



## Web-Based Education: Quality Issues and Solutions

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# Web-based education: Quality issues and solutions.

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## Abstract

As a result of the Fourth Industrial Revolution, the Education system has changed enormously throughout the globe. Since the Coronavirus pandemic has started in all of those countries, its speed has rapidly increased by distant communication. Moreover, education has faced a plethora of challenges due to strict lockdown. This document contains a discussion of the benefits or adverse effects of Web-based teaching and learning methods and quality issues and their solutions on the developing techniques.

## 1 Introduction

Admittedly, the physical separation between people is highly needed these days; lucky enough, digital technology based on the internet saves humankind.

To humanity, the internet has brought many opportunities to send/receive emails, the video/audio content channel and more importantly, the possibility to connect people. These are not just the developments of tools, but also they became a crucial part of modern human communications.

This paper will discuss how Web-Based education creates more opportunities such as a quick-grading system, teacher-student communication and feedback, user satisfaction on the performance, and multiple device usage advantages. On the contrary, the digitalised training techniques' side effects will have discussed.

## 2 Benefits on the web-education

The E-learning method is becoming a more significant part of the training approach than the old one. It has several benefits, including cost and time efficiency, feasibility and effectiveness, and

also, more importantly, distance learning system availability gives numerous possibilities to interact with other students and teachers (Kuzmin and Livanova, 2020). In addition to this, some people argue that in-person teaching is far more effective for students; however, researchers have shown a positive impact on their Grade Point Average (GPA) after using e-modules with assessment criteria. Moreover, the number of students refusing to use e-learning decreased by 18.8% (Lavrov, Siryk and Chabanenko, 2020). Although the e-learning approach has brought prosperity towards the future, some drawbacks should have mentioned as significant in human relations.

## 3 Negative effects

The impact on the people cannot remain complimentary ever. Less awareness of the benefit of face-to-face communication and lack of emotional well-being mixed with other problems (Lazareska, Stojanovska, 2020) can lead to potential risk on people. There are some issues identified based on survey results. For instance, the difficulty of solving complex problems with a teacher, the inability to flexibly change the complexity of the material, lack of ability to evaluate quickly, errors, poor formatting, and low flexibility to enable self-monitoring of the learning process and error explanations. (Lavrov, Siryk and Chabanenko, 2020).

Furthermore, there are such factors identified when using distance educational technologies on the operating process, which are: Lack of quality; Low interest to sit down and study; Health of the students; Cyber-security (Kuzmin and Livanova, 2020). Humanity may be unaware that there are more negative impacts on people who use that technological improvement. Nevertheless, it is

essential to learn from likely issues such as quality assurance and psychological well-being.

#### 4 Quality issues

How to measure distance learning quality is not certain among educators nowadays. Some people may say it is trustworthy or not. Even though the e-learning method's contribution has proven by some research conducted by scholars, its evaluation criteria are still not clear. (Allen et al., 2004; Shachar & Neumann, 2003).

Although the evaluating system is not acceptable, crucial factors should have determined in the education sector. One way to identify critical indicators is by putting each stakeholder group – such as learner, instructor and support staff. – at the centre of the framework and raising issues along the eight dimensions of e-learning from that group's perspective (Badrul H Khan, 2016).

According to Khan, an editor of Revolutionising modern education through meaningful e-learning implementation, the e-quality framework is constructed, with three levels in which 113 'benchmarks' are categorised and sorted into 29 'sub-factors' and seven main factors. By considering their interrelationships, current information and communication technology (ICT) regulation and procedure, stakeholders' points of view and their role in need of conduct.

The eight-dimensional framework developed by Khan provides the educational technology community with the leading guidelines and practices for the development of e-Learning systems. The eight dimensions of this e-learning framework are '(1) institutional, (2) pedagogical, (3) technological, (4) interface design, (5) evaluation, (6) management, (7) resource support, and (8) ethics' (Saida Affouneh1 , PhD; Soheil Salha1 , PhD; Zuheir N Khlaifl \*, PhD , 2020).

#### 5 Solutions

When installing an e-learning system, the tutoring program should not only take scholars' responsibility, but it should also be under parents' control. By the time launching that kind of big

projects, there must be a bigger group of professionals, including computer scientists, content specialists, developers, testers and designers. Design thinking can bring immense improvement to the development of the solution and puts the user at the centre of the problem. Combining two types of stakeholders' participation contributes to reducing hazardous and predictable risks.

In the technical part of this type of platform, 3D Web technology with Artificial intelligence (AI) has a substantial positive impact on performance quality. Even if the 3D web is not popular, the effect on the study has been proven. The optimisation of the 3D web has increased interactivity in virtual classes- on Artificial Reality (AR) illustrates that learners feeling and discovery are identical (Nguyen Duc Son, 2019).

Policymakers and the Minister of Education can determine how the quality measurement could have changed under the supplementary authoritative documents.

#### 6 Conclusion

The increased number of innovative products such as applications, web pages and software programs are changing the world. A massive wave of demand has created in the instruction area. The human capacity is not enough to reach its standard; therefore, well-developed application or web-page teaching can increase study effectiveness. Many people use Facebook, Viber, WhatsApp and Google for their daily cycle, but most people use YouTube for their studying, except other video platforms. That is a clear sign that people wish to use it in their studies. As discussed in the review, there is also good marks on the students' result, and teachers are happy to use the software when teaching. Nevertheless, there is some bad influence on human relationships; people tend to handle them more effectively.

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