# A Virtual University Model for Higher Education in Republic of Yemen

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## ABSTRACT

The purpose of this study is to investigate the feasibility, practicality and desirability of establishing a virtual university using Internet-based technology in Yemen. The intention would be to deliver higher education in order to accommodate the rapid growth in the number of secondary school graduates. The questionnaire in this study was designed to obtain respondents' views in relation to the proposed model. It was distributed to 996 teaching members (male and female) at two major universities: Sana'aU, AdenU. The number of questionnaires returned was 538; this represents about 57% of the total sample. The majority of respondents (about 67.7%; N= 364) suggested that establishing a virtual university in Yemen was appropriate to meet the increasing demand for higher education. Group B represented the highest percentages of agreement at around 92.7%, while Group A represented nearly 60.2%. In contrast, the remaining 32.3% of the total number of respondents believed that there are alternative available solutions that can be utilised in order to overcome this problem. Almost 19.0% stated that they would like the private sector to take its responsibility seriously and begin autonomously or collaboratively with the Saudi government, to construct more traditional colleges and universities in all regions of the Yemen. Around 51.1% were in favour of the MHE, on behalf of the Yemeni government, taking full control of higher education provision, introducing more traditional public colleges and universities throughout the Republic. Finally, almost 29.9% appreciated any effort made by the current traditional universities to increase their capacity to absorb more students now and in the future. The study concluded that a virtual university was both systematically desirable and culturally feasible; therefore, recommendations were made for its implementation.

**Key words:** Higher Education, Internet-based technology, MHE, virtual university

## Introduction

One of the most astonishing aspects of the 21$^{th}$ century is the overwhelming advancement of information and communication technologies in the world today. This ICT revolution is acknowledged by modern societies as a persistent force that is continually remodeling their life styles. All predictions suggest that this pace of change is not going to slow down, but will expand to include most nations of the world. Education in general, and distance education in particular, has been dramatically affected by this transformation which, at the same time, offers a striking opportunity to expand its geographical reach. Utilizing ICT, such as the Internet and related technologies, according to French has the potential to affect radical change, not just for the design and delivery of online courses, but also in the way that conventional institutions are structured. Indisputably, the advent of the Internet, and more accurately the www, means that higher education is no longer confined to a conventional classroom. Instead, learners who are enthusiastic about proceeding with their education may study for academic degrees while at home or at work, and whether they come from an urban or a rural area. Education via the Internet and its resources has demolished any such constraint of time or location and provides a new means of high quality distance teaching and learning. Baker and Gloster noted that "A paradigm shift is taking place in higher education instruction, from a mode of faculty-student interaction occurring in fixed locations at specific times to one in which students can access the same instructional resources in a variety of forms, regardless of location, at their convenience. This is possible because several technologies have matured, supporting major changes in how instruction can be delivered to students, in their homes, or in their work places".Farrell et al. emphasized that the emergence of the virtual university phenomenon has been forcefully driven by the following factors:

The increasing capacity, flexibility, and suitability of information and communication technologies to educational applications, together with a continuing decrease in hardware.

The enabling capacity of the technologies to "unbundle" functions that have traditionally been provided by one institution.

## Problem of the Research

The tremendous growth in the number of students seeking higher education studies, and the persistent need to connect the input and output of higher education institutions with the aims, objectives and strategies of the National Strategy for Higher Education 2006-2010 arc the most important problematic issues that the higher education system encounters today. In addition to the political situation which is passing in Yemen through this few years war both of them let us to thinking in another way to continue the learning without stop education.

## Purpose of the Research

As noted in the National Strategy for Higher Education 2006-2010, the predominant challenge facing higher education institutions in Republic of Yemen is to contain the increasing number of students seeking continuing higher education studies. Tremendous efforts have been made by higher education policy-makers to overcome this problem through increasing the number of students being accepted. This, of course, is beyond the capacity of the existing universities, and is in spite of establishing new colleges of social faculties in many parts of the Yemen, founding new universities, and eventually developing a new set of admission regulations. All of these solutions have been attempted but the problem still persists without fundamental change. The study addresses this problem.

## Aims and Objectives of the Research

This study aims to achieve the following objectives:

1. To analyze socio-cultural aspects of Republic of Yemen with particular emphasis on those related to information and communication technology.

2. To investigate the traditional higher education system in Republic of Yemen.

These objectives will be achieved by,

a) Analyzing the organizational structure of the higher education system and its fundamental roles.

b) Summarizing the basic objectives of the higher education system in general and the National Strategy for Higher Education pertaining to higher education in particular.

3. To investigate the information technology infrastructure and the development of the Internet in the Republic of Yemen. This can be accomplished through:

a) Examining government initiatives and policies regarding the development and implementation of information and communication technology via TeleYemen.

b) Exploring the key components of the national information and communication technology infrastructure currently existing in Saudi Arabia that have been put in place by MTIT and later by PTC.

*The significance of the research*

It is hoped that the study will help the reader to get sufficient information about the corruption of virtual university which left its negative effects on all sides of educational life and the importance of the e-learning.

## Research Methodology

There are a number of different approaches that may be selected for a study. Each of these methods is suited to solving a specific problem in a specific situation and each has its

advantages and disadvantages. These approaches must always be weighed against each other before making a decision regarding the research technique to be adopted for a particular project. This researcher feels that it is indispensable to understand some of the major research approaches in Information Systems (IS). Action research is a growing field and contains a great number of research methodologies. Flood and Jackson pointed out seven types of Soft Systems Methodologies that are assumed to be classified under the umbrella of the action research paradigm. These encompass the Strategic Assumption Surfacing and Testing Methods (SASI); Viable System Diagnosis (VSD); System Dynamic (SD); Interactive planning (IP); Soft Systems Methodology (SSM); Critical Systems Heuristics (CSH); and

*Research Questions*

This research attempts to answer the following questions,

Q1. How is the perception of establishing a virtual university in republic of yemen among the teachers in the two big universities?

Q2. What progress has been made in the development of the information technology infrastructure in Republic of Yemen?

Q3. What are the likely advantages that may support the exploitation of the Internet and associated technologies in delivering higher education in Republic of Yemen?

*The Samples*

The samples were executed mainly in terms of the two main groups of respondents: Group A (male teaching members) and Group B (female teaching members) affiliated to three major universities in Republic of Yemen. These are SanaaU, AdenU .

*Study Tool*

The researcher used the questionnaire as a tool for the study.

*The Reliability of the Tool*

Has been verified reliability of study tool using the coefficient alpha Krumbach, Which stood at 0.92, a high reliability coefficient.

*Statistical Methods Used*

To analyze the data of study and answer the questions,  the researcher used (SPSS)  , where data has been entered into the computer memory according to Likert scale, according to the following weights,

**Table 1:** Analysis of data

| The View | Very High Degree | High Degree | Medium Degree | Weak Degree | Very Weak Degree |
|----------|------------------|-------------|---------------|-------------|------------------|
| Weight | 5 | 4 | 3 | 2 | 1 |

Source: Primary Data

*Methods used*

Cronbach's alpha coefficient, Frequencies and percentages, Averages and standard deviations and Kruskal-Wallis Test.

## Result and Analysis

Will first display the characteristics of the study sample, and then answer questions of study.

*The Properties of the Sample*

**Table 2:** The Distribution of the Sample According to Personal Characteristics

| Academic Qualification | | | | | | |
|---|---|---|---|---|---|---|
| Qualification | Group A | | Group B | | Total | |
| | Frequency | % | Frequency | % | Frequency | % |
| Ph.D. | 337 | 81.2 | 73 | 59.3 | 410 | 76.2 |
| Master | 63 | 15.2 | 36 | 29.3 | 99 | 18.4 |
| Bachelor | 15 | 3.6 | 99 | 11.4 | 29 | 5.4 |
| Total | | | | | 539 | 100 |

Source: Primary Data

The Results Show that, the majority of respondents supported this concept as about 67.7% (N = 364) said "yes" while just 32.3% (N= 174) said "no". Table 6.6 demonstrates the respondents' views on the concept of establishing a virtual university in the Republic of Yemen. Group B represented the highest percentages of respondents at around 92.7%, while Group A represented almost 60.2%. The Chi-square test was applied to pinpoint any significance between the groups' different perspectives on this matter and the outcome was 45.63 (dfl, P=0.000). This clearly indicates that Group B was significantly more appreciative of the idea of establishing a virtual university in Yemen than Group A. This implied that Group B was enthusiastic and eager to find alternatives to a higher education system that takes no account of sex in providing equal higher education opportunities. Additionally, the Chi-square test was applied to determine any significance between age of respondents and their gender on perception of establishing a virtual university in Yemen. The result was 32.411 (df3, P= 000). This analysis result indicated that the younger of Group B aged 30-39 about 41.2% were more supportive of the concept of establishing a virtual university than other age groups. In contrary, aged less than 30 years of Group A 6.0% were less supportive to this idea.

## Conclusion

The principal conclusions to be drawn from this research are as follows:

1. A virtual university is feasible in Yemen.

2. The study provided an extensive review of the existing literature regarding the development of IT infrastructure and the growth of the Internet network in Yemen.

3. The study revealed numerous issues and problems that currently exist in higher education which are beyond the scope of this study and, at present, cannot be addressed by the creation of a virtual university.

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