned that the T&L policy only referred to "the use of discussion forums of the LMS". Another report mentioned that the policy "stipulates students' participation in debates through the e-learning forum". Whereas another two reports highlighted that the policies stipulated the use of e-learning only for enhancing students' self-study and independent learning.

No reference was made, thus, in the T&L policies or strategies as to how e-learning could or should be used in ways that contribute to students' achievement of learning outcomes, nor how it could assist in the development of HOTS and enhancement of innovation and creativity. Going back to the literature review, it follows, therefore, that the universities' T&L policies/strategies neglected one of the main purposes for introducing e-learning in instruction agreed upon in the international scholarly literature, which is the enhancement of students' innovation and creativity. This implies that the issue with e-learning before the pandemic was not

solely one of misalignment between e-learning implementations and the overall institutional strategies and objectives of most HEIs, as explained before. Rather, more importantly, it was the issue of unavailability of a well-developed, comprehensive, and explicit policy or strategy devoted for e-learning in the HEIs to clearly guide the academic programs and their relevant stakeholders.

- *Post-COVID*

Post the COVID outbreak, HEIs resorted to remote T&L as an alternative to the traditional instructional approaches that rely on the face-to-face interaction between faculty members and students. This was a result of a governmental resolution at the national level. In response, HEIs took several decisions and developed procedures related to organizing the complete transition to online education and assessment of students in a time of crisis. At the present, the HEIs are operating in accordance with special e-learning plans and guides that are directing them during this critical period.

Theme Two: The E-Learning Platform/s in Use

This theme relates to the e-learning platform or LMS used in the academic programs that the DHR/BQA reviewed.

- *Pre-COVID*

The analysis of the collected data indicated that the LMS that was mostly in use for e-learning purposes in the HEIs between 2013 and 2018 was MOODLE, except for only two private universities that were using a different platform, and the main public university using both MOODLE and Blackboard. There was also one anomalous case where a private university was not using any LMS at all and was relying only on traditional teaching methods lacking many independent inquiry-based learning opportunities.

- *Post-COVID*

Most of the HEIs post the outbreak have been relying on their available LMS such as Moodle and Blackboard, with some institutions also using communication platforms such as Zoom and Microsoft Teams. The e-learning systems include the feature of live broadcasting of lectures in audio and video, recording of lectures, and the uploading of educational materials and resources. The analysis of data has shown, however, that students prefer lectures being delivered via one approved platform rather than via several platforms, so as not to feel distracted nor to miss to attend a lecture on one platform by attending a lecture on another, especially when some faculty members keep changing the times of their lectures.

Moreover, although the e-systems include features of direct interaction that enable students to ask questions, present and discuss their work, and attend online office hours and meetings with academic staff members, the analysis of review findings has indicated a lack of responsiveness or interaction of some students with their

instructors and peers in the virtual learning environment (VLE). This deficiency in online interaction is not unique to Bahrain, as it is reported in many studies from around the world as being one of the main drawbacks of e-learning (e.g., Al-Rawashdeh et al., 2021; Arkorful & Abaidoo, 2015).

Theme Three: Faculty's E-Learning Capacity and Related Training and Support

This theme relates to the kind of support and capacity-building received by the e-learning users (namely the faculty and students) from their university.

- *Pre-COVID*

Data analysis revealed that, in all the HEIs in which e-learning was in use before COVID, related support was being provided to the students either in the form of LMS training during student induction or within the academic year. In some cases, also, a member of staff acting as an e-learning coordinator was available to provide one-to-one LMS assistance and/or there was a LMS user manual to provide students with guidance.
Similarly, LMS training workshops were being organized for the academic staff in almost all the universities, with a couple institutions having provided also one-to-one training sessions focusing on assisting faculty on how to upload their course contents on the LMS. Despite this, however, data collected from some review reports indicated issues related to the e-learning professional development (PD) aspect.

One main issue had to do with faculty members being slow in undertaking PD opportunities required for teaching in an online environment mainly because of their high teaching loads. Another issue pertained to faculty members lacking experience in using the virtual learning platforms despite the PD provided to them, which suggests possibly a lack of effectiveness of the PD that was being provided. Finally, there was the need for a couple of universities to revise their PD plans in ways that make e-learning more attractive for the academic staff, which highlights a motivational problem in relation to e-learning.

- *Post-COVID*

Several training workshops related to e-learning have been delivered electronically to faculty members and administrative staff in HEIs since the pandemic outbreak. Feedback on the effectiveness of the workshops has also been collected for improvement purposes, although not on a regular basis in all institutions. In addition to workshops, several tools have been relied on to help guide faculty members on the use of e-learning platforms, such as: user manuals, educational videos, and links to training materials. In one case even, external parties were invited to provide employees and faculty members with technical and academic training workshops and seminars on remote education and e-learning. Nevertheless, the sudden transition to e-learning, highlighted in Bahrain's HEIs challenges with PD in relation to e-learning that had been dormant before the wake of the pandemic; the resurfacing of these challenges is exactly what took place in other parts of the world as well (ElSaheli-Elhage, 2021; UNESCO, 2020a, 2020b).

Theme Four: Uses of E-Learning System

This theme focuses on how the learning management systems available in the HEIs are used within the institution, and what the students think of them.

- *Pre-COVID*

A reoccurring theme that resulted from the data analysis is that e-learning was not a central mode of instruction and learning; rather, it was mainly being used for providing students with access to course materials and assignments as well as providing them with feedback on their works. In many cases, it was also being used for making announcements, sending emails, recording attendance, and posting grades. In a few cases only, the LMS was also utilized as a discussion tool between instructors and students. All this led the review panels to conclude that most faculty members were not fully utilizing the LMS and were limiting the usage of the system to its most basic level, which does not promote or enhance independent learning of students. This is consistent with previous findings mentioned in the scholarly literature (Al-Ammary et al., 2016; Abdul Razzak, 2016).

In many cases, where there were faculty members using the e-learning system, their approach to the design of e-materials and courses lacked consistency. This inconsistency was found in all institutions with no exception. Inconsistencies were also evident within each HEI with some faculty members using the LMS for some of their courses but not for others and with many members not using e-learning at all in comparison to those who used it, even if irregularly.

The limited utilization of the LMS and the inconsistencies in e-learning implementation yielded the conclusion that the potential opportunities for e-learning integration in HEIs' academic programs and courses remained underdeveloped and fell short of enhancing students' learning experiences. Students themselves were found-through the reviews- to be critical of the variable use of e-learning, both in terms of some courses using the LMS and others not, and in terms of the variable quality of the courses delivered via the LMS. However, there was general student satisfaction and appreciation toward the e-learning environment and systems being available for them through their universities.

- *Post-COVID*

Data collected about the LMS and other communication platforms in HEIs post-COVID indicates the following uses: uploading course materials; monitoring students' attendance; monitoring the percentage of faculty presence and interaction in the VLE outside and during their schedule of online classes; conducting virtual office hours; delivering lessons synchronously that can be recorded by students, so that they can retrieve them when needed; supervising graduate students' research; assessing students' performance through a variety of methods, such as research assignments, projects, case studies, problem-solving, and open-book tests; and fulfilling practical components of courses through, for example, simulations, virtual labs, or through students' role playing and recording of their skits as material for assessment and evaluation.

These varied uses of the electronic platforms have been receiving mixed reactions from both students and faculty members. While students appreciate the opportunity to record some online lessons, they at the same time are frustrated by the fact that there are some faculty members who do not allow the recording of their lectures. Similarly, students do not appreciate faculty members who refuse to turn on their cameras during synchronous lessons. However, they are pleased with the online assessment methods and find them more varied and often better than those previously used in the face-to-face classes; although, they feel a need for better scheduling of assessment tasks by their professors to prevent student overload.

Some faculty members are also fond of the current assessment methods but find a need to have in place more appropriate mechanisms to ensure credibility and fairness of grades and to reduce the possibility of cheating. They additionally see it necessary for faculty members to receive more training on e-assessment methods and on related ways of detecting plagiarism and preventing other modes of academic misconduct. These concerns about cheating and the security of assessments among instructors in Bahrain, in addition to feeling not sufficiently prepared and experienced to control the e-assessment systems and processes, are shared by many other educators internationally and are, thus, a critical matter to be addressed if e-learning is to succeed (Ndibalema , 2021; Appiah & van Tonder, 2018).

Theme Five: Tracking of E-Learning Usage

This theme relates to how e-learning usage is tracked in the HEIs and how the tracking is made use of.

- *Pre-COVID*

The data analysis revealed that, apart from one HEI only, the use of e-learning was being tracked in all institutions via their learning management systems in use. Tracking reports were generated by the systems and utilized to inform decision-making in relation to the management of the academic programs; however, they were usually made use of only on demand rather than on a regular basis.

- *Post-COVID*

Like pre-COVID times, all tracking of e-learning in HEIs is being done via the LMS, with tracking reports being available for decision-making purposes. The only difference is that, currently, the reports are being utilized in more systemic ways.

Theme Six: Areas of Improvement with Respect to E-Learning

This theme highlights the main areas of improvement with respect to e-learning in HEIs, which emerged through the academic program reviews and the researcher's reflections on her field experiences.

➢ *Pre-COVID*

The data analysis indicated the following areas of improvement in terms of e-learning for most HEIs pre-COVID:

- E-learning should be adopted as a stand-alone and explicit T&L policy for HEIs.
- E-learning should be more effectively and consistently integrated into HEIs' academic programs by increasing the number of courses that utilize the learning management systems adopted by the institutions.
- More creativity and innovation are needed in the implementation of e-learning via making utmost use of LMS facilities/features, which would help create a more interactive VLE for students and enrich their learning experiences.
- PD plans in HEIs should be revised to include greater support opportunities that make e-learning more attractive for all academic staff members, and that train them on the use of the available LMS in ways that aid in the creation of structured opportunities and tasks for: independent learning; engaging students in HOTS development; and enabling them to transfer their newly acquired knowledge to different contexts, including the work environment.
- Training and educating students about the features of the LMS is needed, to develop their skills, so as to become more independent in their learning experiences.

➢ *Post-COVID*

Data collected through reviews and evaluation of HEIs' practices and applications post-COVID have indicated several good practices in support of the e-learning process. To mention only a few, there is evidence of:

- Continuous technical support being provided around the clock for all users;
- Multiple features of the LMS being utilized, which enable faculty members and students to directly broadcast, and record, audio and video content and to interact with each other for different purposes, such as discussions, questions and answers, office hours, and academic advising; and
- Monitoring of students' academic progress remotely.

Despite these good practices, however, there remain to be some areas of improvement in relation to e-learning in most HEIs; as, the data analysis indicated a need for:

- Conducting a needs' analysis in relation to students and faculty access to e-learning technologies, mainly in terms of computers and quick Internet connection, outside the universities' campuses.
- Developing, via the involvement of all relevant stakeholders, an e-learning strategy with related T&L and assessment policies, procedures, and plans, encompassing field training and practical courses, in anticipation of the continuation of the current COVID-19 crisis or its recurrence in the future.
- Issuing a student guide on the ethics and etiquette to be followed in a virtual environment.
- Developing mechanisms for evaluating faculty members' ability to design e-courses that contribute to students' achievement of intended learning outcomes and help develop students' HOTS.

- Providing faculty members with specialized training workshops on online assessment, to promote greater utilization of formative assessment methods, especially in post-graduate studies, and to facilitate the process of evaluating students' projects and assignments while ensuring transparency and fairness of grading.
- Ensuring that student workload in terms of study time and assessments is appropriate and is consistent with the level of the program of study and the required learning outcomes.
- Encouraging faculty members to coordinate exams and major assignments' dates among each other and to provide students with timely feedback, so they can benefit from it accordingly. Providing students with feedback and clear instructions are extremely important because they have been found by researchers to provide warmth and a sense of belongingness for students in the virtual environment, which has the potential of being a very lonely space (Ananga, 2020).
- Finding solutions for the lack of interaction of some students with faculty members during the virtual classes and for their poor participation in required academic tasks and duties, in addition to working on strengthening their effective communication with their peers in the VLE, especially during group work. This area of improvement and the need for finding new methods for keeping students engaged has been highlighted repeatedly in many international research studies (e.g., ElSaheli-Elhage, 2021; Shakya, et al. 2020; Dorn et al. 2020).

Theme Seven: Internal Quality Reviews

This theme focuses on the types of reviews carried out by HEIs to evaluate the quality of their programs and on how e-learning is tackled by those reviews.

➢ *Pre-COVID*

Based on the data analysis, there was no mention of reviews being conducted by HEIs of the e-learning taking place in them pre-COVID. Indeed, there were some annual and/or periodic reviews of their academic programs but the few courses delivered as blended learning were treated in the reviews the same as traditional courses delivered entirely face-to-face. Thus, there was an internal review of *quality through e-learning*, which as explained earlier "refers to the quality of education in general by means of the use of e-learning tools" (cited in Misut & Pribilova, 2014, p.313), but no reviews of *quality of e-learning* itself.

➢ *Post-COVID*

Post-COVID, BQA reviews conducted on HEIs e-learning practices have reached the conclusion that, in HEIs, operations are continuing at all levels according to the institutions' internal quality management systems. It is true that, in some cases, special committees headed by QA directors have been formed to oversee and monitor the mechanisms and methods of transition from face-to-face to online teaching, and to ensure the implementation of the QA guidelines for the critical pandemic period; however, no reviews have been conducted of the *quality of e-learning* per se.

Recommendations

The review of the literature with the study's embedded conceptual framework, its contextual background, and the pre-and-post COVID research findings on e-learning in HEIs in Bahrain, yield several important implications. To begin with, 'QA in e-learning', as a technology-related process, is generally in need of a specific model at its core for it to be effective or fit for purpose (Alias et al., 2011). Such a model would set standards on the basis of which the e-learning could be evaluated. These standards would also act as criteria to be met when designing e-learning activities, courses, or programs to ensure their quality (*i.e., quality of e-learning*) prior to their delivery, which would simultaneously contribute to ensuring student achievement of intended learning outcomes (*i.e., quality through e-learning*).

In the case of Bahrain, such a model for 'QA in e-learning' comprising both *quality of e-learning* and *quality through e-learning* is not yet available in/for HEIs. What is available is a QA model (or in most cases guidelines), aligned with the BQA program review framework, and adopted originally for traditional face-to-face T&L contexts, with some elements focusing on e-learning infused in it. This model can help mainly in setting criteria for, and evaluating, the quality of what is delivered *through e-learning* but not *of the e-learning* itself. The existing model thus is incomplete and needs to be complemented by standards or guidelines that focus on *QA of e-learning* itself.

While it is true that e-learning is included in the BQA/DHR frameworks as part of the T&L indicator, as explained earlier, here again the focus has always been on evaluating the quality of what is delivered through it (*i.e., quality through e-learning*). Nevertheless, it is important to mention that after the COVID-19 outbreak and transition to online learning in all HEIs, revisions were made to the latest BQA/DHR academic program review framework, to include additional expectations that help with carrying out more thorough evaluations of e-learning provision under the new exceptional circumstances. However, these revisions do not render a complete 'QA in e-learning model' and there is a need still for the establishment of a comprehensive set of guidelines that can facilitate more accurate and in-depth quality evaluations *of e-learning* by the BQA. At the same time, these guidelines can assist HEIs in Bahrain in developing their own comprehensive 'QA in e-learning' models.

For the guidelines to be both relevant and current, they must be informed by literature review findings on e-learning in Bahrain and internationally and must tackle areas of improvement identified through the BQA/DHR reviews listed in the themes' section above. The Appendix includes a recommended list of such guidelines reflecting only the principles relevant to *quality of e-learning* that can complement both the BQA/DHR frameworks and the guidelines available in HEIs in Bahrain, which currently happen to pertain predominantly to *quality through e-learning*. Some of these proposed/recommended guidelines were adopted from the online learning standards of Azusa Pacific University, Southern California due to their clarity and relevance, whereas a few were adopted from the US National Standards for Quality for Program Design (California Department of Education, 2020). All guidelines, however, have been customized for the purposes of this study. The guidelines are valid irrespective of whether the academic programs are delivered entirely online or in a hybrid/blended/hyflex format. They are organized in seven categories (see Appendix) and are supported with

remarks that either help justify the proposed guidelines or link them to the existing areas of improvement identified earlier in this paper.

Concluding Remarks and Future Research

With the recommended guidelines for *QA of e-learning*, HEIs in Bahrain now have a set of criteria to guide their attempts of designing e-learning activities, courses, or programs prior to their delivery, to ensure their quality (*i.e., quality of e-learning*). This can contribute to ensuring student achievement of intended learning outcomes (*i.e., quality through e-learning*) in academic programs of higher education but only if these guidelines are used hand-in-hand with the already existing BQA frameworks and standards. Together, the guidelines and BQA standards can help each HEI tailor its own comprehensive 'QA in e-learning' model (covering both *quality of e-learning* and *quality through e-learning* dimensions), based on its mission, aims, graduate attributes, teaching philosophy, and other institutional features and components.

At the same time, the recommended guidelines can facilitate more accurate and in-depth quality evaluations *of e-learning* by the BQA and other similar agencies or authorities; thus, resulting in reviews of 'QA in e-learning' that are more holistic when it comes to the two dimensions of this process. Conclusively, this is where the strength of this study lies. This is in addition to its uniqueness for filling both an existing research gap and a similar gap in terms of practice with respect to the evaluation of *quality of e-learning* in HEIs in the Kingdom of Bahrain (and possibly elsewhere). The way forward, hence, is to integrate the proposed guidelines in HEIs' policies, frameworks, and practices and then, conduct future internal and external e-learning QA reviews to evaluate their soundness and validity, and to trigger future research inquiries based on the new review findings.

That being said, however, this study could not but have been limited, especially since the shift to e-learning as an obligation came very sudden and is still very new, and so to almost all HEIs in Bahrain, and even to the BQA, it is still a learning process. Thus, whatever research results were obtained post-COVID, they were of a transitional and uncertain period rather than of a well-established and clear set of higher education practices. Additionally, since educational research is value-laden, this study could not but have been biased or subjective in some way, and particularly when there was a considerable reliance in it on the researcher's personal reflections and professional judgement. Nevertheless, what lends some credibility to the study's research findings is the fact that several sources of data collection were used in it.

Notes

All the data used in this study is included in review reports published for the public on the official website of the Education & Training Quality Authority of the Kingdom of Bahrain (https://www.bqa.gov.bh/en/pages/home.aspx). Other than this data, personal reflections of the researcher were utilized.

References

Abdul Razzak, N. (2018). Bahrain. In A. Weber & S. Hamlaoui (Eds.), *E-Learning in the Middle East and North Africa* (pp. 27–53). Springer International Publishing AG.

Abdul Razzak, N. (2016). Strategies for effective faculty involvement in online activities aimed at promoting critical thinking and deep learning. *Education and Information Technologies*, *21*(4), 881–889. http://dx.doi.org/10.1007/s10639-014-9359-z

Abdul Razzak, N. (2014). In-service teachers' attitudes towards technology integration in the Bahraini classroom. *World Journal on Educational Technology, 6*(1), 60-74.

Abdul Razzak, N. (2013). Challenges facing school leadership in promoting ICT integration in instruction in the public schools of Bahrain'. *Education and Information Technologies*, *20*(2), 303-318. https://link.springer.com/article/10.1007%2Fs10639-013-9283-7

Ahmad, M.D. & Tarmudi, S.M. (2012). Generational differences in satisfaction with e-learning among higher learning institution staff. *Procedia Social and Behavioral Sciences, 67*, 304-311.

Al-Ammary, J., Mohammed, Z., & Omran, F. (2016). E-learning capability maturity level in the Kingdom of Bahrain. *The Turkish Online Journal of Educational Technology, 15*(2), 47–60. https://www.semanticscholar.org/paper/E-Learning-Capability-Maturity-Level-in-Kingdom-of-Al-Ammary-Mohammed/391310f981f14d73b5e849d3e18348d93e5218e3

Albaloshi, F.A. (2013). Graduate attributes for higher education and their development in Bahrain. *International Education Studies, 6*(9), 23-30.

Alias, N., Zakariah, Z., Ismail, N.Z., & Abd Aziz, M.N. (2011). E-learning successful elements for higher learning institutions in Malaysia. *Procedia Social and Behavioral Sciences,67*, 484-489.

Al-Rawashdeh, A. Z., Mohammed, E. Y., Al Arab, A. R., Alara, M., & Al-Rawashdeh, B. (2021). Advantages and disadvantages of using e-learning in university education: Analyzing students' perspectives. *The Electronic Journal of e-Learning, 19*(3), 107–117.

Ananga, P. (2020). Pedagogical considerations of e-learning in education for development in the face of COVID-19. *International Journal of Technology in Education and Science*, *4*(4), 310–321. https://doi.org/10.46328/ijtes.v4i4.123

Appiah, M., & van Tonder, F. (2018). E-Assessment in higher education: A review. *International Journal of Business Management and Economic Research (IJBMER)*, *9*(6), 1454–1460. www.ijbmer.com

Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29–42.

Assareh, A. & Bidokht, M.H. (2011). Barriers to e-teaching and e-learning. *Procedia Computer Science, 3*, 791-795. Azusa Pacific University, Southern California (n.d.). *Online learning standards.* https://www.apu.edu/live_data/files/334/online_learning_standards.pdf

Babbie, E. R. (2013). *The practice of social research*. Wadsworth Cengage Learning.

Bahrain Education & Training Quality Authority (2014). *Programs-within-college reviews handbook.* Directorate of Higher Education Reviews.

Bryman, A. (2004). *Social research methods* (2nd ed.). Oxford University Press.

California Department of Education. (2020). *US national standards for quality for program design*. https://www.cde.ca.gov/ci/cr/dl/hqonlinecourse.asp

Casanova, D., Costa, N., Leal, R., & Oliveira, D. (2011). Curriculum development in virtual mobility educational contexts. In M. Tereseviciene, A. Volungeviciene, & E. Dauksiene (Eds.), *Virtual mobility for teachers and students in higher education: Comparative research study on virtual mobility* (pp. 35-42). Vytautas Magnus University.

Casanova, D., Moreira, A., & Costa, N. (2011). Technology enhanced learning in higher education: Results from the design of a quality evaluation framework. *Procedia Social and Behavioral Sciences, 29*, 893-902.

Coldwell-Neilson, J., Beekhuyzen, J., Craig, A. (2012). Which e-learning technology is right for me? *International Journal of Emerging Technologies in Learning, 7*(2), 13-21.

Davok, D.F. (2007). Quality in education. *Review Journal*, *12*(3), 505-513.

Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). *COVID-19 and student learning in the United States: The hurt could last a lifetime*. McKinsey & Company.

ElSaheli-Elhage, R. (2021). Access to students and parents and levels of preparedness of educators during the COVID-19 emergency transition to e-learning. *International Journal on Studies in Education (IJonSE)*, *3*(2), 61-69.

Flyvbjerg, B. (2001). Making social science matter: Why social inquiry fails and how it can succeed again. Cambridge University Press.

Hannafin, M. & Land, S. (1997). The foundations and assumptions of technology-enhanced student-centered learning environments. *Instructional Science, 25*, 167-202.

Harvey, I. (2002). The end of quality? *Quality in Higher Education, 8*(1), 5-22.

Hosnan. (2017). *Scientific and Contextual Approach in 21st Century Learning: the key to successful implementation of the 2013 curriculum*. Ghalia Indonesia.

Jabli, N. & Qahmash, A. (2013). The benefits and barriers of e-learning in higher education in Saudi Arabia. *Journal of Emerging Trends in Computing and Information Sciences*, *4*(1), 877-880.

Jara, M., & Mellar, H. (2009). Factors affecting quality enhancement procedures for e-learning courses. *Quality Assurance in Education*, *17*, 220–232.

Khan, S., & Khan, R. A. (2019). Online assessments: Exploring perspectives of university students. *Education and Information Technologies*, *24*(1), 661–677. https://doi.org/10.1007/s10639-018-9797-0

Leininger, M. (1992). Current issues, problems, and trends to advance qualitative paradigmatic research methods for the future. *Qualitative Health Research*, *2*(4), 392–415. http://dx.doi.org/10.1177/104973239200200403

Liani, & Rustiana. (2016). Role playing model in improving learning outcomes in basic competence applying excellent service principles. *Journal of Educational Economics Education Dynamics*, *8*(2), 87-93.

Luckin, R. (2008). The learner centric ecology of resources: A framework for using technology to scaffold learning. Computers & Education, *50*(2), 449–462.

Misut, M. & Pribilova, K. (2014). Measuring of quality in the context of e-learning. *Procedia Social and Behavioral Sciences, 177*, 312-319.

Mohammed, S. (2010, January 22-24). *SWOT analysis of e-learning system in Bahraini universities*. [Paper presentation]. International Conference on E-education, E-business, E-management, and E-learning, IEEE, Sanya, China.

Ndibalema, P. (2021). Online assessment in the era of digital natives in higher education institutions. *International Journal of Technology in Education (IJTE)*, *4*(3), 443-463. https://doi.org/10.46328/ijte.89

Nichols, M. (2003). A theory for e-learning. *Journal of Educational Technology & Society, 6*(2), 1-10.

Orill, C.H., Hannafin, M.J., & Glazer, E.M. (2004). Disciplined inquiry and the study of emerging technology. In D.H. Jonassen (ed.), *Handbook of research on educational communications and technology* (2nd ed., pp. 335-353). Lawrence Erlbaum.

Pattnayak, J. & Pattnaik, S. (2016). Integration of web services with e-learning for knowledge society. *Procedia Computer Science, 92*, 155-160.

Paudel, P. (2021). Online education during and after covid-19 in higher education. *International Journal on Studies in Education (IJonSE)*, *3*(2), 70–85. www.ijonse.net

Pavel, A.P., Fruth, A., & Neacsu, M.N. (2015). ICT and e-learning: Catalysts for innovation and quality in higher education. *Procedia Economics and Finance, 23, 704-711.*

Pawlowski, J.M. (2007). The quality adaptation model: Adaptation and adoption of the quality standard ISO/IEC 19796-1 for learning, education, and training. *Educational Technology & Society*, *10*, 3-16.

Reichert, S.& Tauch, C. (2005). *Trends IV: European Universities Implementing Bologna.* European University Association. https://eua.eu/downloads/publications/trends%20iv%20european%20universities%20iplementing%20bologna.pdf

Restuati, M., Nasution, M. Y., Pulungan, A. S. S., Pratiwi, N., & Safirah, B. (2021). Improvement Efforts for Student Learning Outcomes and Motivation using Edmodo during the COVID-19 Pandemic. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, *9*(4), 614-624. https://doi.org/10.46328/ijemst.1974

Shakya, T., Fasano, S., Marsh. M., & Rivas. A., (2020, May 20). For teachers and students, remote learning during COVID-19 poses challenges, stokes creativity. abc News. https://abcnews.go.com/US/teachers-students-remote-learning-covid-19-poses-challenges/story?id=70770744

Shea, P.J., Pickett, A.M., & Pelz, W.E. (2003). A follow-up investigation of teaching presence in the SUNY learning network. *Journal of Asynchronous Learning Networks*, *7*(2), 61-80.

Teodora, V., Mioara, U., and Magdalena, N. (2013). Quality through e-learning and quality for e-learning. *Journal of Knowledge Management, Economics and Information Technology, 3*(1), 1-5.

Tomczyk, Ł. (2020). Skills in the area of digital safety as a key component of digital literacy among teachers. *Educ Inf Technol, 25*, 471–486. https://doi.org/10.1007/s10639-019-09980-6

UNESCO (2020a). *COVID-19 education response*. https://en.unesco.org/covid19/educationresponse/globalcoalition

UNESCO (2020b). *COVID-19 Educational disruption and response*. https://en.unesco.org/covid19/educationresponse

UNESCO (2009). *ICTs for higher education*- Background Paper Commonwealth of Learning, Paris, UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000183207

Wang, M. & Kang, M. (2006). Cybergogy for engaged learning: a framework for creating learner engagement through information and communication technology. In D. Hung & M.S. Khine (Eds.), *Engaged learning with emerging technologies* (pp. 225-253). Springer.

Wiseman, A. W., & Anderson, E. (2012). ICT-integrated education and national innovation systems in the Gulf Cooperation Council (GCC) countries. Computers & Education, *59*, 607–618.

Author Information

Nina Abdul Razzak

https://orcid.org/0000-0002-0328-0672

Education & Training Quality Authority

Manama

Kingdom of Bahrain

Contact e-mail: *ninarazzak@yahoo.com*

Appendix. Recommended Guidelines for *Quality Assurance of E-Learning* in Academic Programs

Category	Guidelines	Remarks
Management of E-learning	1. The program has an independent and clearly articulated policy that defines the approach taken toward e-learning, which is consistent with the T&L philosophy adopted by the program and with the mission and aims of the institution; this policy is well-disseminated and regularly reviewed.	1. Having an independent e-learning policy was highlighted as an area of Improvement in HEIs pre-COVID, as mentioned in this paper.
	2. The program has a clear strategy and a comprehensive action plan for e-learning, including aspects relevant to T&L, student assessment, practical course components, and field training. This strategy and plan are guided by its e-learning policy and developed through the involvement of all relevant stakeholders.	2. Having an e-learning strategy developed by all relevant stakeholders was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.
	3. E-learning planned-out practices in the program are properly aligned with the institution's strategies, goals, and policies, and focus in their implementation on the production of new knowledge, thus contributing to the creation of a knowledge society.	3. Literature review findings from Bahrain indicated misalignment between e-learning practices and HEIs' strategies and policies in relation to knowledge production (Al-Ammary et al. 2016) and international researchers emphasize the necessity of this alignment (Pattnayak & Pattnaik 2016; Wiseman & Anderson 2012).
Community Building and Integration	1. There are mechanisms in place to ensure that the program promotes a sense of community among diverse learners in the VLE and works toward fully integrating the online community with the larger community of the institution.	1. Findings from the international scholarly literature highlight the learning environment as one of the essential dimensions to be considered in the evaluation of the quality of e-learning provision (Casanova, Moreira, and Costa 2011).
	2. There are mechanisms in place to ensure that the course design principles applied in the program foster community in the VLE through reciprocal interaction between faculty and students and student-to-student collaboration, via the utilization of various course elements and LMS features.	2. Findings from the international scholarly literature emphasize that effective e-learning involves sufficient and meaningful interaction between instructors and students, as well as reciprocity and cooperation between the learners in the online learning environment (Shea, Pickett, and Pelz 2003; Casanova, Costa, Leal, and Oliveira 2011). Also, among the highlighted areas of improvement in HEIs mentioned in this paper were a couple pertinent to student interaction.
	3. Course syllabi in the program contribute to community building and integration by clearly explaining the expected netiquette to be followed in the VLE, and other policies and procedures of the institution and department regarding accessibility of services and resources, academic support, and student support; these syllabi are regularly monitored and reviewed.	3. Guiding students in the ethics and etiquette to be followed in the VLE was highlighted as an area of improvement in HEIs post-COVID, as mentioned in this paper.
E-Learning Course Design & Structure	1. There are policies and procedures that ensure that course content in the program is of high quality and has sound instructional design that is guided by research-based design principles, such as the Universal Design for Learning (UDL) principles, which improve access to learning for all participants, and other standards regarding readability, navigation, and learner-centered education.	1. Course content that has poor instructional design was identified by UNESCO (2009) as one the main obstacles facing the integration of ICT in T&L. This guideline is included here to prevent this obstacle. As for UDL, it is a framework (developed by CAST) that guides the design of learning experiences to proactively meet the needs of all learners. When UDL is used, there is the assumption that barriers to learning are often in the design of the environment, rather than in the student.
	2. Where e-content is adopted from other parts of the world, there are implemented mechanisms to properly customize it according to the HEI's context.	2. One the main obstacles facing the integration of ICT in T&L, as identified by UNESCO (2009), is the adoption of e-content without customizing it. This guideline is included here to prevent this obstacle.
	3. Courses offered through the program are designed to include opportunities for both asynchronous and synchronous learning.	3. This point is taken from the US National Standards for Quality for Program Design.
	4. There are instructions that clearly explain to students the course structure, how to begin the course, and how to locate and use course tools. Students are able to successfully navigate throughout the online components of the course in an intuitive, logical, consistent, and efficient manner.	4. This guideline was included in compliance with e-learning research-based design principles and standards. Also, findings from the international scholarly literature indicate that students in a VLE need more guidance than usual, in order to be able to plan their individual learning and assume a more independent role than they normally would have in a traditional learning setting (Reichert and Tauch 2005).

	5. The course design facilitates readability and minimizes distractions, in addition to providing rich media relevant to the course learning outcomes, and in multiple formats for ease of use and access; so as to cater to the diverse needs of students and better contribute to their achievement of learning outcomes.	5. This guideline was included in compliance with e-learning research-based design principles and standards.
	6. Faculty receive training related to the design of electronic course content, including "cybergogy" training regarding technical elements, pedagogical strategies, and fair use.	6. Cybergogy is a branch of pedagogy that provides learners with opportunities to engage in learning through three main domains: cognitive, emotive, and social (Wang & Kang 2006). International research findings indicate that for e-learning to be effective, it must involve not only cognitive aspects but also social and emotive ones through, for example, meaningful interaction between instructors and students; reciprocity and cooperation between the learners; respect for the diverse needs of the students; etc. (Shea, Pickett, and Pelz, 2003; Casanova, Costa, Leal, and Oliveira, 2011).
	7. There are mechanisms in place for evaluating faculty members' ability to design e-courses that contribute to students' achievement of intended learning outcomes and the development of students' HOTS.	7. Having mechanisms for evaluating faculty members' ability to design e-courses that develop students' HOTS was highlighted as an area of Improvement in HEIs pre-and-post-COVID, as mentioned in this paper. Also, findings from the international scholarly literature indicate that one of the main purposes for introducing e-learning in T&L in the first place was to enhance students' innovation, creativity, and other HOTS (Coldwell-Neilson et al., 2012); while research on Bahrain indicated a lack of faculty members' ability to promote students' HOTS in an online environment (Author, 2014a).
Teaching, Learning, and Student Assessment	1. Faculty members utilize a variety of T&L methods, media, activities, and LMS features that engage students in active learning and promote their interaction, participation in required academic tasks and duties, peer-to-peer communication, and learning collaboration in group work.	1. Student interaction, communication, collaboration, and participation in academic tasks was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.

	2. Capacity building activities related to online assessment are provided to faculty members, encouraging greater utilization of authentic and formative assessment methods, especially in post-graduate studies. Training faculty on how to evaluate students' online projects and assignments, while ensuring academic integrity of what is submitted and transparency and fairness of grading, is also provided.	2. Capacity building for faculty of the type described in the guideline added here was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.
	3. There are mechanisms in place that ensure that student workload in terms of study time and assessments is appropriate and is consistent with the level of the program of study, the required learning outcomes, and what is expected of students studying online.	3. Ensuring appropriate student workload in terms of study time and assessments was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.
	4. Faculty members coordinate online exams and major assignments' dates among each other and provide students with timely feedback, so they can benefit from it accordingly.	4. Better coordination of online exams and assignments among faculty members was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.
	5. Course assessments are varied and appropriate for online learning and measure content mastery, critical thinking skills, core learning, and achievement of student-learning outcomes.	5. Findings from the international scholarly literature highlight assessment strategies and practices among the essential dimensions to be considered in the evaluation of the quality of e-learning provision (Casanova, Moreira, and Costa 2011).
	6. Students have multiple opportunities to measure their own learning progress, and assess their understanding of course content through self-assessment instruments.	7. Findings from the international scholarly literature indicate that students in a VLE are expected to plan their individual learning and to assume a more independent role than they normally have in a traditional learning setting (Reichert and Tauch 2005).
Technology & Accessibility	1. A needs' analysis in relation to students and faculty access to e-learning technologies, mainly in terms of computers and quick Internet connection, outside the universities' campuses, is regularly conducted.	1. A needs' analysis related to access to e-learning technologies was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.

	2. Course syllabi clearly state minimum technology requirements (hardware, browser, software, etc.) and required technical skills of students.	2. This guideline was included in compliance with e-learning research-based design principles and standards. Also, research findings from the international scholarly literature indicate that it is important for students to be aware of the communication competencies needed in an ICT-mediated learning environment (Casanova, Moreira, and Costa 2011).
	3. The program provides training opportunities for students to learn the basics of e-learning technologies.	3. Training students on e-learning technologies was highlighted as an area of Improvement in HEIs pre-COVID, as mentioned in this paper. It is also a requirement as per e-learning research-based standards.
	4. Technology, media, and course tools are current and readily accessible to students; support their achievement of the course learning outcomes; and support active learning and engagement. All course technologies are monitored by the program for improvement purposes.	4. The guideline included here on how e-learning technologies should be is a requirement as per e-learning research-based principles and standards.
	5. Special needs students can access course content and activities via special arrangements/accommodations, such as equivalent alternatives to auditory and visual content, and accommodations for the use of assistive technology.	5. The guideline included here in relation to special technology arrangements for special needs students complies with research-based design principles, especially the UDL ones, which help ensure that learning experiences meet the needs of all students.
Student Support	1. Course syllabi clearly state faculty expectations for students in the VLE, and clarify faculty response time for email, which they adhere to by responding to students' emails promptly and appropriately.	1. Findings from the international scholarly literature on e-learning emphasize provision of expectations for the students and prompt communication with them (Shea, Pickett, and Pelz 2003; Casanova, Costa, Leal, and Oliveira 2011).
	2. Faculty use appropriate communication tools and help-resources to quickly direct students in the right channels for resolving technical problems.	2. The guideline included here on supporting students with technical issues This guideline was included in compliance with e-learning research-based principles and standards.
	3. The program has a student guide on the ethics and netiquette to be followed in a virtual environment.	3. A student guide on netiquette was highlighted as an area of Improvement in HEIs post-COVID, as mentioned in this paper.