

# A Study on the Implementation of Integrating Online Learning (Fully and Blended Forms) and its Quality Assurance in Jordanian Universities

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**Abstract**—The study aims to identify the readiness of Jordanian higher education institutions for online learning, and the extent to which online learning was provided and applied in its both forms, namely: fully online learning, and blended learning, with the ultimate goal to be a part of the educational/learning system in Jordanian higher education institutions. The study also aims to determine the percentages of achievement at the level of fully online learning and blended learning in Jordanian universities. The study includes a specification of the components relevant to online learning, the percentages of achievement for each component, and the most important actions that should be taken by universities to achieve them. The study concludes with a set of results that will benefit decision-makers in the Accreditation and Quality Assurance Commission for Higher Education Institutions (AQACHEI), the Ministry of Higher Education and Scientific Research (MOHESR), and Jordanian higher education institutions. The aim is to benefit the integration of online learning within the Jordanian higher education system in an effective manner that achieves high levels of educational quality for online learning in its both forms and ensure the desired shift in the performance of Jordanian higher education institutions and the quality of its output, keeping pace with global developments in this field.

**Keywords**—online learning, Jordanian universities, fully online learning, blended learning.

## I. INTRODUCTION

Universities have a prominent place within the educational system, and by virtue of this place, they are not only responsible for developing themselves and renewing their potentials, but also for developing and completely renewing the education system. No country can make significant progress in education and achieve the development goals in the third millennium without having a strong educational system that is capable of keeping pace with the occurring changes and exceptional and urgent circumstances. Such a strong educational system is crucial for conducting the educational process according to the highest levels of quality. In addition, as the Corona pandemic has cast a shadow over the country, along with the accompanying changes in the

adopted learning and teaching methods as well as the content of education, it is necessary for the educational system to provoke profound thoughts, pursue effective remediation, and fulfill aspirations towards new prospects [1].

Based on the above, university educational institutions in Jordan, in general, have quickly dealt with emergency situations facing education, such as the Corona pandemic, in which they needed to move from traditional learning to online learning (in its fully and blended forms) during the previous period. This led the educational institutions to implement the executive action plan that was prepared by the Ministry of Higher Education and Scientific Research (MOHESR) for integrating online learning (in its fully and blended forms) into the higher education system from 2021 until 2023 [2]. They also needed to implement the executive action plan to reflect it on their programs in order to keep pace with developments at the local, regional and international levels. Consequently, it has become an ongoing and pressing necessity for educational institutions to develop their educational programs and legal acts due to the fact that circumstances are changing, and all of that was a strong motive to conduct this study.

## II. PROBLEM AND QUESTIONS OF THE STUDY

The problem of the study is determined by the following main question:

“To what extent is online learning, in its fully and blended forms, activated and applied in Jordanian universities?”

The following questions are subdivided from the main question:

- 1) What is meant by fully online learning?
- 2) What are the forms of fully online learning?
- 3) What is meant by blended learning?
- 4) What are the forms of blended learning?
- 5) What are the percentages at which achievements in relation to fully online learning or blended learning, are made in Jordanian universities?.

### III. OBJECTIVES OF THE STUDY

This study aims to achieve the following objectives:

- 1) Defining online learning in terms of concept, importance, and objectives.
- 2) Identifying the components related to online learning and checking their availability.
- 3) Identifying the percentages of achievements made in relation to the procedures taken by the university.

### IV. IMPORTANCE OF THE STUDY

This study is considered important based on:

- 1) The ability of university educational institutions to use online learning in its fully and blended forms in an optimal way, in order to achieve the highest educational quality.
- 2) It is hoped that the study will benefit the following parties:
  - Decision-makers in the Accreditation and Quality Assurance Commission for Higher Education Institutions (AQACHEI) and the Ministry of Higher Education and Scientific Research (MOHESR).
  - Universities, private university colleges, and intermediate university colleges.

### V. METHODOLOGY

The descriptive-analytical method [3] was used to conduct this study, as it is appropriate for its nature in order to reach the desired results.

### VI. TERMINOLOGIES USED THROUGHOUT THE STUDY

The purpose of this section is to help in understanding the basic terminologies on online learning.

#### A. Online Learning

It is an interactive education system that is provided to the learner using information and communication technology and is based on an integrated digital electronic environment that shares courses via online networks. It also provides guidance and counseling skills, organizes exams, and manages and evaluates resources and processes [4, 5, 6, 7].

The importance of online learning lies in solving the problem of knowledge explosion, the increasing demand for education, and expanding opportunities for admission to education. In addition, online learning is important to empower, train, and educate employees without them leaving their jobs as well as to contribute to breaking psychological barriers between the teacher and the learner. It is also important for satisfying the needs and characteristics of the learner while raising investment returns by reducing the cost of education [4, 5]. Online learning has two forms, namely: fully online learning and blended learning.

#### A.1 Fully online learning

Fully online learning takes place distantly when the student and teacher are in two different places and/or work and study at two different times. This form of online learning takes place distantly via the virtual learning platforms approved by the university. It also consists of two components: synchronous online learning (interactive and online) and asynchronous online learning (non-interactive and online) [6].

#### A.1.1 Synchronous Online Learning (Interactive Online Learning)

It is also called interactive learning, in which the teacher communicates with the students, and they communicate with each other at the same time. In this form, the teacher interacts with the students directly, and all students can directly interact with each other and with the teacher at the same time. Students can also join classes from a distant place as all they need is to have an Internet connection to join the website through which the lesson is delivered. Communication takes place at the same moment by written communications, voice communications, or audio-visual communications [7].

#### A.1.2 Asynchronous Online Learning (Non-interactive Online Learning)

It is the form of learning in which students do not rely on communicating at the same time as it takes place outside the lecture times. In this form of learning, materials are available on the learning platform for all students so they can access them whenever and wherever they want. Thus, students choose the times and places that suit their circumstances. Students can also re-study the material and access it online whenever they need. One of the disadvantages of this form of learning is that students cannot receive immediate feedback from the instructor [7].

#### A.2 Blended Online Learning

It is the form of learning that combines both face-to-face learning that takes place in the classrooms or laboratories in the university campus and online learning in one course. Blended learning has two forms, mainly: face-to-face learning that takes place on campus (synchronous), which is similar to synchronous online learning, and asynchronous learning, which is similar to asynchronous online learning. Blended learning is characterized by combining the advantages of both traditional and online learning; however, in this case, teachers' role is to provide guidance and manage the educational situation [8].

### VII. UNIVERSITY-BASED ONLINE LEARNING MANAGEMENT SYSTEM

The Online Learning Management System can be defined as an integrated computer system for distance education services, as this system aims to facilitate the interaction between the student and the instructor. This management system is characterized by ensuring the quality and efficiency of the educational design, using various methods to present information, applying modern technology, and using it as an educational method. It is also characterized by encouraging the interaction between the two components of the educational system, developing self-learning skills for students, easing the process of monitoring, and providing good management for the educational process [2, 9]. The Online Learning Management System includes the following components:

- Developing a synchronous communication system.
- Developing an integrated Online Learning Management System.
- Providing computers and technological tools for faculty members, staff, and students.
- Having an appropriate technological capacity.
- Developing specialized instructions and legislation.

- Providing the Online Learning Center with competent staff members.
- Providing training for students.
- Providing training for the faculty, administrative, and technical staff.
- Designing synchronous lectures.
- Reviewing and amending the study plans of the academic programs and courses.
- Introducing modern learning methods and strategies.
- Restructuring the evaluation system.
- Introducing both forms of learning which are blended and fully online learning.
- Introducing to the required percentages for the hybrid program, which is a program that combines fully online learning, blended learning, and face-to-face learning.
- Defining the analogy between the forms, models and components of fully online learning, and between the forms, models and components of blended learning.

Based on these components whose results were provided by the Jordanian universities, it becomes obvious what the universities have done in terms of procedures and percentages of achievement in each of them. Section VIII shows the achievement percentages for the components of the Online Learning Management Systems mentioned above.

#### VIII. ACHIEVEMENT PERCENTAGES FOR THE COMPONENTS OF THE ONLINE LEARNING MANAGEMENT SYSTEM AT THE UNIVERSITY LEVEL

In this section, the percentages of achievement of the various Online Learning Management System components are presented at the university level. Fig. 1 shows the average percentage of achievement from the total number of instructors for the component of introducing both forms of learning which are blended and fully online learning. This

percentage of achievement amounted to (3.32 out of 4), and the percentages of achievement in universities ranged from (2) to (4).

Fig. 2 shows the average percentage of achievement from the total number of instructors for the component of introducing to the required percentages for the hybrid program, which amounted to (3.14 out of 4), and the percentages of achievement in universities ranged from (0) to (4).

Fig. 3 shows the average achievement percentage from the total number of instructors for the component of defining the analogy between the forms, models and components of fully online learning, and between the forms, models and components of blended learning. This percentage of achievement amounted to (3.09 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 4 shows the average percentage of achievement from the total number of instructors for the component of restructuring the evaluation system, which amounted to (2.86 out of 4), and the percentage of achievement in universities ranged from (0) to (4).

Fig. 5 shows the average percentage of achievement from the total number of instructors for the component of introducing modern learning methods and strategies, which reached (2.05 out of 4), and the percentages of achievement in universities ranged from (0) to (4).

Fig. 6 shows the average percentages of achievement from the total number of programs for the component of reviewing and amending the study plans of the academic programs and courses, which amounted to (2.95 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 7 shows the average percentage of achievement of the evidence that was prepared and the decisions that were taken for the component of designing synchronous lectures, which amounted to (2.68 out of 4), and the percentages of achievement in universities ranged from (0) to (4).

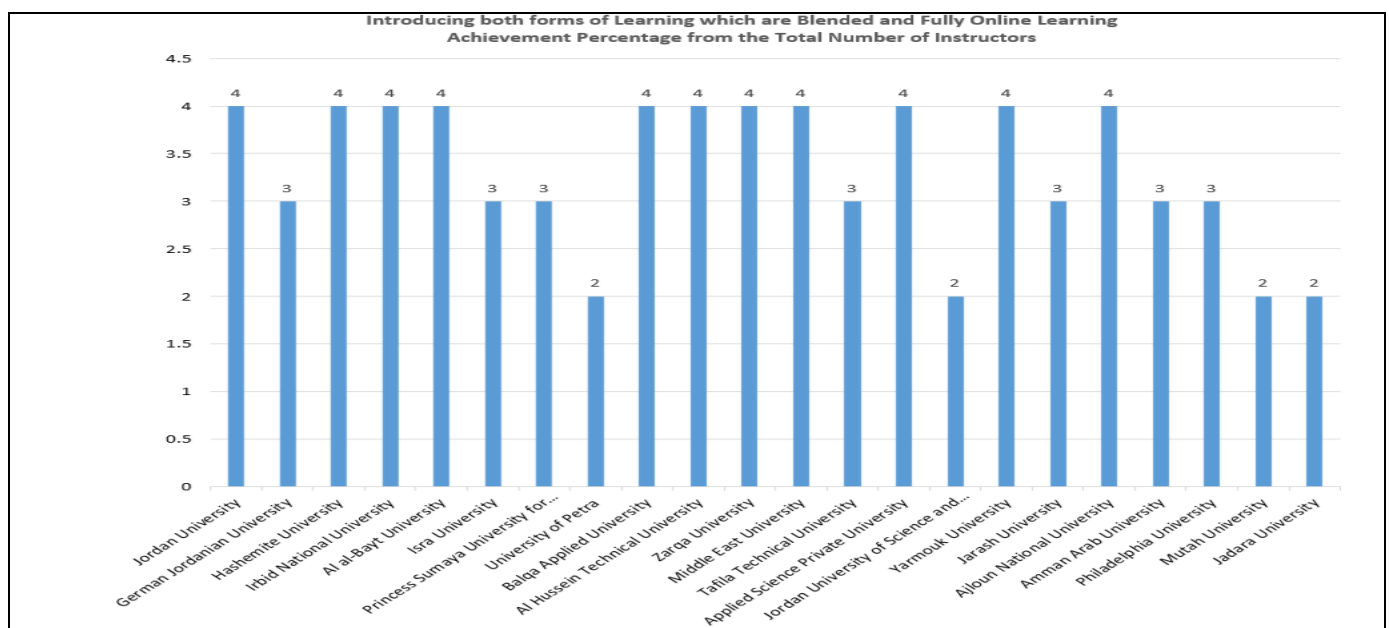


Fig. 1. Average percentage of achievement for the component of introducing both forms of learning which are blended and fully online learning.

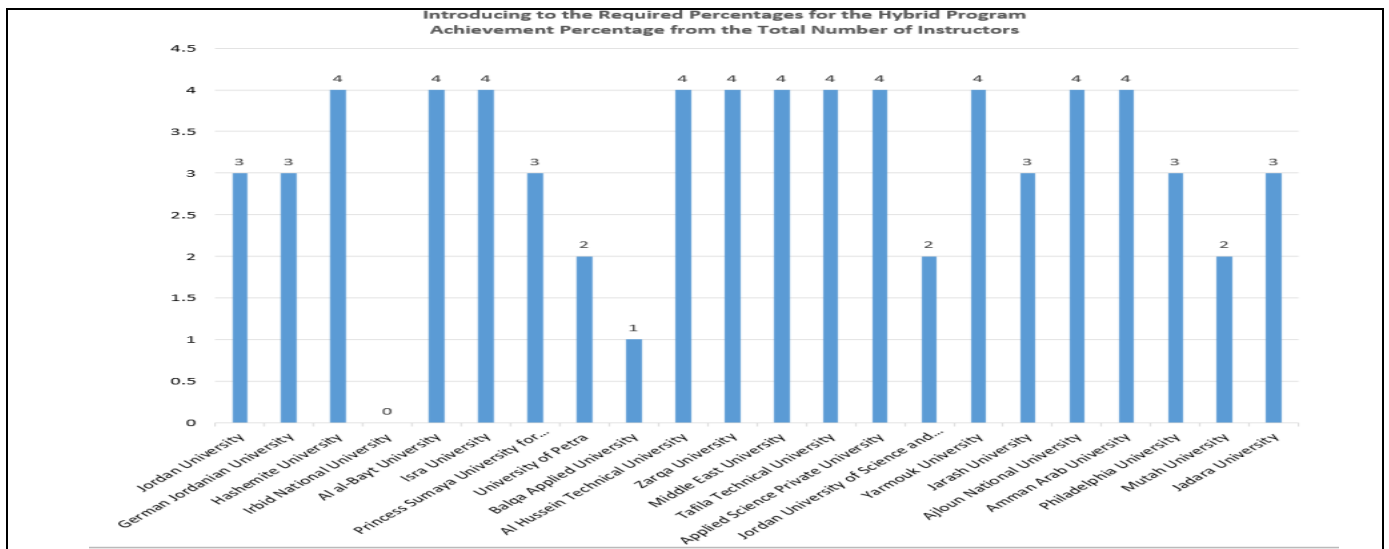


Fig. 2. Average percentage of achievement for the component of introducing to the required percentages for the hybrid program.

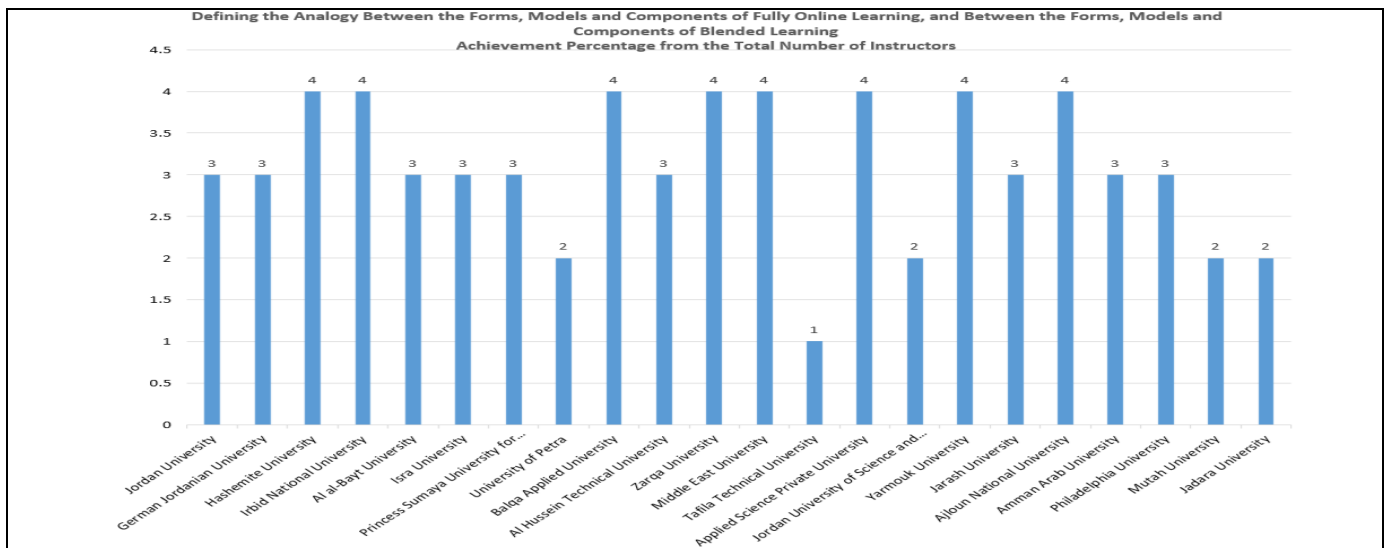


Fig. 3. The percentages of achievement for the component of defining the analogy between the forms, models and components of fully online learning, and between the forms, models and components of blended learning.

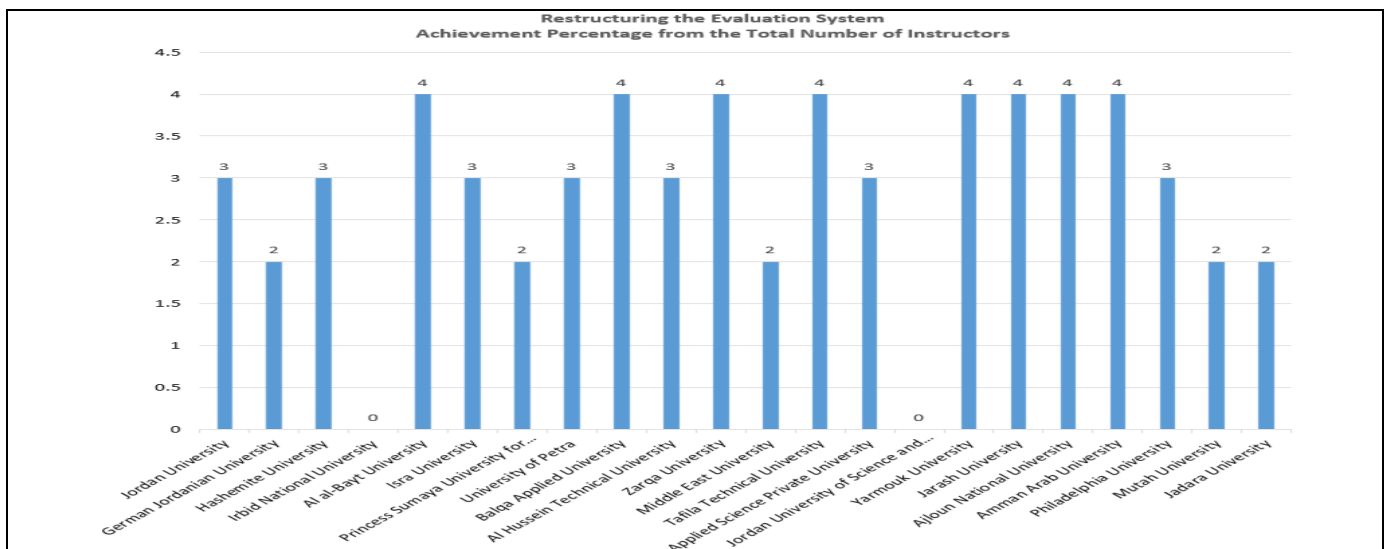


Fig. 4. Average percentage of achievement for the component of restructuring the evaluation system.

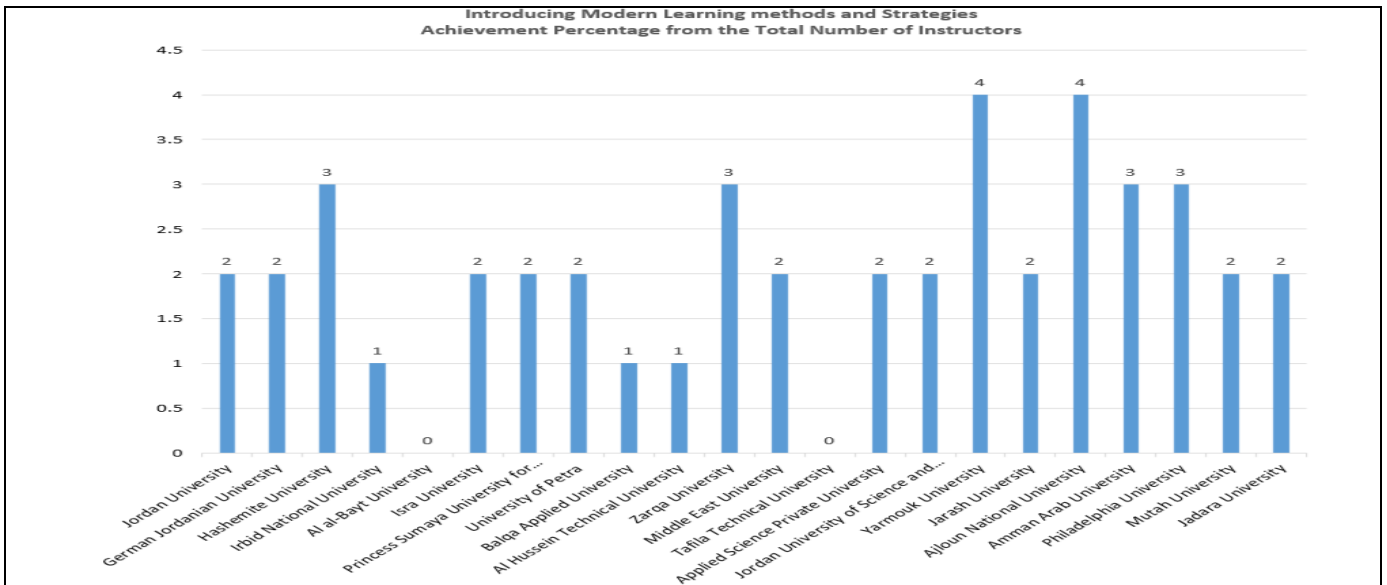


Fig. 5. Average percentage of achievement for the component of introducing modern learning methods and strategies.

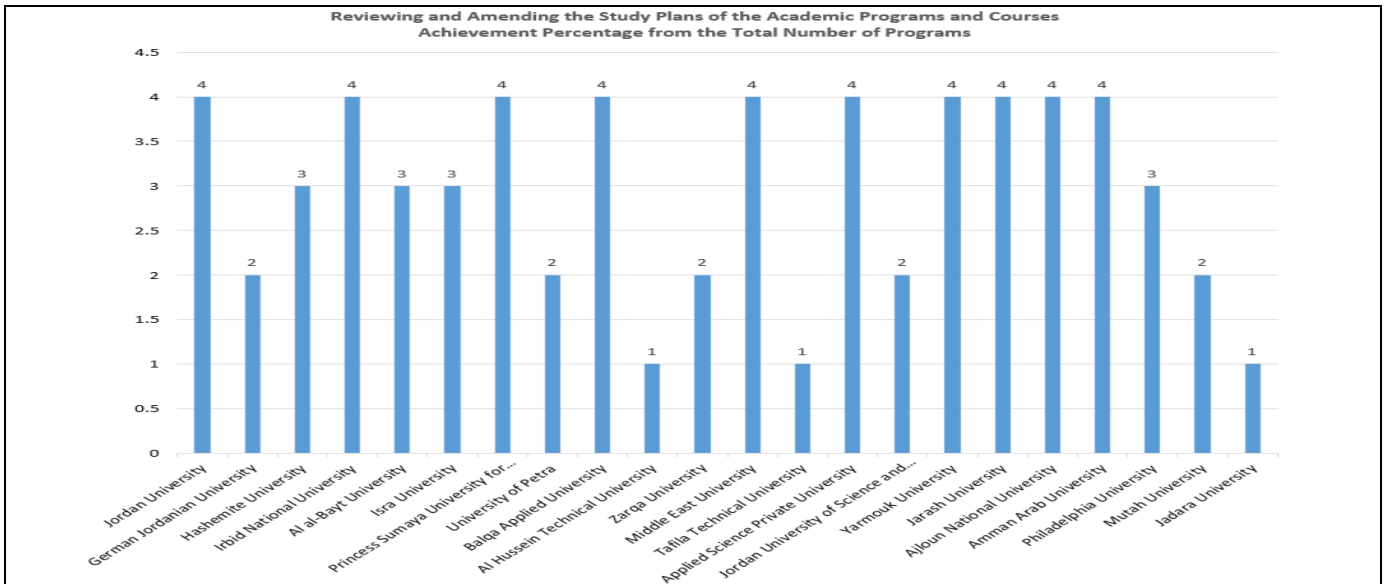


Fig. 6. Average percentage of achievement for the component of reviewing and amending the study plans for the academic programs and courses.

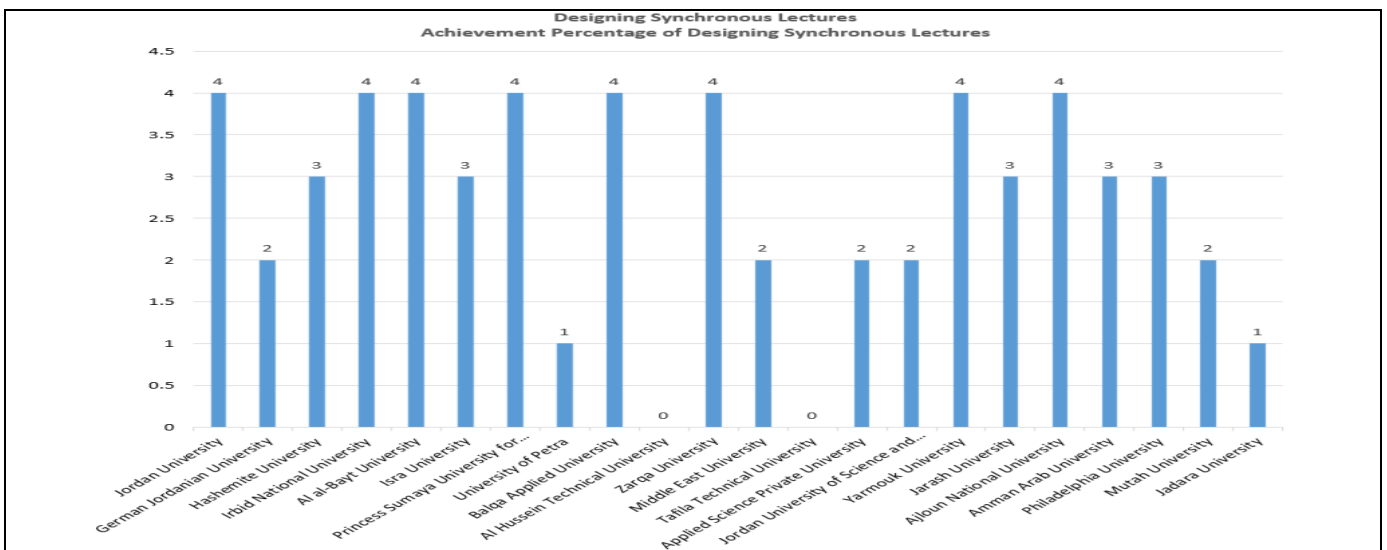


Fig. 7. Average percentage of achievement for the component of designing synchronous lectures.

Fig. 8 shows the average percentage of achievement for the component of providing training for faculty members, administrative, and technical staff, which amounted to (3.09 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 9 shows the average percentages of achievement for the component of providing training for students, which amounted to (2.50 out of 4), and the percentages of achievement in universities ranged from (0) to (4).

Fig. 10 shows the average percentage of achievement for the component of providing the Online Learning Center with competent staff members, which amounted to (2.68 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 11 shows the average percentage of achievement for the component of developing specialized instructions and legislation, which amounted to (2.73 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 12 shows the average percentage of achievement for the component of having the appropriate technological capacity, which amounted to (3.68 out of 4), and the percentages of achievement in universities ranged from (1) to (4).

Fig. 13 shows the average percentages of achievement for the component of providing computers and technological tools for faculty members, staff, and students, which amounted to (3.32 out of 4), and the percentages of achievement in universities ranged from (2) to (4).

Fig. 14 shows the percentage of achievement for the component of providing an integrated online learning management system, which amounted to (3.82 out of 4), and the percentages of achievement in universities ranged from (3) to (4).

Fig. 15 shows the average percentage of achievement for the component of providing a synchronous communication system, which amounted to (3.86 out of 4), and the percentages of achievement in universities ranged from (2) to (4).

To sum up, Fig. (16) shows the Achievement Percentages Rate for all Components of the Online Learning Management System at the university level. The average of the achievement percentages rate for all components of the Online Learning Management System amounted to (3.05 out of 4), and the percentages ranged from (1.67) to (4.00). The lowest percentage of achievement was at Jadara University (1.67), and the highest percentage of achievement was at Ajloun National Unuiversity (4.0).

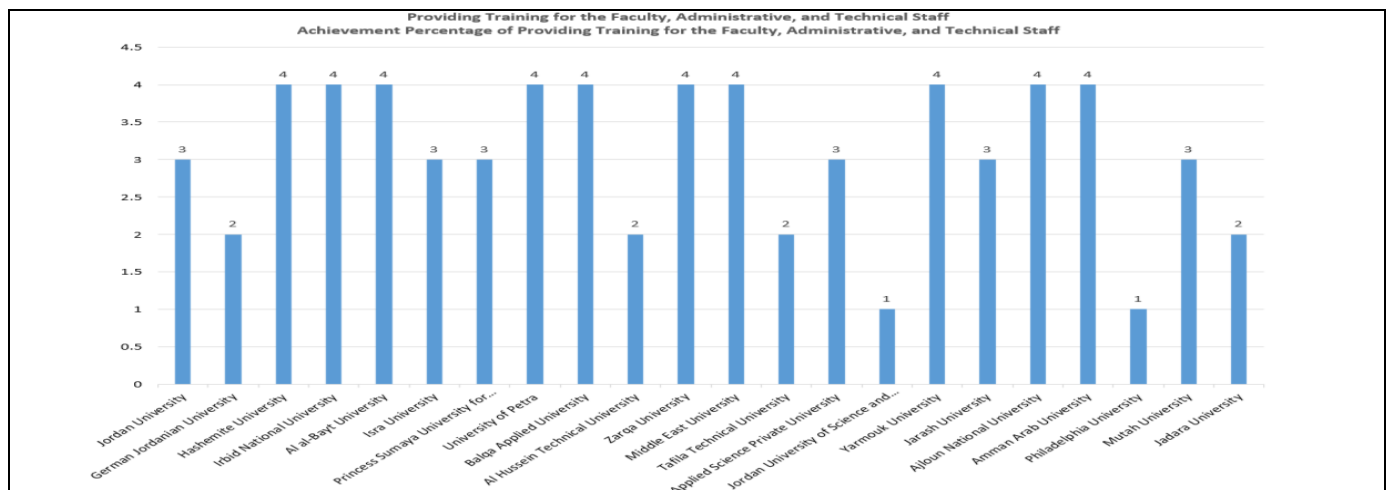


Fig. 8. Average percentages of achievement for the component of providing training for faculty members, administrative, and technical staff.

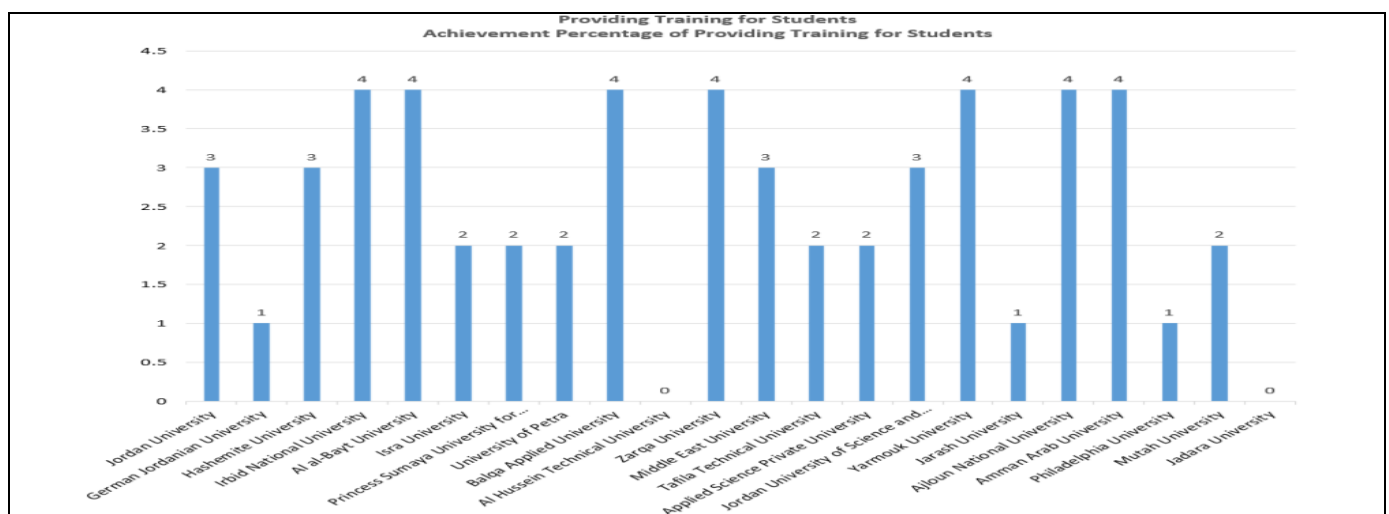


Fig. 9. Average percentage of achievement for the component of providing training for students.

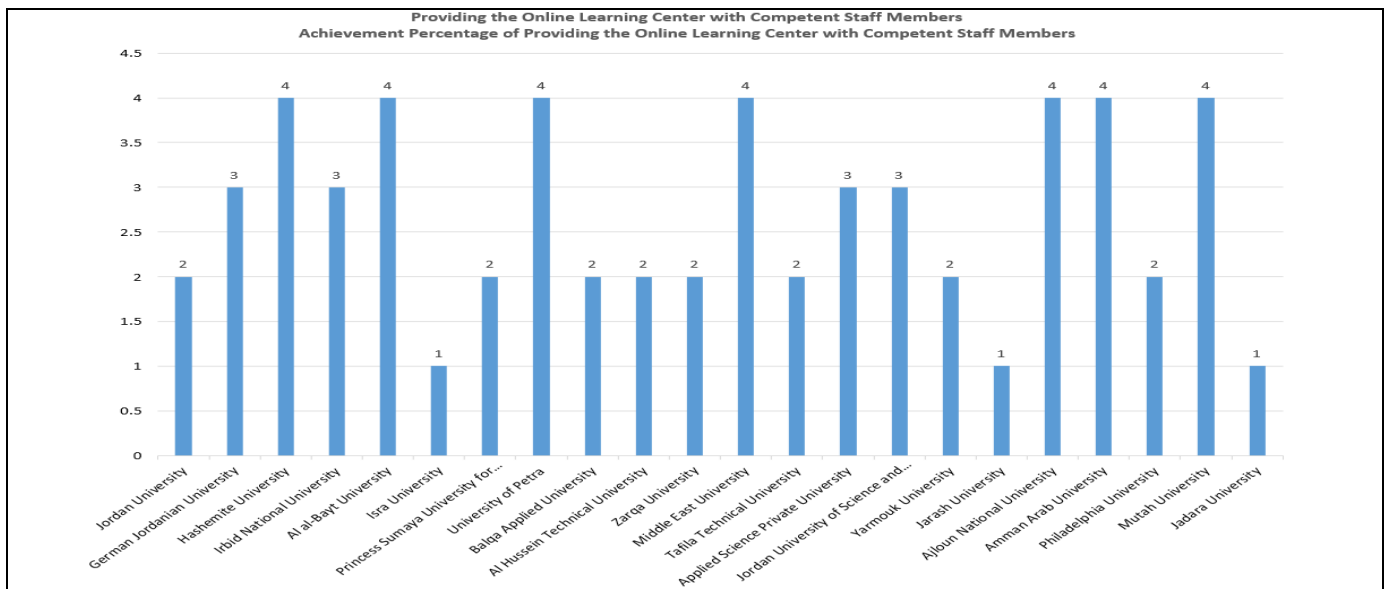


Fig. 10. Average percentage of achievement for the component of providing the Online Learning Center with competent staff members

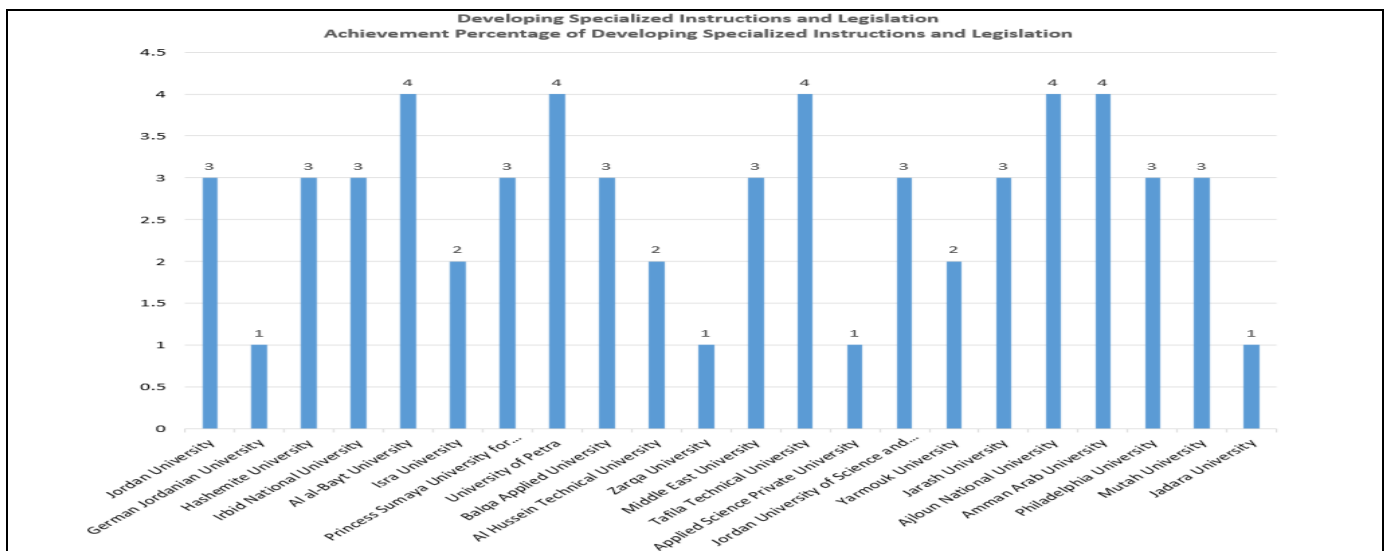


Fig. 11. Average percentage of achievement for the component of developing specialized instructions and legislation.

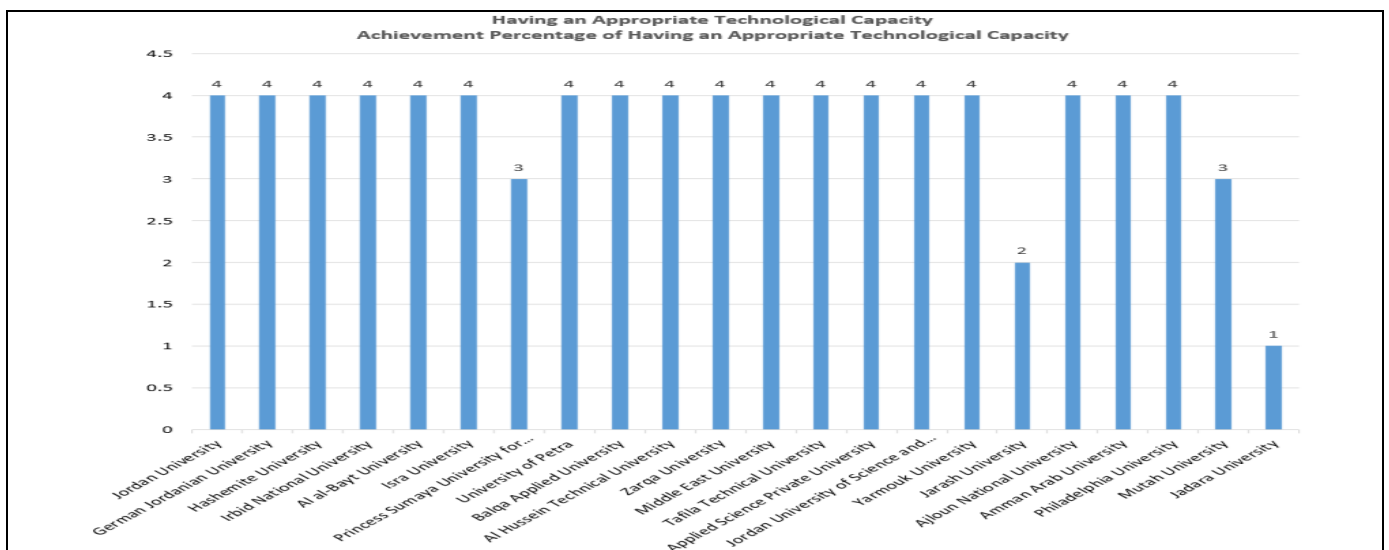


Fig. 12. Average percentage of achievement for the component of having the appropriate technological capacity.

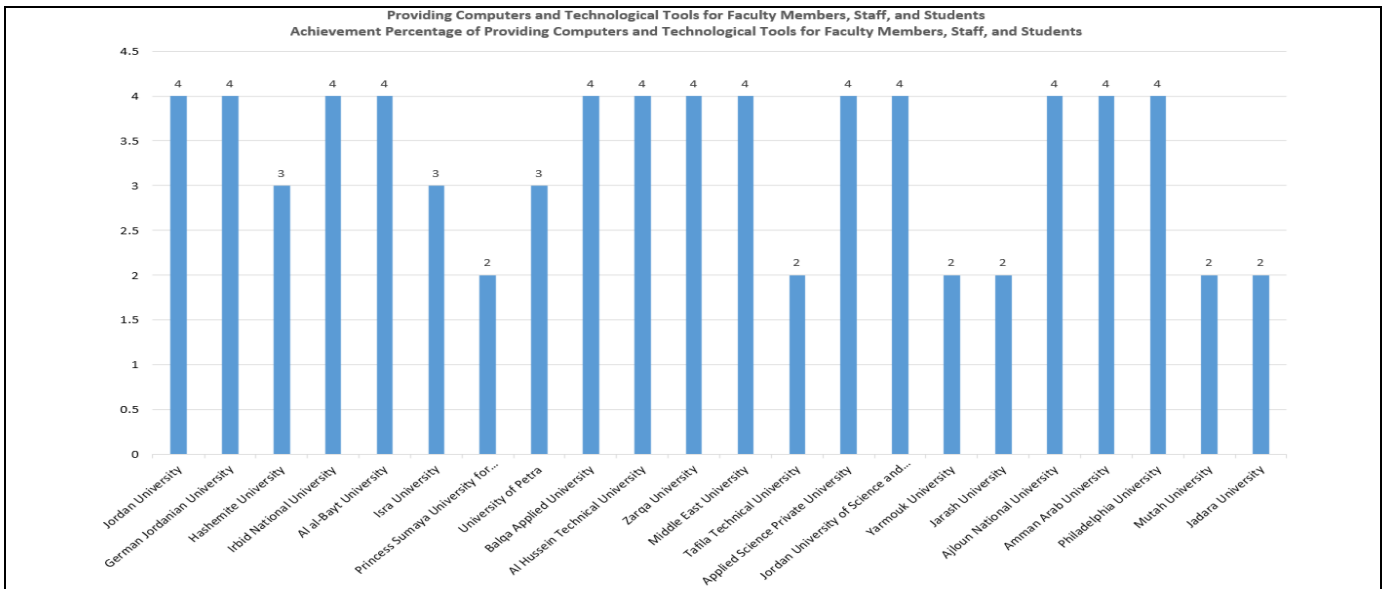


Fig. 13. Average percentage of achievement for the component of providing computers and technological tools to faculty members, staff, and students.

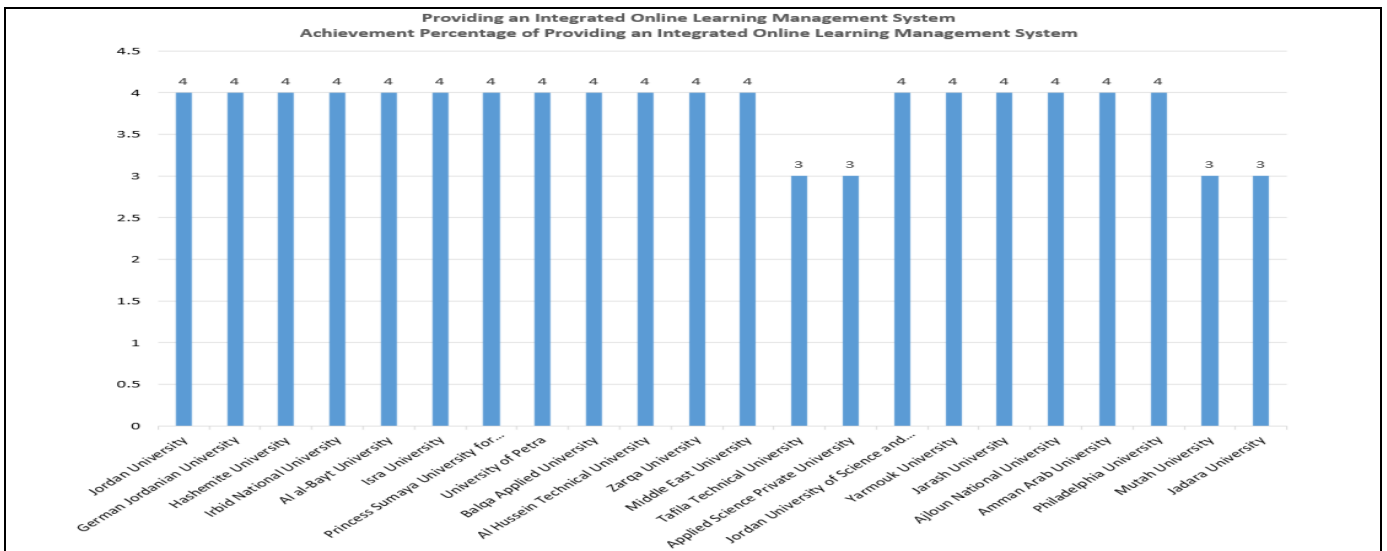


Fig. 14. Average percentage of achievement for the component of providing an integrated Online Learning Management System.

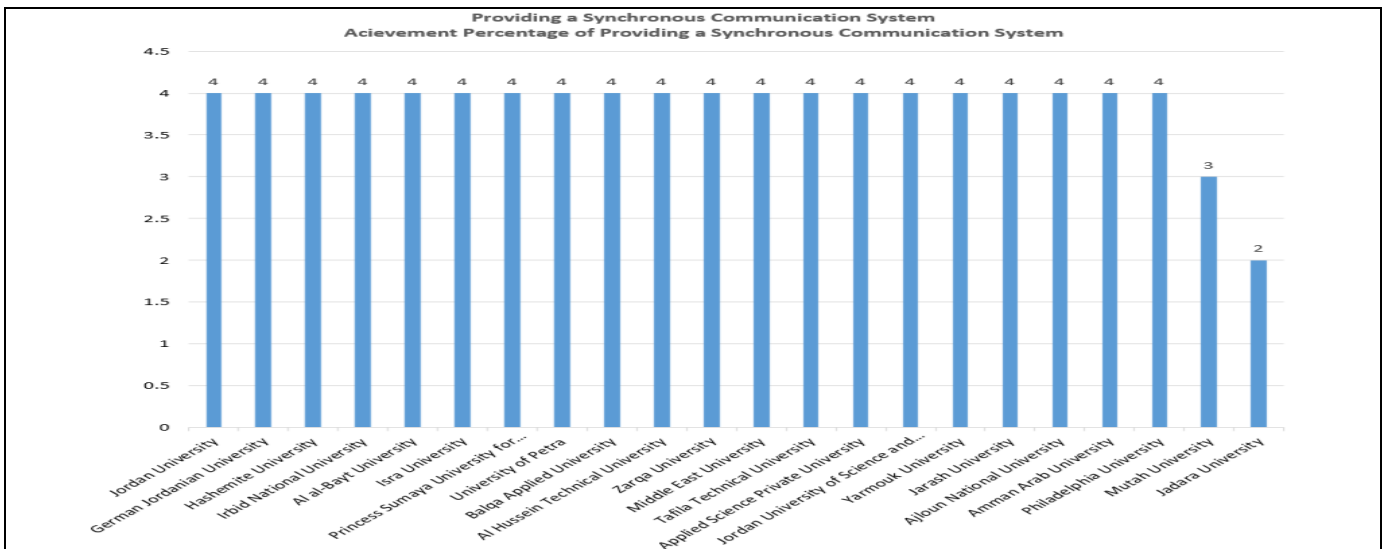


Fig. 15. Average percentage of achievement for the component of providing a synchronous communication system.



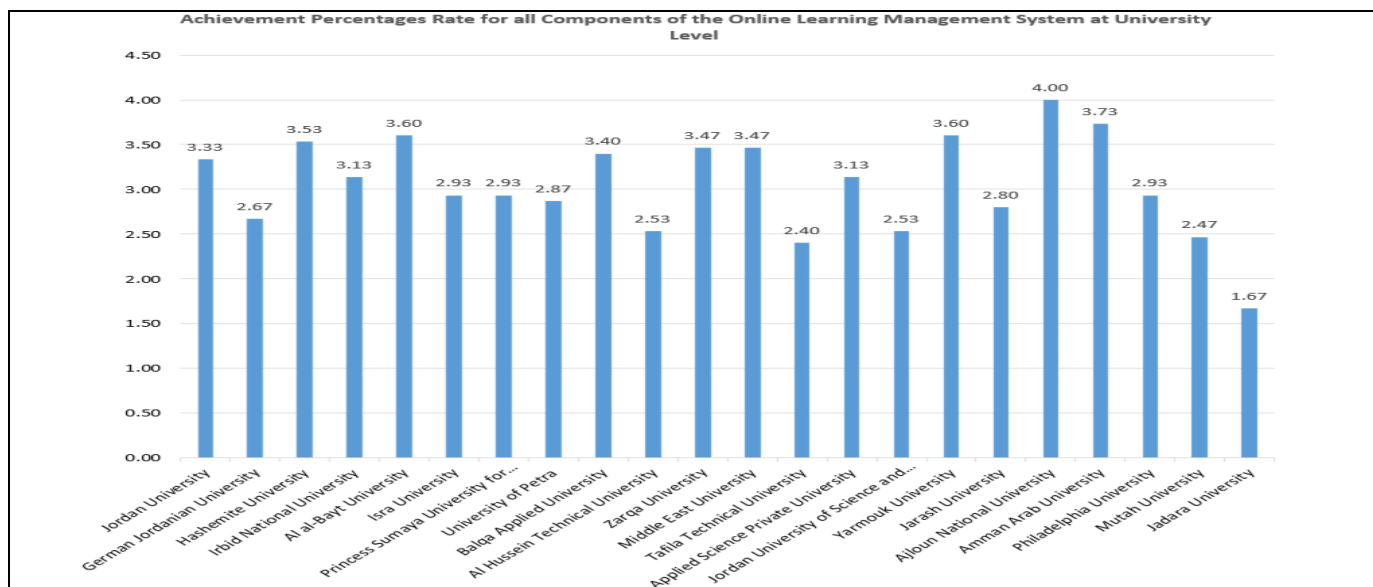


Fig. 16. Achievement Percentages Rate for all Components of the Online Learning Management System at University Level.

## IX. RESULTS DISCUSSION

By considering the percentages of achievement for all components of the Online Learning Management System, results showed that, in general, there is clear progress in implementing most of the components, as the highest progress was in the technical infrastructure necessary for implementing effective online learning. This was achieved by having the appropriate technological capacity which ensures providing an integrated system for online learning management that includes developing a synchronized communication system and providing computers and technological tools to faculty members, staff, and students. Results also revealed that the progress in developing instructions and legislation related to online learning varies from one institution to another. However, what is important is that the system for integrating online learning in higher education institutions was issued by a royal decree, and that the Higher Education Council had approved executive instructions for the system. The Accreditation and Quality Assurance Commission for Higher Education Institutions (AQACHEI) had also built foundations to regulate the implementation of blended and online learning in educational institutions. Results also indicated that there is a good progress in some universities in relation to the component of providing training for faculty members; however, all universities still need to conduct more work. What is more important in this context is the maximum benefit from the trainees/trainers who participated in the training courses prepared by the Ministry of Higher Education and Scientific Research in this field. Results also indicated that there is a good achievement in some universities at the level of achieving the component of reviewing and amending study plans to suit the form of learning adopted in them, but there is still a need for more efforts to be made at this level in all universities.

Additionally, results showed that there are few universities that have not determined the percentages of integration in the programs as desired and taken the required actions. This is essential for the successful implementation of online learning in universities. It is also noted that some institutions have set higher percentages of achievement than expected, especially in the components that are more difficult to be implemented,

such as reviewing study plans, introducing modern teaching methods, restructuring the evaluation system, among others. However, percentages must accurately reflect what is actually happening.

Moreover, results showed that some components need rapid intervention to be made by universities to address their imbalances, including the following:

- 1) Introducing modern learning methods and strategies.
- 2) Reviewing and amending the study plans for the academic programs and courses.
- 3) Providing training for students.
- 4) Providing the Online Learning Centers with competent staff members. This is expected, but it is important to have gradual percentages of achievement.
- 5) Developing specialized legislation and instructions.
- 6) Restructuring the evaluation system.

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