Technology-Enhanced Learning Research In Higher Education: A recommendation System For creating Courses Using the Management Systems in the E-Learning 5.0

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Abstract. The purpose of this research was technology-enhanced research in higher education. Design-based research for creating courses using the management system in the E-Learning 5.0 has proven its promise as a tool useful for both research and design of technology-enhanced learning environments over the last decade (TELEs). In this article, we characterize and explain design-based research characteristics, outline the relevance of design-based research in the creation of TELEs, suggest principles for applying design-based research with TELEs, and address potential challenges in using this approach. This inaugural special issue of Studies in Technology Enhanced Learning focuses on 'theory,' a controversial subject. While theory has been criticized for being vague or alienating at times, it is safe to conclude that theory has never been as profoundly rooted in Technology Enhanced Learning (TEL) science as it has in many other fields of scholarship.

Keywords: E-learning, Management System, Technology-Enhanced, Courses

1. Introduction
Explicit declarations of what the word is considered to mean are uncommon, and it is not clear that a common definition about what constitutes an improvement to the student learning environment has evolved in higher education. The aim of this article is to provide a critical analysis and evaluation of how TEL is viewed in recent literature. It investigates the function of technology initiatives, the techniques used to explain the importance of technology in improving the learning environment, the different ways in which improvement is formulated, and the use of various sources of proof to substantiate TEL arguments.

One explanation is that TEL is often thought of as a 'practical' sector, with 'theory' negatively juxtaposed against other goals such as methodological advancement, 'evidence,' 'best practice,' or, more recently, imperatives to be 'data oriented.' Furthermore, the use of theory can also be a stumbling block for many beginner researchers: even those who are ambitious in their use of theory can struggle with coming to grips with the associated vocabularies, or with actually applying specific theories in their own study. Many people can begin to question whether it is really worth the effort. For eg, one previous suggestion was for the Centre to write a "article" on theory in TEL science. Instead, we took up the current Special Issue after realizing that the concept of jointly writing about ‘theory' would fit with the idea of starting an open-access publication, and that a Special Issue might make for a more multi-vocal discussion of the subject matter, [16].
These statements also provide a fair explanation of our original starting point for this Special Issue. Our Call for Papers, which benefited from dialogue and refinement at Centre meetings, sought submissions based on a variety of issues that we felt were critical to the advancement of TEL scholarship.

2. Methodology
The study was carried out using a qualitative descriptive method, which investigates the status of an object, situations, and processes of thinking, function, and perception. Since this research thesis does not make use of equations. Literacy studies are also a tool for compiling different sources of books, publications, papers, and documentation related to science. The approach is one that necessitates a significant amount of activity in order to read the data, study, and knowledge that has been gathered.

3. Result and Discussion
The present thesis aimed to search the Google Scholar corpus for peer-reviewed literature on e-learning in education from the beginning of time until the year 2021. The current study found a growing trend in the growth of literature, with a sharp peak in 2021, owing primarily to e-learning publications during COVID19, [14]. This rise has been noted in the general development of literature on e-learning.

Figure 1 showed overlay network visualization chart of the top 59 author keywords (n=4247 keywords), which constitute the top 1% of all author keywords throughout the collected papers. The colors on the map represented the time of publication in the literature, with yellow representing keywords that were comparatively new in the literature.

Student counseling must provide opinions on job guidance, managing inter-personal relationships, learning strategy values, as well as personality and aptitude. Typically, this task is provided by counselors or consultants with extensive organizational expertise, [11]. However, with a the number of students and options, as well as the amount of work on these advisors who are unable to manage the case, the faculty of education institutions at the higher secondary level lacks adequate expertise and experience of the courses and programs, [12]. Owing to their workload, they still do not have time to counsel their pupils, [15]. As a result, it is preferable to provide some kind of intelligent suggestion
mechanisms that needed to be built to assist them in the admissions process. This dilemma served as the impetus for this study and the development of the recommender scheme to assist students and faculty. This system is recommended for collecting course knowledge and counseling for a course entrant to bridge the gap between his skills and potential requirements, [9].

Figure 2 shows the bibliographic coupling of the top participating papers. The map is divided into four clusters. Education that necessitates the application of technology to the industrial revolution The adoption of 4.0 would have a positive effect on learning practices. Learning activities using various methods generate a high level of interest in learning, especially among students. As opposed to conventional classroom approaches, the Learning Management System (LMS) will build a stronger and more efficient education system through its implementation, [5]. The Learning Management System is an important e-learning platform. LMS is an application that is used in making the learning media process directly as a software for the delivery of learning activity programs, [17]. The LMS also has facilities such as management of learning courses, management of learning materials, management of activities, value management, displaying transcript values, and managing diaries, [2]. Learning platforms, such as e-learning, have enormous promise in the advancement of skills and student competencies. The programs offered are available and can be used, [7].

E-learning necessitates two types of activities: networking activities (e-mail, forums, seminars, online journals, and so on) and discovery activities (mainly navigation of contents) [1]. These tasks are usually carried out on a learning management system (LMS) (Learning Management System). An LMS is a forum for administering, recording, and providing e-learning material that provides registered students with a large range of courses and highly personalized capabilities, [3].
Figure 3 showed the bibliographic coupling of the top participating papers. The map is divided into four clusters. Each cluster represents a set of journals with a shared theme. E-learning is also used in the continuing education of nurses, doctors, and pharmacists, [10]. It has been shown that e-learning has a beneficial impact on healthcare practitioners' awareness, abilities, and attitudes, as well as on patient outcomes, [8].

Despite the prevalence of e-learning, a number of reasons have been identified as impediments to the creation and application of an online learning program in health sciences, [6]. According to a recent report, there are many obstacles to online medical education in developing countries, including a lack of technological expertise, insufficient resources, a lack of systemic policies and funding, and divisive attitudes for all parties concerned, [4].

4. Conclusion

The aim of this analysis was to provide an overview of the amount and research developments in e-learning in education. According to the findings, this field is prominent and marked by a growing degree of author collaboration from various subject areas, but with insufficient foreign research collaboration. The majority of study output came from high-income countries in the northern hemisphere, with just a small contribution from low-income world areas. E-learning 5.0 innovation in education is advancing further than in other health sciences areas. It is possible that new specialized publications would be needed. E-learning technology in education is advancing quicker than research in other health sciences areas. There could be a need to create new specialist publications.

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