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Abstract

The appearance of COVID-19 virus has affected many aspects of our life. These include and not limited to social, financial and economic changes. One of the most important impacts is the economic effects. Many countries have taken actions to continue the teaching process through online teaching platforms. The students are expected to graduate during the next few semesters with certificates that include some online-completed courses and their graduation certificates are called mixed certificates.

This paper considers graduation mixed certificates with some online courses and its impact on graduates seeking jobs. First, we study how well the mixed certificates are accepted by job market. In other words, how different companies, organizations and even governmental entities would accept such certificates when hiring. We study the perception of job market for such certificates for different learning fields. Secondly, we study how well the online courses are accepted by the students keeping in mind that these students are used to traditional face to face teaching. Finally, we paper our results and recommendations according to the collected data from the surveys. Some of the results show that about 60% of companies don’t have policies to encourage hiring graduates with mixed certificates. Also, colleges are almost divided evenly between preferring face to face and preferring online teaching.

***Keywords:***

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1. **Introduction**

The wide spread of COVID-19 virus all over the world has changed our lives in many aspects. People’s life has been changed socially, financially and economically due to the COVID-19 virus. One of the most important changes is the economic changes. The economic changes could have direct or indirect consequences on people. This proposal focuses on the economic consequences COVID-19 and specifically its impact on graduates seeking jobs.

Because of the need to social distancing to prevent the spread of the virus, many countries have taken actions towards suspending schools and universities. For example, Saudi Arabia was one of the first countries to take such measures to protect students in schools and universities. Suspending schools and universities was proven to be one important measure to protect the students and their families and the society as a whole. At the same time, countries always tried to continue the teaching process through online learning [1,2,3,4,10]. In such cases, students who are currently enrolled in universities are completing some courses in their study through online platforms. These students are expected to graduate during the next few semesters with certificates that include some online-completed courses and some traditional face-to-face courses (This type of learning is called blended learning [5,6,7,8,9]). In this proposal, we call such certificates, mixed certificates.

University graduates with mixed certificates need to be hired after graduation. In this proposal, we study how different companies, organizations and even governmental entities would accept such mixed certificates. We plan to study the perception of job market for such certificates for different learning fields.

There is a number of different teaching systems that exist in different countries. The most popular system is the traditional face-to-face teaching system. In this traditional system [11,12], all the courses are taught in classes with personal contact. Classes that need practical skills benefit very much from the system where the students are allowed to attend classes and labs physically and get direct guidance from instructors.

On the other hand, distance learning (or online learning) [13,14,15,16,17,18,19,20] started as another way of teaching which offers new opportunities to people who cannot attend classes physically. In distance learning, all classes are conducted virtually online and no face-to-face interaction. This type of learning provides course materials through Internet and also facilitates the interaction between instructors and students. However, the certificates earned completely virtual through distance learning does not have good reputation where all the courses within these programs are online courses. These certificates are perceived by job market as having lower quality as compared to traditional certificates earned with face-to-face teaching strategies.

This paper considers the graduation certificates with some face-to-face courses and some online courses, mixed certificates, and their effect on graduates seeking jobs. Again, because of COVID-19 pandemic, our universities are going to issue mixed certificates for all currently enrolled students. This paper has two-fold. Firstly, we try to answer the question, how well the mixed certificates, are accepted by job market. This is in the view that a student gets grade of Pass/Fail in online courses if the course grade would hurt his grade point average (GPA). We consider several learning fields such as Computer Science, Engineering, Medical and Trading.

The second track considers the question, how well the online courses are accepted by the students keeping in mind that these students are used to traditional face-to-face teaching. We focus on students from computer science and engineering. The results could lead us to recommending that some courses could be online courses even in normal times not only in pandemic times. The importance of this wok can be characterized as follows.

Saudi Arabia effort in containing the COVID-19 pandemic is noticeable, and this work would help in measuring the consequences of outbreak of virus at the economic level.

Students in traditional programs are completing some of their courses online, and it is important to gather their feedback to help improving the online teaching process.

Classification of the learning fields with mixed certificates according to their level of acceptance by job market is important to universities and decision makers.

Studying the effect of including some specific online courses in the traditional curriculum is important to scientific departments such as computer science.

Our findings and recommendations could benefit the job market as well as the universities.

This paper is organized as follows. The next section describes the methodology we followed int his paper. Section 3 discusses the companies’ survey results. In section 4, we discuss the results of the students’ survey.

Section 5 summarizes the results and gives some recommendations. Finally, in section 6, we give some concluding remarks.

1. **Methodology**

In this research, we started by surveying the different existing teaching strategies. This survey looked at different ways and mainly focused on traditional and virtual teaching strategies. We looked at techniques of such systems and the acceptance of these strategies by job market as well as students.

The results of the survey would be important in comparing these techniques to the new technique of mixed teaching strategies.

We measured the acceptance of the new techniques of mixed strategies (some courses are traditional face to face while some other courses are conducted online). Measuring the acceptance of the new strategy is done through questionnaires. Two main surveys are designed and conducted. The first is targeting and is answered by companies, entities, and even governmental organizations. This questionnaire would give us the answer on how well such mixed certificates are accepted by job market. Also, it classifies different fields of science in relation to the acceptance of their certificates. The second questionnaire is targeting and is answered by students who are used to traditional way of teaching and were switched to distant learning strategies because of the Coronavirus pandemic.

Finally, we analyzed the questionnaires data and based on the findings, some results and recommendations are suggested. The next section shows the results of the companies’ survey.

**3. Paragraphs and Itemizations**

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