



**FACTORS AFFECTING EDUCATIONAL  
ALTERNATIVES DURING COVID-19 PANDEMIC  
IN IRAQ**

by

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## LIST OF ABBREVIATIONS

ICT	Information and Communication Technology
AHP	Analytical Hierarchy Process
CI	Consistency Index
CR	Consistency Ratio
RI	Random Index
CW	Criteria Weight
CQ	Challenge Query

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## LIST OF SYMBOLS

$\lambda$	Lambda value
$\alpha$	Standard consistency threshold

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# **Faktor-faktor Mempengaruhi Alternatif Pendidikan Semasa Pandemi COVID-19 di Iraq**

## **ABSTRAK**

Kajian ini diilhamkan daripada situasi global sekarang yang sukar and kompleks yang telah melanda dunia hasil daripada pandemik COVID-19. Pandemi ini telah memberi kesan yang amat besar terhadap sector pendidikan seluruh dunia termasuk Iraq. Terutamanya, sejak Pertubuhan Kesihatan Sedunia (WHO) telah menyarankan agar tidak mencampurkan dan berkumpul setelah diketahui bahawa kedua-duanya adalah dua penyebab utama penyebaran virus Corona. Wabak ini menyebabkan penutupan universiti dan sekolah di seluruh dunia termasuk Iraq. Pandemi ini telah memberi kesan pada realiti keputusan pendidikan, terutamanya yang berkaitan dengan kesinambungan pendidikan. Matlamat utama kajian ini adalah untuk mencapai keseimbangan antara memastikan kesinambungan pendidikan dan menjaga kesihatan semasa wabak. Mengenal pasti alternatif pendidikan yang sesuai, mengenal pasti kriteria-kriteria atau ciri-ciri yang mempengaruhi alternatif ini, dan mengenal pasti cabaran yang dihadapi dalam pelaksanaan alternatif ini, semuanya harus dilakukan untuk tujuan ini. Metodologi tersebut merangkumi wawancara dengan pembuat keputusan pendidikan di Iraq, lawatan, dan tinjauan literatur. Alat NVIVO digunakan untuk mengenal pasti alternatif pendidikan dan faktor (kriteria) yang mempengaruhi alternatif ini. Satu borang telah dibentuk untuk mengumpul data mengenai skor kepentingan kriteria sehingga perbandingan berpasangan dapat dibuat. Tambahan pula, beberapa borang telah dibentuk untuk mengumpul data mengenai skor kepentingan untuk alternatif pendidikan sehingga perbandingan berpasangan dapat dibuat. Setiap kali alternatif dibandingkan di bawah pengaruh salah satu kriteria ini, jumlah baring-borang perbandingan alternatif bergantung pada jumlah kriteria tersebut. Proses Analisis Hierarki (AHP) digunakan untuk mengatur alternatif mengikut peringkat dan keutamaannya berdasarkan skor respons kriteria dan bentuk perbandingan berpasangan alternatif. Kajian ini juga merangkumi pembangunan program simulasi AHP menggunakan bahasa pengaturcaraan Visual Basic Dot Net dan lembaran Microsoft Excel. Akhir sekali metodologi tinjauan digunakan untuk mengenal pasti cabaran yang dihadapi oleh pelaksanaan alternatif ini dengan menggunakan borang soal selidik yang telah dibentuk untuk tujuan ini dan berdasarkan skala Likert 5 mata. Lapan pakar telah mengkaji borang soal selidik dan menentukan kesahan dan kebolehpercayaannya. Data tinjauan pertanyaan telah dianalisis menggunakan pakej statistik SPSS. Menurut hasil kajian ini, alternatif pendidikan yang dikenal pasti adalah dalam rangka: pembelajaran campuran, pembelajaran jarak jauh, bilik darjah digital, dan penangguhan pendidikan. Antara kriteria yang dikenal pasti berpotensi mempengaruhi alternatif ini adalah kesihatan, kos, kualiti, dan infrastruktur. Akhirnya, cabaran dikenal pasti dan diklasifikasikan sebagai cabaran dan rintangan fizikal dan prosedur. Penyelidikan ini memberikan beberapa cadangan penting.

Kata kunci: pandemik COVID-19, alternatif pendidikan, kriteria, cabaran, pendidikan tradisional

## Factors Affecting Educational Alternatives during COVID-19 Pandemic in Iraq

### ABSTRACT

The study was inspired by the present global difficult and complex situation caused by the COVID-19 pandemic. This pandemic has had a significant impact on the education sector worldwide, including in Iraq. Especially since the World Health Organization advised against mixing in public places and avoiding large gatherings after it was discovered that they are among the main causes of the Corona virus's spread. The Covid-19 pandemic has caused the closure of universities and schools in the majority of countries around the world, including Iraq. This pandemic had an effect on the reality of educational decisions, particularly those involving educational continuity. The main purpose of the research is to achieve a balance between ensuring education continuity and maintaining health during the Covid-19 pandemic. Identifying appropriate educational alternatives, identifying criteria that affect these alternatives, and identifying the challenges facing the implementation of these alternatives should all be done for this purpose. The methodology included interviews with educational decision-makers in Iraq, visits, and a literature review. The NVIVO tool was used to identify educational alternatives and the factors (criteria) that affect these alternatives. A form was designed to collect data on the importance scores of the criteria so that pairwise comparisons could be made. In addition, a number of forms were designed to collect data on the importance scores for educational alternatives so that pairwise comparisons could be made. Every time the alternatives are compared under the influence of one of these criteria. The Analytical Hierarchy Process (AHP) was used to arrange the alternatives according to their ranks and priorities based on the responses scores of the criteria and alternatives pairwise comparison forms. This study also included the build of an AHP simulation program using the Visual Basic Dot Net programming language and a Microsoft Excel sheet. Finally, survey methodology was used to identify the challenges that these alternatives' implementation faced using a questionnaire designed for this purpose and based on a 5-point Likert scale. Eight experts reviewed the questionnaire and determined its integrity and suitability for its intended purpose. The validity and reliability of the questionnaire were determined by collecting data from a population sample of 43 higher education experts and analyzing it with SPSS. The Questionary survey data was analyzed using the SPSS statistical package. According to the results of this study, the educational alternatives identified are, in order, blended learning, remote learning, digital classrooms, and education suspension. Among the criteria identified as potentially influencing these alternatives are health, cost, quality, and infrastructure. Finally, the challenges were identified and classified as physical and procedural challenges and obstacles. The research provided a number of important recommendations. Such as desperate need of conducting studies at the level of educational decisions during the crisis time in order to find appropriate solutions to educational problems in light of such crises as the current Covid-19 crisis.

**Keywords:** coronavirus, COVID19 pandemic, educational alternatives, criteria, challenges, traditional education, Interviews, questionnaire

## CHAPTER 1 : INTRODUCTION

### 1.1 Research Background

Education is the cornerstone of the development of civilization (Fägerlind & Saha, 2016). Society has recognized that the only way to continue this development is to ensure the continuity of education, evolve its techniques and tools, and maintain continuous communication from generation to generation. As a result, education has become an essential factor for individual and societal prosperity, as well as a necessary and indispensable element in all fields of scientific, economic, cultural, and health development and advancement (Akiba, 2020). However, under exceptional circumstances, such as the current situation in which the world lives due to the Covid-19, which has spread widely and quickly since its first appearance at the end of December 2019 (Mackenzie & Smith, 2020), which has generated a big challenge to maintaining educational continuity. COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020 (Organization, 2020; Takian et al., 2020), and has urged countries around the world to enforce stringent controls to prevent the virus's spread, as implementing a social distancing policy had a significant effect in putting a suspend to most sectors, forcing them to close, including the education sector.

Millions of students have been denied access to study continuity as a result of the education sector's closure (Huang et al., 2020). It is also causing global consternation and confusion in educational decisions, especially those concerning educational continuity.

As a result of this movement, the need for educational alternatives is becoming more urgent (Alanezi, 2020). This encouraged these countries to search for available educational alternatives to traditional classroom education, as well as to identify the factors and criteria that may have an impact on them (Hasan et al., 2020). As well as identify challenges in order to create future solutions for such situations in the face of the Covid-19 pandemic or any future crisis (Hasan, Ibrahim, et al., 2021; He et al., 2021).

This provided the opportunity for scholars to look at educational alternatives, in addition to the factors and criteria that may affect them, as well as the challenges they may face in implementing these alternatives (Hodges et al., 2020).

Perhaps one or a set of educational alternatives is appropriate for one nation or region but not another, or certain factors which have a common influence on one of the alternatives in one region or country but vary in their degree of affect in another. In addition to identifying the challenges. As a result, in-depth studies of educational realities in each region are needed.

This thesis was conducted on the realities of education in Iraq in light of the spread of Covid-19, with the aim of identifying educational alternatives and factors, as well as challenges. This thesis came as a result of an absence or scarcity of related studies or researches in the same direction in Iraq.

## 1.2 Problem Statement

The Covid-19 is one of the worst disasters to hit the modern world. As a result, all sectors, beginning with the economic, political, socio-cultural, and educational sectors, have been halted. This situation can be seen in a several of countries around the world, including Iraq (Dutta, 2020; Koshyk, n.d.).

On February 24, 2020, the virus's spread was confirmed in Iraq, prompting the Covid-19 Pandemic Crisis Cell (Diwaniya Committee Order 55 of the year 2020) (السادة et al., 2021) to close all schools and universities across the country on February 25, 2020. (Porcheddu et al., 2020).

The discovery of a number of Covid-19 infections, as well as the virus's rapid spread, had surprised Iraq off guard, and the education sector was unprepared to deal with such a pandemic. The educational decision-makers were not given enough time to think about the optimal alternative. As a result, they selected the most available alternative, which is the usage of remote learning without prior study for this option (Quandt et al., 2020). Which perplexed the educational process, as there were several obstacles to the implementation of this alternative, including psychological, technological, organizational, and so on. Teachers and educational staff are not trained or prepared to transition directly to this kind of education and the majority of them lacked sufficient familiarity with contemporary technologies and communication devices. In addition to a lack of time to move or identify suitable alternatives. There were no studies or research on educational alternatives for such circumstances in Iraq (Doghonadze et al., 2020).

As a result, studies that aid in the identification of available alternatives, as well as tools to aid in the educational decision-making process, have become necessary (Nebeker et al., 2020). Furthermore, these studies aid in the identification of challenges as a starting point for developing future solutions (Purington et al., 2020).

Thus, this study investigates the fundamental issue of education in Iraq, namely educational continuity. through the identification of appropriate alternatives to traditional education, as well as the criteria or factors that influence them. Finally, identify the challenges that may arise during the implementation of such alternatives, which may result in the suspension of the learning process.

### **1.3 Research Questions**

A set of four questions was raised in order to identify the study's objectives.

- i What educational alternatives and solutions are available during of the Covid-19 Pandemic to maintain educational continuity?
- ii What criteria are affecting educational alternatives in order to guarantee a seamless transition from conventional to educational alternatives during the Covid-19 Pandemic?
- iii How was the implementation of educational alternatives priority decided?

- iv What are the challenges and barriers to transitioning from traditional education to educational alternatives in light of the Covid-19 pandemic?

#### **1.4 Objectives of the Study**

The aim of this study is to identify educational alternatives to conventional education and rank them in order of priority from the best highest to the lowest. The main objectives of this study are:

- i To identify educational alternatives and solutions to ensure educational continuation in the light of the Covid-19 Pandemic.
- ii To determine the criteria that influence educational alternatives in order to guarantee a seamless transition from conventional to educational alternatives during the Covid-19 Pandemic.
- iii To arrange educational options depending on their priorities.
- iv To identify the challenges and barriers to implementing educational alternatives during the Covid-19 Pandemic.

#### **1.5 Research Scope and Limitations**

The scope of this study is restricted to the study problem, which is related to education in Iraq, as well as the objectives, methodologies, and tools used to achieve them. In light of the COVID-19 pandemic in Iraq, the study's scope is to identify the educational alternatives available for educational continuity.

In addition to determining the criteria that affect educational decision-making in light of the COVID-19 pandemic, especially in higher education in Iraqi universities. Furthermore, to identifying the scope of challenges and obstacles.

The study's limitations were determined by collecting qualitative data through personal interviews, quantitative data through a questionnaire, and analyzing the data using NVIVO and SPSS analysis tools. The analytical hierarchy process (AHP), Visual Basic.net, and an MS Excel sheet were used for decisions-making. The time limit for the study was set during the Covid-19 pandemic.

## 1.6 Terminology of Study

Term	Definition
Analytical Hierarchy Process AHP	It is one of the methods used to analyze decisions in the light of the existence of several alternatives within influential factors and situations, and this method is considered to be one of the most effective methods of decision-making of all kinds.
Blended Learning	A form of education in which students learn through electronic and online media in addition to traditional face-to-face learning
Coronavirus	It appeared in China at the end of 2019 and caused the deaths of thousands of people and spread throughout the world by mixing and gathering, causing multiple barriers to all sectors, including medical, economic, educational and other sectors.
Criteria	The set of factors that influence educational alternatives
Digital Classroom	A digital classroom is one in which a physical classroom is extended into a digital space. it is one that is completely immersed in technology. These classrooms rely on educational applications and websites to help students learn more effectively.

Term	Definition
Educational alternatives	Any modern or traditional educational method that can constitute an effective educational tool under certain circumstances. It may include direct or electronic education or any alternative available according to need and circumstances.
Educational challenges and obstacles	Are all that can prevent the achievement of the educational process. They may be a human or a material element, and may depend on natural factors, such as disasters, diseases, or man-made events, such as wars and conflicts, and may be individual barriers due to individual abilities, so the barriers are various classes that vary for different reasons.
Educational tools	All tools that can be used for education, and they are a main axis in education, as they are the tool of the link between teachers and students, and they are a tool for transferring knowledge and clarifying it to students.
E-learning (remote learning)	E-learning is a type of education that uses modern communication mechanisms like computer networks and multimedia to deliver as much information as possible at the lowest possible cost and in the shortest amount of time.

## 1.7 Thesis Outline

The structure of this thesis includes five chapters as a follow:

Chapter 1: Discussed the research's background and how the Covid-19 pandemic affected educational reality around the world, with Iraq being one of the countries affected, with a focus on educational continuity. Through the discussion of the problem statement, this chapter also discussed the factors that influenced the choice of this study. To reach the research objectives, four questions were asked, so four basic research objectives were extracted in response to those questions. Finally, definitions of the most important terms used throughout this research are provided in this chapter.

Chapter 2: The educational reality in Iraq in light of the Covid-19 pandemic, as well as the alternatives available to maintain educational continuity, were reviewed in this chapter. Some literature on educational alternatives in the light of crises and disasters, including the Covid-19 pandemic, was then reviewed. Some research was also reviewed that used the Analytical Hierarchy Process (AHP) to make decisions affecting in some exceptional circumstances, such as the Covid-19 pandemic.

Chapter 3: Explanations of the tools used in applying the research methodology, such as interviews, diagrams, models, flowcharts, algorithms, and various data collection and analysis tools. In addition to using the AHP approach to facilitate educational decision-making by arranging educational alternatives by priority. Finally, using a questionnaire designed for the purpose of identifying the barriers and challenges of educational alternatives.

Chapter 4: Follows the steps taken to achieve the research objectives and answers all of the study's questions. Explanations of the tools used to apply the methodology, analysis of the results, and discussion of the results.

Chapter 5: In this chapter, the most important results from Chapter 4 were reviewed by answering the research questions raised in Chapter 1. The significance of the research, and the contributions were also discussed. Finally, the most important conclusions are discussed, as well as future works.