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FACTORS INVOLVED IN THE ADOPTION AND
REJECTION OF INSTRUCTIONAL DESIGN IDEAS
IN SAUDI ARABIAN UNIVERSITIES

By

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A DISSERTATION

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1985

ABSTRACT

FACTORS INVOLVED IN THE ADOPTION AND REJECTION OF INSTRUCTIONAL DESIGN IDEAS IN SAUDI ARABIAN UNIVERSITIES

By

Saleh Ibrahim Al-Lihiedan

The purpose of this study was threefold: First, it was to identify the reasons considered by faculty members in Saudi Arabian universities for accepting and the reasons for rejecting specific instructional design ideas. Second, it was to identify which of those reasons affect faculty members' decisions more strongly than others. Third, it was to identify any differences in considering the reasons given by those who accept and those who do not accept instructional design ideas.

To accomplish these purposes a questionnaire of two parts was distributed by the researcher to a sample of 470 faculty members. The questionnaire was developed and validated by the researcher. The sample was randomly selected from a population of 5,841 faculty members in Saudi Arabian universities. Descriptive and statistical techniques; frequencies; means; standard deviations; Z-test; multivariates and univariate analyses of variance for repeated measures; tests were used to describe and analyze data from 400 returned questionnaires.

The results of the analysis indicate that:

1. The factors or reasons given for acceptance in using the suggested instructional design ideas in Saudi Arabian universities were:

a. Knowledge and learning of the implementation skills of the ideas.

b. Perceiving the need to use the ideas (motivation).

c. The expectation of success to apply these ideas.

d. The availability of needed resources.

e. Getting desirable rewards.

f. Acceptance of the ideas in the departments.

2. The factors or reasons given for rejection in using the suggested instructional design ideas in Saudi Arabian universities were:

a. The absence of the implementation skills of the ideas.

b. Perceiving no need to use these ideas.

c. The expectation of failure in applying these ideas.

d. The unavailability of needed resources.

e. The expectation of not getting the desirable rewards.

f. The unacceptability of the ideas in faculty members' departments.

3. The approximate order of the importance of the six factors or reasons to accept ideas was (a) motivation, (b) skills to implement the ideas and expectation of success of implementation, (c) availability of needed resources and the acceptance of these ideas in the departments, and (d) getting desirable rewards.

4. There were no differences between the six factors or reasons in terms of level of importance in the rejection of the five suggested instructional design ideas.

5. Receptive and unreceptive faculty members generally considered the six factors or reasons equally in their decisions.

DEDICATION

This dissertation is dedicated to the memory of my father, Ibrahim, my mother, Meznah, my brothers, Ali and Luhiedan, my wife, Meznah, and my children.

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CHAPTER I

INTRODUCTION

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INTRODUCTION

The Problem

There is much concern today about how universities in Saudi Arabia are responding to the need for change in teaching and learning procedures. These concerns arise because of changing students' needs and interests which are part of the rapid development that is taking place in every aspect of society. Cole (1978) noted four major sets of reasons for needing changes in instruction; the sets of reasons relate to:

1. Institutions of higher education,
2. Faculty in universities,
3. University students, and
4. Society at-large.

1. Reasons related to institutions of higher education:

Four reasons calling for instructional change related to institutions of higher education can be mentioned. First there is the growing realization that traditional teaching methods are antiquated and no longer fully responsive to the need of the moment. As Holtzman put it:

These time-honored traditional instructional methods that have served us well in the past are currently being questioned in many quarters, even among faculty members themselves.

There is a call for education that is less routinized and more personalized, for education that not only imparts adopted knowledge but implants adaptive thinking, for education that does not just master belatedly the solution of the past but that solves creatively the problem of the present and foresees realistically the issues of the future. (Meesick, 1976, p 24)

The universities and institutions of higher education in Saudi Arabia are becoming aware that lectures and note-taking are no longer accomplishing educational goals; these do not accommodate the present stage of development that higher education is now facing. There is a call for changing instruction formats.

Faheem (1982) pointed out that at a symposium on "The Saudi Professor: His Duties and His Rights" which took place at King Saud University (University of Riyadh previously) on March 18, 1980, the participants stressed that a university education should: (1) encourage research activities and independent thinking among students; (2) avoid the mechanical transmission of the inherited knowledge and value; (3) allow students to explore the universe and everyday problems with open and critical minds; (4) give students the ability to question their teachers and share constructive discussion with them; (5) stress creativity and originality in grading and examination; and (6) establish a cultural linkage between old and new generations.

Similar opinions were expressed by participants at a similar symposium on "Higher Education Between Theory and Practice" held at the same university in March, 1985. The

participants, who were a mixture of college deans, journalists, university administrators, and Civil Services Bureau administrators, expressed their concerns about the method of instruction in universities. They said that instructional procedures are old and ineffective; it depends heavily on transmission, memorization and lecturing. This memorized knowledge is forgotten by the end of the examination. With regard to this point, they suggested implementation of a method that encourages the student to be independent in his learning. ("Higher Education Between Theory and Practice," (1985).

The capacity and willingness of the institutions to provide for experimentation and innovation is the second reason related to institutions which is an important issue in instructional improvement. As Boyer and Crockett (1973) point out, to produce changes in instruction it is desirable to shift the faculty toward more institutional identification and to increase college and university support for good teaching. In Saudi Arabian higher institutions there is no support for experimentation in improving instruction. This kind of support is clearly needed.

Faheem (1982) noted that Saudi professors have resented the criticisms leveled against them by drawing attention to the fact that the Saudi professor, like any other professional in the country, is trying his best within limited resources and many socio-economic constraints. They saw no reason for singling out the academics for being less productive, or elitist, when nobody bothers to empirically assess

the work of each university and each teacher. There are no institutes for research, no up-to-date good books, and no understanding and appreciation of scientists and research. Within this prevailing situation, it is impossible for them to engage in any intellectual activities.

A third institutional reason that calls for instructional change is competition among institutions coupled with no recognition and reward for superior instruction. Recently there are signs of certain types of competition between institutions in Saudi Arabia. Established colleges have opened new departments, as well as new colleges, either in the original campuses or as branches in other districts of the country. This type of competition, unfortunately, was not coupled with an equal effort to strengthen the quality of the instruction.

A fourth institutional factor is failure of graduate schools to devote sufficient attention in their doctoral programs to the subject of teaching. Milton (1973) and others have commented that most traditional graduate educational experiences are directed toward research and toward a narrow specialization within an academic discipline. Thus, there is little time left for adequately preparing future professionals in instructional techniques. In Saudi Arabian universities there are three types of individuals who serve in college faculty positions: 1) Saudis who were trained outside Saudi Arabia; 2) foreign faculty; 3) Saudis trained in graduate schools in Saudi Arabia.

Saudian graduate schools are new; they are no more than six years old and are limited to a few areas of specialization. These schools share with the other graduate schools in most of the world the problem of offering inadequate training in instructional techniques. After graduation, those who teach in a university or in other higher institutions find themselves somewhat handicapped in teaching skills. New faculty need this element to provide more effective instruction. Therefore, the curriculum in graduate school should be reformed to improve training in instructional techniques.

2. Reasons related to faculty in universities:

The two reasons related to faculty in universities can be mentioned. The first major reason is that of faculty identity and adequacy of faculty. As Gaff put it:

Our colleges and universities are now staffed by faculty who, in general, have never studied the history of their profession, are unfamiliar with the topography of the traditional landscape, are unaware of the professional literature in higher education, and have never been expected to formulate systematically their own philosophies of education or their views about teaching and learning. (1975, p 16)

Freedman and Stanford interviewed 500 faculty members and found "pervasive unease and confusion," a "lack of professional identity" and "a sense of vulnerability" that gravely threatened their effectiveness (1973, p 13).

The faculty in Saudi Arabia are suffering from the same problem -- no adequate training in the profession and no developmental programs as well as a lack of coursework about

teaching in higher education. The presence of such problems strongly suggests that the faculty may be suffering from a lack of professional identity.

The second reason related to faculty members is the continued need for even the best instructor to grow intellectually, to learn, and to adapt to new circumstances and new challenges. It is imperative that faculty members sharpen their teaching skills, keep up with new research in their respective fields of study, become and remain knowledgeable about those aspects of a discipline outside of their own specialization, and gain new information about human behavior and learning theory. In this respect the faculty in Saudi Arabia are no different from faculty members anywhere; they need to keep up in their field and improve themselves.

As reported by Faheem (1982) at the symposium on "The Saudi Professor: His Duties and His Rights," the participants discussed, among other things, allegations against the Saudi academics and university professors. Some of these allegations are:

A. The Saudi university teacher is, in general, an elitist, a consumer-oriented person whose interest is not scholarly exertion, but climbing the socio-economic ladder.

B. Few of these professors try to further their knowledge or keep touch with the progress in their special field.

C. Very few of them tolerate the agony of spending days and years collecting facts, verifying data and writing a well-researched book.

D. They are blamed for most of the ills of the university, such as inflation in grading, and lack of independent thinking among students.

3. Reasons related to university students:

The consideration of the nature of students and the increased effort to increase the quality of instruction calls for an awareness of individual differences in the classroom as well as an awareness of the change of students' needs and interests. Three reasons related can be mentioned. First, there is a growing belief that students respond differently in various learning situations (Diamond, et al. 1975). For this reason in many institutions varied forms of individualized instruction are developed to match individual learning styles (Roueche, 1972). The difficulty in some institutions is that faculty do not wish to adjust to this new instructional climate or to accommodate a new clientele. Second, it is important that faculty be aware of students' concerns about the practical value of what they are asked to learn. Faculty cannot depend only on their assumption that their subjects and teaching methods are accepted by students. Third, the attrition rate of students dropping out of college partially results from uninspired teaching, poor advice, or programs insufficiently responsive to their needs.

In Saudi Arabian universities these aspects of students' personalities are almost ignored when constructing any unit of instructions. Because there is not any kind of assessment of student's abilities or needs and interests, faculty

are led to rely exclusively on their own assumptions when they plan or deliver their units of instruction.

4. Reasons related to society at-large:

There are two reasons that can be pointed out relating to society. The first reason calling for instructional improvement is the nature of the development stage of the present society. The second reason is that the world is experiencing a revolution in terms of knowledge and technology. These two elements, as well as other changes in society, have implications for curriculum, from rewriting the objectives of the various subject matters to providing the content that helps to achieve the objectives. There are implications for classroom teaching as well.

The society in Saudi Arabia today is facing a rapid development in all aspects of its life; economic, social and political. There is a growing concern from parents, legislators and the general public that higher education is contributing less than what is expected. For the last six years, the Saudi press and media, including university campus newspapers, have engaged, as Faheem (1982) put it

In a lively debate concerning the plight of Saudi academics. Like many other underdeveloped countries, Saudi society has expected a great deal from its growing university professors. ... In the minds of the majority of the people, a university professor should be a scholar and researcher, capable of innovative thinking and critical analysis of the social order. ... Journalists, in particular, have charged the academics not only failed to assume the leadership role to help the society make wise decisions about changes and social transformations, but that they betrayed their

profession by not applying their academic method and discipline in analyzing the problems of society. (pp. 122-123)

Therefore, higher educational personnel in general and faculty members in particular are being asked to re-examine their professional and personal attitudes toward classroom instruction as well as to consider training in new classroom teaching procedures.

If accepting the need to improve instruction is the first step, the second step is to select an approach to improve it. Because the quality of education depends considerably on faculty members (McKeachie, 1969, Gaff, 1975 and Eble, 1972), they are the "most important educational resources of institutions." (Gaff 1975, p. 62). One approach to improve instruction is to teach instructional design to faculty members. When teaching faculty, it is common to suggest instructional design ideas which faculty members voluntarily accept or reject. To maximize acceptance and therefore achieve improvement in instruction, those responsible for producing change need to know faculty members' reactions to instructional ideas, the reasons for acceptance or rejection of an idea, as well as who are likely to accept instructional ideas and who are not. Then those who teach faculty could apply the knowledge of faculty members' reasons for acceptance or rejection of an idea by creating approaches to removing barriers and approaches to maximizing acceptances.

Therefore, the present study focused on the reasons (or factors) given by faculty members in Saudi Arabian universities for accepting or rejecting instructional design ideas. In addition, the relative importance of faculty members' reasons in these decisions were studied. Finally, the differences in considering the given reasons between those faculty members who accept instructional design ideas and those who do not accept them were studied.

Setting of the Study

Because this study is concerned with faculty in colleges and universities in Saudi Arabia, it is appropriate to provide some background of the development of higher education in that country.

Higher education in Saudi Arabia is a relatively new phenomenon. Formal higher education in the country is less than four decades old. During this 36-year period, and in particular during the last ten years, higher education has experienced rapid expansion. In 1949 there was one college with few fields of study. Now there are seven large universities and ten girls' colleges with many fields of study and specialization, in addition to many junior colleges, military colleges, as well as science and mathematics centers.

All higher educational institutions in Saudi Arabia are public. Even those which began as private institutions became public because of financial and administrative reasons. Consequently, there are no fees or tuitions in any of the Saudi Arabian colleges, (Hammad, 1973). In fact, students are awarded generous monthly allowances -- about 1000

Saudi Riyals (equivalent to 290 dollars). There are two types of student enrollments. Students attending full time are considered regular students; those attending part time are considered nonregular students. The latter are asked to attend at least 70% of the classes and are allowed to sit in for examinations along with regular students. Part-time students are allowed to choose their major from only a few areas such as religion or liberal education. In the past part-time enrollment was the only way for women to participate in higher education, but recently they became full-time students in either their own colleges under the supervision of the Girls' Education Administration or within other universities in separate classes from males. Up to the present, women are allowed to have only certain fields for their majors, and they are taught either by female teachers or by male teachers through a TV cable system.

The authority for policy making, planning and the coordinating of programs in Saudi Arabian higher institutions is divided among several autonomous authorities. One of the major problems that higher education faces is the lack of coordination between the higher institutions. Consequently, there is a lot of duplication in the programs. (Hammad, 1973).

Each university or college has its own budget, which is separate from the general government budget. Each has its own administrative organization and its own internal regulations. The structure of the administrative organization of a university is illustrated in Figure 1.

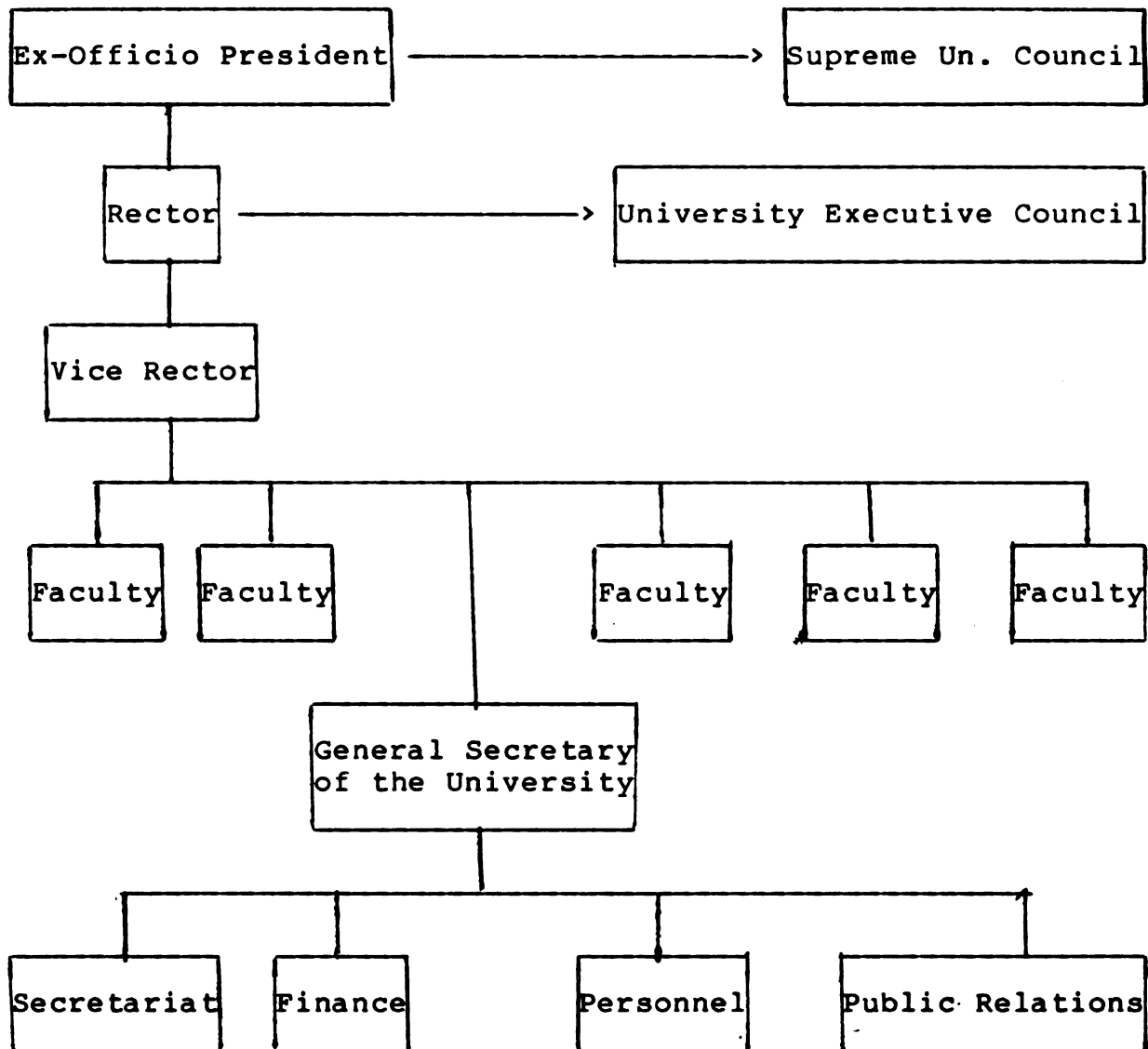


Figure 1-1. The structure of the administrative organization of a university.

All University colleges are authorized to grant the bachelor's degree but some are authorized to grant Master's, and Ph.D. degrees in a few fields. In terms of research activities there is now a great potential for conducting research. Most of the universities have already established research centers on their campuses. The type of research that has occurred so far is in Humanities and Social Studies.

From its establishment, higher education in Saudi Arabia has been influenced mainly by three foreign education systems: those of Egypt, England and the United States. The influence of foreign systems permeates academics as well as administrative matters. The organizational structures, curricula and regulations have been patterned on these foreign educational systems with little modifications. From the establishment of formal higher institutions in Saudi Arabia in 1949 until 1974 the British and Egyptian educational systems influenced the higher educational system more than the United States system. During this period the only university that was designed according to the United States system was the University of Petroleum and Minerals in Duhran. But from 1974 until now it has been found that most of the universities in Saudi Arabia have started to change to the American system. Now five of the seven universities are using the credit-hour system, in addition to some junior colleges. Today, the instructional method used in all classes is the lecture/note-taking method. As was mentioned, there is a demand these days for a more personalized education that takes the abilities and the needs of the individual into consideration. The lecture/note-taking method is not appropriate for all students, nor for all subject matters. Therefore, new instructional methods should be put to use.

Arabic is the official language in higher education in Saudi Arabia. There are two colleges that are using English in instruction; these colleges are the Medical Colleges and

the Engineering Colleges. In the Natural Sciences Colleges there is a mixture of Arabic and English. The main reason for using English in the colleges mentioned is the lack of books and other materials in Arabic. Consequently, these two colleges have less interaction with the larger society than the rest of the colleges, because their communication and activities language differs from society's language.

Since the present study focuses on the factors which lead faculty members to change their instructional methods, it is appropriate to mention the general rules of faculty appointment in the universities in Saudi Arabia. There are five positions that faculty members have in the universities -- demonstrator, lecturer, assistant professor, associate professor, and professor. The following are the general rules governing appointments to each of these positions:

A. Demonstrator

1. He or she should have a Bachelor's degree with a G.P.A. of 3.00 or above (very good).
2. He or she will be put on the salary levels according to how many years it took to complete his or her Bachelor's degree. If it took four years, then he or she will be put in the first level; if it took five years, then he or she will be placed in the second level; six years will place him or her on the third level and seven years (such as a Bachelor's in Medicine) will place him or her on the fourth salary level. Levels of salary will be illustrated in Table 1-1.

Table 1-1

SALARY RATING SYSTEM FOR FACULTY MEMBERS IN SAUDI ARABIAN UNIVERSITIES*

Position Name	SALARY LEVELS										Transportation Allowance	Annual Increase	
	1	2	3	4	5	6	7	8	9	10			
Demonstrator	5025	5335	5645	5955	6265	6575	6885	7195	7505	7815	600	400	310
Lecturer	6625	7005	7385	7765	8145	8525	8905	9285	9665	10045	600	600	380
Assistant Professor	9650	10080	10510	10940	11370	11800	12230	12660	13050	13020	600	700	430
Associate Professor	12155	12655	13155	13655	14155	14655	15155	15655	16155	16655	600	700	500
Professor	13925	14475	15025	15575	16125	16675	17225	17775	18325	18875	600	800	550

*These figures represent the monthly salary and other allowances in Saudi Arabian Ryals (1 dollar = 3.4 Ryals).

**Nine percent will be cut from monthly salary for retirement funds by the government.

***In addition to their salary and allowance, the faculty member and his family (both Saudis as well as foreign faculty members) are provided with their residence by the University.

****This salary rating system is only for the Saudi faculty. Foreign faculty have their own rules that determine their salaries depending mostly upon their area of interest. See Figure 3.

(The source of information in this figure is in the Office of Higher Education Minister, 1983).

B. Lecturer

1. He or she should have at least a Master's degree or any degree that the Committee of Degrees considers equivalent to the Master's.

C. Assistant Professor

1. He or she should have the doctoral degree or any degree that the Committee of Degrees considers equivalent to the Doctor's Degree or according to a decision from the Ministers' Council.

D. Associate Professor

1. He or she must have the doctoral degree.
2. He or she should have at least four years of teaching experience in an accredited university.
3. He or she should conduct creative research which is evaluated by a committee whose members are specialists in that subject.
4. He or she should report about his or her contributions in various activities.

E. Professor

1. He or she must have the doctoral degree.
2. He or she should have at least eight years of teaching experience, four of them as an associate professor.
3. He or she should conduct creative research that is evaluated by a committee whose members

are specialists in the subject of the research.

4. He or she should report about his or her contribution in various activities.
5. The professor continues to be given the annual increasing rate even when he completes the tenth level.¹

The general conditions for appointment of foreign faculty are:

1. He or she must be not less than 20 years old and not more than 60 years old, or 70 years old with the agreement of the university president.
2. He or she must be able, in terms of his/her health, to perform the job. He or she must provide a certificate regarding this matter.
3. He or she must have a good reputation.
4. He or she must fulfill the conditions of the position that he or she applies for.
5. He or she must work in the university full time.
6. He or she must not work with another agency.²

(See Table 2-1 for foreign faculty salary rating.)

¹The source of information is the Office of Higher Education Minister, 1982.

²The source of information is the Office of the Director of Foreign Employees Affairs in Mohammed Bin Saud University, Riyadh, Saudi Arabia.

Table 2-1
SALARY RATING SYSTEM FOR FOREIGN FACULTY MEMBERS IN SAUDI ARABIAN UNIVERSITIES

Position Name	Minimum Monthly Salary Amount	Annual Increase	Maximum Monthly Salary Amount	Monthly Transportation Allowance	Residential Allowance per Year
Demonstrator	2700	300	5400	500	17000 for single 20000 for married
Lecturer	3400	350	6550	500	18000 for single 22000 for married
Assistant Professor	5600	400	9200	600	25000 for single 30000 for married
Associate Professor	7250	450	11300	600	25000 for single 30000 for married
Professor	9100	500	13600	600	25000 for single 30000 for married

*These figures in Saudian Arabian Ryals; to convert to dollars, divide by 3.40.

**There are extra percentages in salary for faculty who specialized in the following areas: Medicine, Dentistry, Pharmacy, Engineering have 30% more; Para-Medical Sciences, Veterinary Medicine, Agriculture Engineering, Accounting and Law have 20% more. These percentages are allowances for the unavailability of the specialists in these areas.

***The universities provide the foreign faculty members and their families tickets once a year to his homeland as well as when he first comes to Saudi Arabia and again when his contract is terminated.

(The source of information in this table is the Office of Director of Foreign Employee Affairs in Mohammed Bin Saud University, Riyadh, Saudi Arabia, 1982).

The Need for the Study

If faculty are to change their instructional methods, the first step is to determine what factors influence their decision to do so. The need for the present study can be viewed from two perspectives -- practical and theoretical. From a practical perspective, this study is needed because it will provide the faculty members, as well as administrators in higher education in Saudi Arabia, with helpful information about the reasons and the characteristics of those who accept instructional design readily and those who reject ideas. Knowledge about these reasons and characteristics will be a major source for administrators and those responsible for producing change and suggesting elements that need to be established, such as programs for faculty development, centers for evaluation and teaching, and other resources for instructional improvement.

From a theoretical perspective, this study is concerned with the voluntary, innovative instructional behavior of faculty in universities -- what factors influence their behavior and the relative importance of the factors. Davis (1979) suggested a model of voluntary behavioral changes with implications for faculty development. In this model he defined and discussed six classes of factors influencing the adoption process: energizers, expectations, learning, motivators, resources and role expectations. (For definition and discussion of these factors, see Chapter II.)

Davis mentioned that this model should prove to be useful for understanding the decisions of faculty members to change their instructional practices and for predicting the extent to which they will succeed in their efforts to change.

Davis also noted that any useful model of the change process must take account of individual differences in the perception of one's life space. Different types of organization undoubtedly define different roles and offer different incentives to their faculties. How a given faculty member reacts will depend on his particular world view. Davis' assumption is that around the world the individual and organizational variables that affect change are essentially the same, but the way in which variables operate is very different. One would certainly expect the tendency of innovation to be more salient for faculty members in societies where they have very heavy teaching loads. Role expectation with respect to research or teaching in certain types of institutions also shifts across cultures. There are also enormous differences in the leverage that institutions have to control the payoffs directly and the perceptions of faculty members indirectly. Therefore, faculty from different countries are expected to assign quite different probabilities to the same lists of possible outcomes from instructional innovation.

In the present study, the objective is to identify the factors that influence faculty members in Saudi Arabian universities in adopting instructional design ideas and to

ascertain from the faculty perspective the order of the importance of the factors in the process of adoption. This will add to the present literature in this area a perspective on the type of factors that affect faculty members who teach in the Saudi Arabia culture and on their decision to adopt new instructional methods.

The Purposes of the Study

The purposes of the study are:

1. To identify the reasons that influence faculty members in Saudi Arabian universities to accept or reject specific instructional design ideas.
2. To identify which of those reasons faculty members report affect their decisions more strongly than others.
3. To identify the differences, if any, in considering the reasons given between those who accept and those who do not accept instructional design ideas.

Research Questions

A. General research questions:

1. What are the reasons given by faculty members in reaction to suggested ideas for instructional improvement?
2. What faculty members are receptive to ideas to improve teaching and what faculty members are not receptive to ideas to improve teaching?

B. Specific research questions:

1. What are reasons given by faculty members in Saudi Arabian universities for accepting and reasons for rejecting specific instructional design ideas?
2. Which of those reasons do faculty members report affect their decisions more strongly than others?
3. Are there any differences in considering the reasons given between those who accept and those who do not accept instructional design ideas?

Research Questions and Hypotheses

Question 1: What are reasons given by faculty for accepting and reasons for rejecting specific ideas of instructional design?

Hypotheses 1-6. There is no difference in the proportions of faculty members who accept instructional design ideas who given the reason:

1. Implementation skills - "I know how to apply the idea"
2. Motivation - "see need for the idea"
3. Expectation - "I will succeed in applying the idea"
4. Resources - "I will get needed resources to apply the idea"
5. Rewards - "I will get rewards I desire"
6. Role expectation - "The idea will be acceptable in my department"

and those not giving the reasons.

Hypotheses 7-12. There is no difference in the proportions of faculty members who do not accept instructional design ideas who give the reason:

1. Implementation skills - "I do not know how to apply the idea"
2. Motivation - "I do not see need for applying the idea"
3. Expectation - "I will not succeed in applying the idea"
4. Resources - "I will not get the needed resources to apply the idea"
5. Rewards- "I will not get rewards I desire"
6. Role expectation - "The idea will not be acceptable in my department"

and those not giving the reason.

Question 2: Which of the reasons do faculty members report affect their decision more strongly than others?

Hypothesis 13. There are no differences in the reported strength of influence of the six reasons on the decision given by those who do accept instructional ideas.

Hypothesis 14. There are no differences in the reported strength of influence of the six reasons on the decision given by those who do not accept instructional ideas.

Question 3: Are there any differences in considering the reasons given between those who accept and those who do not accept instructional design ideas?

Hypotheses 15-20. There are no differences in considering the reasons given between those who accept and those who do not accept instructional design ideas.

Definition of Terms

Faculty member: Any full-time or part-time teaching staff person in a university in Saudi Arabia, either Saudian or foreigner.

Adoption or innovation-decision: The mental process through which an individual progresses from initial awareness of an innovation to a decision to adopt or reject, and finally confirmation of this decision. There are four main stages in the process: (1) knowledge; (2) persuasion (attitude formation and change); (3) decision/adoption or rejection, and (4) confirmation. These stages usually, but not always, occur in this sequence.

Innovation: Any idea, practice or object perceived as new by an individual or some adopting unit. (Rogers, Shoemaker, 1971)

Receptive faculty members to an instructional design idea: The faculty member who accepts the use of a suggested instructional design idea.

Unreceptive faculty members to an instructional design idea: The faculty member who rejects the use of a suggested instructional design idea.

Instructional innovation: Any instructional idea, practice or object perceived by faculty members as new and which he or she decides to adopt or reject.

Faculty position: The academic rank of the faculty member. There are five levels of academic ranks considered in this study: (1) professor; (2) associate professor, (3) assistant professor, (4) lecturer, (5) demonstrator (teaching assistant).

Faculty area of specialization: The area of specialty that the faculty member has his or her last degree in or that he or she is continuing to work on.

Faculty teaching experiences: The number of years that the faculty taught in higher education.

Faculty cultural hemisphere: The region from which the faculty member came. In this study there are four regions to consider: (1) Saudian cultural hemisphere; (2) Arabian hemisphere (all Arabic countries except Saudi Arabia); (3)

Western hemisphere (all European countries and the United States, Canada, South America); (4) Eastern hemisphere (all Asian countries except Arabic countries).

Faculty knowledge and learning skills in teaching and instructional innovation: The amount of information and the learned specific implementation skills that the faculty member has about an instructional innovation and teaching.

Faculty attitude and motivation toward change (Energizers): The degree of tendency and drive to make changes in the present instructional situation.

Faculty expectation of the outcome: The assessment of the probability of success and failure if he or she adopts an instructional idea, taking into consideration the percentage of the positive and negative possible consequences of the adoption.

Availability of resources: What is needed to bring change including release time, media equipment, programs for developing faculty, and money to travel.

The quality and quantity of intrinsic and extrinsic rewards (Motivators): Intrinsic rewards are the level of internal satisfaction which arises directly from the adoption and implementation process, which is independent from any evaluation by an external agent. Extrinsic rewards are those payoffs that are administered by agents who evaluate the innovator's performance and decide whether or not it should be rewarded. These rewards may include money, time, tickets.

Role expectations: The normally developed beliefs by faculty and administrators about how faculty should or should not perform their various roles. These role expectations define how the faculty members should behave in the classroom and other situations and may even prescribe this life style (Davis, 1979, p 134).

Study Limitations

1. The results of the present study will be limited only to the faculty members of Saudi Arabian universities and Girls' Colleges. Generalizing the results to other higher institutions in Saudi Arabia or to other countries' universities and higher institutions should be done with caution. Since other reasons may affect or be affected by cultural or organizational aspects, the faculty members of institutions outside the scope of this study may have different perceptions of the reasons which are involved in accepting or rejecting instructional design ideas.
2. Generalization of the results of this study to the population should be done with caution because of a lack of proportional representation.
3. Also the results of this study should be limited to the types of instructional design ideas presented in the study. Generalizing the results to other types of innovations should be done with caution.

4. The study findings and conclusions are limited to the extent to which the personal procedure of distributing the questionnaire affects responses.
5. The study findings and conclusions are limited to the extent to which the investigator is able objectively to interpret and describe the data.
6. Also, one of the major limitations of the study lies in the fact that respondents may purposefully or unconsciously distort the actual reasons for accepting or rejecting the instructional design ideas.
7. Finally, the study findings are limited by the fact that some faculty members may have adopted some of the ideas and that faculty members were asked to make this decision in a hypothetical way.

Basic Assumptions

1. It was assumed that all considered instructional design ideas are of use to all faculty members.
2. It was assumed that six reasons account for all reasons for acceptance and rejection.

CHAPTER II

REVIEW OF THE LITERATURE

CHAPTER II

REVIEW OF RELATED LITERATURE

The purposes of this Chapter are (A) to review the theoretical and empirical literature to delimit and define the major factors accounting for the reasons faculty members may give for accepting or rejecting instructional ideas. (B) to review the literature related to the order of the importance of these factors; on the decision to accept or reject the use of instructional ideas; (C) to define instructional design field and discuss the instructional design ideas that were used by the study; and (D) to review methodological issues which emerge in the research that has been done.

A. Types of factors accounting for the reasons influencing the accepting or rejecting of instructional ideas:

In this review of types of factors accounting for the reasons influencing the accepting or rejecting of instructional design ideas by faculty members, it will be demonstrated that the body of the literature includes the following six major categories of factors suggested by Davis (1979) in his model:

1. Factors related to the learning and skills of faculty members: The amount of information and

knowledge about instruction and the learned specific implementation skills that the faculty members possess relevant to instructional innovations.

2. Factors related to the attitudes and motivation of faculty members about teaching and change in instructional methods (Energizers): The strength of the tendency to make changes in the present instructional situation.
3. Factors related to faculty members' expectation of the outcomes: The assessment of the probability of success and failure if he or she adopts an innovation, taking into consideration the percentage of the positive and negative possible consequences of the innovation.
4. Factors related to the availability of resources: What is needed to bring change, including release time, media equipment, programs for developing faculty, money and tickets for travel.
5. Factors related to the rewards that faculty members receive as a result of adoption innovations (Motivators): There are two types of rewards. First, intrinsic rewards, which refer to the level of satisfactions which arise directly from the implementation process and self-evaluation. Second, extrinsic rewards, which are the payoffs administered by agents who evaluate the innovator's performance and decide whether or not it should be rewarded.
6. Factors related to the faculty members' role expectations: The beliefs normally developed by faculty members and administrators about the ways faculty members should or should not perform their various roles. These role expectations define how the faculty members should behave in the classroom and elsewhere, including his/her home.

Now for each of these six categories, consider how the related theoretical and empirical research contributes to the knowledge of each topic.

1. Factors related to a faculty member's learning and skills:

The relevant research discussed three levels of knowledge and skills that are required for faculty members in

order to demonstrate innovative instructional behavior. The respective roles of these levels in the process of innovation and the way they may be acquired will be discussed.

These levels are:

- a. Knowledge about the history of the fields of instruction and learning.
- b. Knowledge about what is new in instructional innovations.
- c. Specific implementation skills about certain innovations.

Theoretical Literature:

- a. Knowledge about the fields of instruction and learning.

Holbrook (1974) discussed graduate preparation programs, noting that they pay little or no attention to teaching. As a result, the graduate students who will go to teach at the university level will find themselves handicapped in regard to teaching ability, unable to recognize where and when innovation is needed. In other words, the lack of general standards in teaching and learning processes in the preparation stage will leave new teachers unable to identify their clear goals and standards in their professional careers. As Gaff (1975) put it:

Our colleges and universities are now staffed by faculty who, in general, have never studied the history of their profession, are unfamiliar with the topography of the traditional landscape, are unaware of the professional literature in higher education, and have never been expected to formulate systematically their own philosophies of education or their views about teaching and learning. (p 16)

Commentators have frequently argued that this problem could be overcome if the degree system were designed in such a way as to place more stress on instruction. The Carnegie Commission on Higher Education supported the development of the Doctor of Arts degree for those individuals interested in teaching at the higher education level. This D.A. program would include courses specially designed for college teachers, regardless of their area of specialization.

b. Knowledge about what is new in instruction.

Hammons (1977) and Cole (1978) stressed the need for faculty members to grow intellectually, keeping up-to-date their own field and gaining new information about human behavior including specifically modern learning and teaching theories. Without such efforts, a faculty member will remain in a static situation regarding their professional career, regardless of their knowledge gained in the preparation stage, since knowledge is rapidly expanding. As a result, innovative behavior will not occur, since the essential stimulus for it will not be present.

c. Specific implementation skills about certain innovations.

Assuming that a faculty member has appropriate preparation as well as current information relevant to instruction and teaching approaches, such information by itself will not be sufficient to guarantee that the faculty member will

adopt instructional innovations. Specific, relevant knowledge and skills must be acquired before adoption can occur. Davis (1979) pointed to two levels of such relevant knowledge. The first one concerns knowledge about an innovation which comes from a process of analysis and assessment of that innovation conducted by the faculty member himself. Such knowledge and learning influences primarily the assessment of the probable outcomes following adoption of the innovation. The second level involves specific implementation skills that enable the faculty members to be successful in applying the innovation. These two levels of specific relevant knowledge and skills can be developed through attendance in lectures, seminars, workshops, individual consultations, and independent readings.

Empirical Research:

From a study of 70 colleges in 40 states, using observation and note-taking as research methods, one of Eble's (1972) conclusions is a need for graduate programs to prepare Ph.D. candidates for teaching responsibilities in a manner which makes the preparation an available part of the doctoral programs. The knowledge about instructional and learning approaches that such preparation would make possible would not be sufficient, as noted earlier, to assure that innovative behavior would occur when the graduate student becomes a faculty member. However, this knowledge is necessary, since it is the foundation for the more specific knowledge that comes later. In other words, faculty

members cannot be expected to demonstrate innovative behavior in teaching without a systematic foundation of knowledge about education.

Evans and Leppman did a study (1967) in nine universities in which they informally interviewed 102 faculty members and administrators. They found that the complexity of the innovation has an influence on the adoption of this innovation. Complexity of an innovation is related to the level of knowledge about it. The less knowledge a faculty member has about an innovation the more likely that he will perceive it as difficult to implement. An efficient search for knowledge about a complex innovation necessitates the acquisition of strategies to break down the innovation into "portable bits." Evidence seems to indicate this "breaking" process will help to make the process of learning about innovation, as well as its implementation, much easier, and therefore at least partial acceptance will be more rapidly affected.

Rogers and others (1975) studied the barriers to the diffusion and adoption of four innovations: EXPER SIM, guided design, TIPS, and student-to-student counseling. One of the three most important reasons they found for non-adoption was the unavailability of specially trained personnel such as computer programmers to help in the implementation of the innovations.

In summary, the literature shows that there are three levels of knowledge and skills which must be acquired by

faculty members before innovative instructional behavior may be expected:

- a. General knowledge about teaching and learning theories. This level is acquired in the preparation stage and its role is to be the foundation for the innovation process.
- b. The knowledge and information about certain innovations that will help the faculty member assess the possible outcomes of that innovation. This level is acquired usually in the period when the faculty member is actually teaching through keeping up-to-date about new research in the field of instruction.
- c. The knowledge and skills relevant to the implementation of an innovation. Even the faculty knows that computers, for example, are useful in teaching some subject matters. This knowledge is not enough to make one able to use a computer; instead, training in its use is necessary. This level can be acquired through attending workshops.

2. Factors related to the attitude and motivation regarding instructional change (Energizers):

In regard to motivation to change, the relevant research includes three topics: first, the attitude of faculty toward teaching as a career; second, faculty attitudes toward change; third, faculty members' perception of need to change.

Theoretical Literature:

Holbrook (1974) and Cole (1978) considered the attitude of faculty members toward teaching to be a major factor influencing the process of instructional development. Holbrook stated the nature of this influence as following:

As long as professors consider instruction the least important of their activities, the opportunity for in-service training involving new approaches and techniques in the instructional process will have little benefit ... This attitude has been instrumental in the refusal to examine learning and teaching from fresh perspectives. (p 94)

This negative attitude toward teaching may have resulted from unfamiliarity with teaching as a professional career. This unfamiliarity derives, as mentioned, from the failure of preparation programs to provide the means for graduate students to develop an adequate and positive perspective about teaching.

To overcome this type of negative attitude and encourage a positive one instead, a group of scholars in an invitational conference about improvement of teaching in higher education (Holbrook, 1974) suggested two techniques that could be used together to positively shape faculty member attitudes toward teaching. One would involve the provision of adequate resources for information about teaching and learning, such as a national center for teaching might provide. A second technique would be the institution of a reward system that would make faculty members feel that teaching is a rewardable activity. A positive attitude toward teaching is an important and necessary energizer for innovative behavior.

The second topic related to motivation, faculty members' attitudes toward change in instructional method, may be considered a specific case of their general attitude toward teaching. This type of attitude arises when a faculty member perceives change as either a threat to his position or as a source of security. In the first situation, a negative attitude will exist, while in the second, a positive attitude will result. Of course, a negative attitude will lead to resistance to any attempt at innovative behavior, while the positive attitude will be a source of energy encouraging innovative behavior. This positive attitude toward change can be created in the minds of faculty members by two means. First, as Cole (1978) reported, a number of educators suggest avoiding threatening faculty when establishing new policies or procedures. The second suggestion involves providing support for any attempt at innovative behavior by supplying money, equipment and training for the faculty members.

The third topic related to motivation to change and therefore to the encouragement of faculty members to manifest instructional innovative behavior is the perception of need for change. As Davis (1979) pointed out, the achievement motive, which is generally defined as the striving to overcome obstacles, to exercise power, and to learn something as well and as quickly as possible, is generated by instances of cognitive dissonance. Dissonance is created when a faculty member has beliefs that conflict with

acquired knowledge. For example, when video feedback enables a teacher to see himself as his students see him, he often experiences cognitive dissonance that motivates behavioral change (Perlberg 1976).

In order to increase the existence of such cognitive dissonance, with their attendant motivation to change, the means for an evaluation system must be provided to help the faculty member acquire the necessary feedback to create awareness of the need to change. For example, a project of the Clinic to Improve University Teaching at the University of Massachusetts and other universities indicates that faculty members in general are becoming increasingly receptive to open discussion of their individual teaching problems and more aware of the need to educate themselves in the area.

Empirical Research:

The relevant empirical research reveals support for the theories under discussion regarding the role of faculty members' attitude and motivation regarding instruction and instructional change in the process of adoption. In addition, some studies (Rogers, 1975) pointed out the importance of the role of students' attitudes in regard to innovation.

Evans and Leppman (1967) did a case history study about resistance to innovation. Two of their main research questions were "What is the nature and extent of attitudes held by a university faculty toward the prospect of teaching by television?" and "In what ways are professors who are strongly favorable to teaching by ITV different from those

who are strongly hostile to it?" To answer these two questions, the researchers applied the following procedure:

An initial questionnaire was sent to 400 full-time faculty of Metro University. Eighty percent of the questionnaires were returned. Also, as a supplement to the initial questionnaire, the researchers developed two schedules for personal interviews prior to and after the experimental phase. Analysis of the questionnaires and interview responses was used as the basis for establishing two extreme groups:

Pro-ITVs (55 faculty members most favorable to instructional television)

Anti-ITVs (65 faculty members most hostile to instructional television)

Among these 120 subjects, 20 faculty members were selected to participate in an actual field experiment. Although their previous collective behavior reflected resistance, individually they were judged to be divided almost equally into Pro-ITV, Anti-ITV, and neutral-ITV groups on the basis of the initial questionnaire and the pretest interview. The remaining 100 members served as a control group.

After completion of the pretest interviews given to both the control and experimental subjects, each person in the experimental group were asked to prepare, produce, and participate in at least one 45-minute presentation to be recorded on a video-tape recorder. In addition, the experimental group was asked to collaborate in the production of

several video tapes, which represented a cooperative effort. Of course, this group was offered consultation, ITV reports, books, pamphlets, and other ITV information by the investigators. The posttest interview then followed for each professor. In addition, each experimental subject was asked to write a report on his experience and his opinion of the video tape recorder as a device for improving teaching.

As researchers mentioned, the most significant results of the present investigation - in behavioral rather than in cognitive terms - are that of two departments which the experimental group was selected from, one began offering a telecourse, which it had previously rejected, and the other began using some of its own video-taped material as supplement to its traditional teaching efforts. This was interpreted to mean that a trend in attitude change is taking place.

Rogers and others (1975) pointed out in their study of the factors involved in the diffusion and adoption of four innovations that faculty members consider the attitude of students toward computer and instructional innovation as an important factor influencing their decision to adopt an innovation or not.

Eble (1972) noted in his study of college teaching that in order to motivate faculty members' involvement in the process of change, the reward system must demonstrate in a credible way that rewards will follow the redistribution of faculty effort to improve their teaching.

In summary, the relevant literature reveals that the faculty members' attitudes toward teaching, the faculty members' attitudes toward change, the faculty members' and students' attitudes toward innovations, and faculty members' perception of need to change are all important sources of the power necessary to motivate faculty members to involve themselves in innovative instructional behavior.

3. Factors related to faculty members' expectations of the outcomes of adopting instructional innovation:

In this category of factors, the relevant research pointed out three types of faculty members' expectations of the outcomes that might result from adopting instructional innovations. These types are: 1) faculty members' expectations related to the faculty member himself; 2) expectations related to students; 3) expectations related to the subject matter or topics to be taught. A faculty member can expect to succeed or fail when considering his own skill, his students' relation and the nature of the subject matter.

Theoretical Literature:

Davis (1979) reported that some contemporary organizational psychologists have developed a model of the motivational process that has been tested with considerable success in industrial settings (Vroom 1964, Lawler 1973, Porter, et al 1975). The model holds that the tendency of a worker to behave in a particular way depends largely on his expectations of the consequences of that behavior. If we wish to predict whether or not a faculty member will adopt a

particular instructional innovation, according to this model, it is necessary to assess his expectations about the outcomes of adopting the innovation. The faculty member in this situation might ask himself two questions. First, "If I innovate, what is the probability that I will succeed?" Second, on the positive side, the faculty member might ask, "If I am successful with innovation, what are the likely outcomes? Will my students learn better?" or "Will my salary be increased?" On the negative side, he might ask, "Will I have to sacrifice my research?" or "Will it take time away from my family?" or "Does the innovation fit the subject matter or topic that I am teaching and will it help to simplify the complexity of this subject matter or topic, or does it make it more complex?"

As Davis (1979) mentioned, these assessments of the possibilities are in a continuous state of change, because they concern man and his motivation, which fluctuate from hour to hour and from moment to moment. Therefore, faculty members become aware of new possibilities every day. Each of these possibilities is assumed to become associated with either approach or avoidance tendencies, and the choice between tendencies is determined by a faculty member's perceptions of the success and payoff associated with each tendency.

The faculty member's knowledge and skills regarding innovations, his students, and the topics that he is teaching are important elements helping the faculty member

to have a more accurate assessment of these possibilities. Through these accurate assessments the faculty member will help himself to decrease the fear of failure in adopting innovations. Likewise, he can forecast that the outcomes, either for him or for his student are in the positive direction.

Empirical Research:

Eble (1972) found that recognizing and accepting the goals which faculty members establish for themselves is an important factor in innovation. These goals are the forecast of the outcomes of their activities. Faculty members should be helped to make such forecasts, not told what these forecasts should be.

Evans and Leppman in their second study (1967) found that professors in applied areas such as engineering and education demonstrate more receptivity to certain innovations that are present in their activities outside the university. However, for those in the more traditional disciplines, such external contacts might represent the expenditure of some special effort outside of their daily routine. This suggests that faculty members are taking the nature of their discipline into consideration when they think about innovations.

In summary, relevant literature provides a view that the faculty members' expectations of outcomes that will result from the adoption of innovations may influence the adoption

process. This is true whether these expectations of outcomes related to the faculty member himself, such as his salary or his time, or to his students, such as student learning or attitude, or related to the topic that he teaches. Expectations are to be a source of energy for the faculty member to demonstrate innovative behavior in his teaching if they are positive. However, expectations may serve as barriers if they are negative.

4. Factors related to the availability of resources:

The relevant literature concerning the availability of resources as a major factor influencing the adoption process of innovation has defined three types of resources: first, the availability of media equipment, books, newsletters that can be used by faculty members any time; second, the availability of developmental programs such as grants; third, the availability of an evaluation services.

Theoretical Literature:

Davis (1979) stressed the importance of classroom equipment and materials and grants for instructional improvement.

As he put it:

The typical faculty member who sets out to implement an instructional change of some kind generally discovers that his success depends on the availability of new resources. The resources needed to bring change about may include released time, supplies, services, money for travel, etc. (p. 135)

As he explained, the role of a grants program is to serve as a vehicle for faculty development. By funding appropriate workshops and facilitating communication among faculty and specialists in instructional development on campus, a grants program encourages personal growth and learning on the part of everyone involved in the process. Davis added that a grants program can achieve three additional outcomes. First, grants reward faculty members and recognize their effort to improve teaching. The symbolic significance to the faculty member of a grant to improve teaching should never be underestimated. Second, grants are used to buy needed equipment, software, or faculty time to be used directly in improving instruction. Third, a grants program signals a message to the entire faculty that the institution values good teaching and is committed to improving teaching.

Evaluation services is a third resource that literature and research suggests to be necessarily available in order to create a good atmosphere for faculty to show innovative behavior.

Holbrook (1974), Hammons (1977) and Cole (1978) pointed out the importance of providing evaluation services as a source of feedback that help the individual faculty members to be aware of present instructional practices and of possibilities for improvement. With the help of national organizations such as the Educational Testing Service, the problem of a lack of instructional assessment techniques could be resolved.

Empirical Research:

Evans' and Leppman's (1967) findings supported the theoretical rationale of the importance of the availability of programs that carefully planned for institute innovations. Eble's (1972) study supported the suggestion for the existence in every department of articulated programs for communicating departmental expectations and for providing assistance to help beginning faculty develop the skills and the attitudes necessary to fulfill these expectations. Eble also stressed the importance of building a teaching evaluation system that gives the faculty member a wide range of evaluation alternatives rather than standardized specific solutions.

Kozma (1978) studied the role of institutional improvement agencies in the adoption of instructional innovations. A small group of college faculty members at the University of Michigan received released time and financial support for the development and implementation of instructional innovations in their courses. In addition, each faculty member had access to technical assistance, equipment, training workshops, a series of seminars, and personalized consultations with project staff. A comparison of these faculty members with several other groups, including faculty members who applied for the program but were not accepted and a random sample of non-participating faculty members, revealed that the faculty members who entered the program significantly increased their use of innovations over a two-year

period. Also, comparison between participating faculty response before and after the program showed an increase in the use of innovations.

This increase of the use of innovations took the form of producing video tapes, discussion techniques were acquired, and simulation games were purchased. Also, courses were redesigned to include a variety of techniques as well as to reflect the faculty members' analysis of their classroom situation.

Rogers and others (1975) found four factors related to availability of resource affecting the non-adoption of IMPACT innovations. These factors are: 1) lack of transferable computer program; 2) lack of adequate information about the innovations; 3) unavailability of appropriate course-related subject matter; and 4) unavailability of measurement devices for course-related content.

In summary, the relevant literature suggests the utility of the availability of media equipment, money to travel, time, consultation and evaluation services. These elements can be provided in conjunction with other services such as grants that were found to have significant positive effects on the adoption of innovations. Such grants programs can buy the needed equipment released time for faculty members, et cetera. In addition, a grants program provides a learning environment that faculty members can use to improve their knowledge and implementation skills regarding innovations. Also a grants program can serve as a communication

channel between the administration and faculty members. As stated earlier, one type of message that a grants program signals to faculty members is that the administration values good teaching and is committed to improving teaching.

5. Factors related to the rewards that a faculty member gets as a result of achieving successful adoption of innovations (Motivators):

The fifth category of factors influencing the adoption of innovation by faculty members is the nature of rewards (motivators) that faculty members get as a result of achieving successful adoption of innovations. The literature defines the types of rewards, their role and influence in the adoption process and, the ways in which they can be made available.

Theoretical Literature:

Davis (1979) discussed two types of motivators: a) Intrinsic, which refers to those satisfactions that come directly from the adoption and implementation process and are not affected by any evaluation by an external agent. This type is usually out of the control of the organization, unless the faculty in the organization are not permitted to exercise their skills; b) The extrinsic motivator, which refers to those extrinsic payoffs that are administered by agents who evaluate the innovator's performance and decide whether or not it should be rewarded. Whether or not the faculty member will be promoted, receive a salary increase, or get tenure depends largely on the reaction of his colleagues to his performance.

Holbrook (1974) pointed out that it is important for the reward system to prize teaching ability as well as prizing scholarship and research. Hammons (1977) emphasized the role of financial support as one type of reward that should be provided by the university. This financial support gives a signal to faculty members that administrators are concerned about teaching improvement.

In an invitational conference about the improvement of teaching in higher education, (1972) at Northwestern University, a group of scholars including Kenneth Eble, Francis Keppel, E. Mathis, Steven Holbrook, and others, arrived at conclusions regarding the nature and the role of evaluation as appraisal method. These conclusions are summarized by Mathis and Holbrook (1974) as follows:

1. Students' evaluation of a faculty member can provide feedback useful to the faculty member in assessing the effectiveness of his techniques in reaching course objectives. This type of evaluation cannot be taken as final, but properly used, it can add to what we can know. (p. 101)
2. The results of evaluation techniques now in use in higher education strongly suggest that information feedback on teaching has a positive effect on the improvement of teaching. (p. 101)
3. The use of evaluation data for promotion or tenure diverts attention away from information which might be useful to the individual in improving his teaching effectiveness. The continuing education of the teacher requires that he be aware of the products of his efforts without the fear that such information will be used improperly against him. (p. 102)
4. Responsible evaluation depends on a balance between objectivity and sensitivity, based on the realization that data which illuminates growth in any area are very subtle in their implications. (p. 102)

Empirical Research:

Eble (1972) found other important characteristics of the reward system. It must show in a credible way that reward will follow the redistribution of faculty effort to improve their teaching in order to make the redistribution reality.

Kozma (1979) found relationships between extrinsic reward (the extent to which faculty members perceived teaching as rewardable activity), and the number of innovations adopted. Also he found a relationship between intrinsic reward (the extent to which faculty members found teaching and working with students personally satisfying) and the number of innovations adopted by faculty members.

One possible explanation is that these two types of rewards together are sources for building positive attitude and values concerning teaching. Therefore, the faculty members influenced by possible rewards will make efforts to adopt innovations that will lead to improved instruction.

There is evidence that building such positive attitudes could not be achieved in a short period of time and with little effort. Evans and Leppman (1967), Kozma (1978) found little evidence of any new trend in the attitudes of faculty members about teaching and innovation before and after these faculty members were put in one-year programs that aimed to increase the use of instructional innovations. The faculty members in these programs were provided with rewards such as travel assistance, names appearing in the faculty newsletter, and support in their application for outstanding teaching awards.

In summary, the literature suggests that there are two main types of rewards: the intrinsic reward (the personal satisfactions that come directly from the adoption and implementation process as a result of self-evaluation) and the extrinsic reward (the payoffs that are administered by extrinsic agents). Their role is to motivate faculty members to involve themselves in innovative instructional efforts.

As Eble (1972) mentioned, two main characteristics of reward should be present in order for these rewards to be effective. First, these rewards should follow the redistribution of any effort of innovative behavior. Second, they should continue not only while the faculty members are on the job but also after retiring.

6. Factors related to the role expectations of the departments and institution within which the faculty member works:

The relevant literature with regard to this sixth major factor discussed the nature of role expectations, the ways they can be communicated and the way in which they influence the innovation process.

Theoretical Literature:

Davis (1979) noted that as a result of the interdependence of faculty members on one another, they normally develop beliefs and expectations about how they should or should

not perform their various roles: their role as teachers in the classroom, their role as researcher, their role as advisors, and perhaps even their role outside the university.

Expectations about these various roles are communicated in a wide variety of ways; one way may be to use the reward system as a channel to communicate expectations. As Davis (1979) put it:

The university recognizes and reinforces some behaviors and frowns on others. A university may insist that if it values good teaching, but if it rewards only research and publications, the faculty will get the message. (p. 134)

Other channels also could be used by an institution to communicate its expectations such as faculty development programs. The goals of these programs are signals to faculty members about the desired behaviors the institutions want. As Davis (1979) pointed out, this type of channel loses its effectiveness when these programs are conducted outside departments. As a result of these outside experiences, individual faculty members often decide to make a significant change in their instructional practices. When the faculty member returns to his department, however, the role expectations of his colleagues have not changed. The same pressures to conform remain and in many cases, the returning faculty member soon loses his incentive to change.

Empirical Research:

Eble (1972) concluded that every department should have some articulated programs for communicating departmental

expectations and for providing assistance to help the beginning faculty member develop the skills and attitude necessary to fulfill these expectations.

The developmental programs that are conducted at the department level seem to have more chance to produce change than programs that are conducted at the institutional level, because the faculty members, or at least most of them, may have more chance to change their expectations in such departmental programs.

Evans and Leppman (1967) mentioned that the young faculty member, who is not yet completely integrated into the system, may be more willing to experiment with newer methods, but the senior faculty member who learned that the system appears to reward conforming rather than innovating behavior, becomes discouraged from trying innovations. On the other hand, if the beginning faculty member finds that innovating behavior is being rewarded, he will continue to try innovations even though the first attempts are not successful. This suggests that the adoption process is influenced by role expectation factors positively as well as negatively, depending on the nature of these expectations and beliefs.

Davis et al (1976) found in their study of instructional innovators at Michigan State University that a number of innovative faculty consciously violated the role expectations of their colleagues and played the part of "dissatisfied mavericks." Often, such faculty fall outside the

departmental incentive structure, in that they have reached their peak in the department, e.g., are full professors or are not apt to be promoted.

In summary, the relevant literature defines role expectations as normally developed beliefs of faculty members and administrators. These beliefs are used as standards that faculty members refer to when they conduct their various roles.

Role expectations may be communicated to the individual faculty member through various ways: through the reward system, by rewarding only those behaviors that fit particular expectations; also through developmental programs, by emphasizing only achieving the objectives that go with departmental and/or institutional expectations.

Whether role expectations influence the process of adoption positively or negatively depends on the nature of those expectations. If faculty members and administrators only support confirming behavior, this will discourage innovative behavior and therefore no adoption will take place. But if both types of behaviors, confirming as well as innovative are supported, then the adoption of innovation will be a continuing phenomenon. There is evidence that innovative faculty members who fall outside the departmental incentive structure violate the role expectations of their colleagues.

B. Order of importance of factors:

It is important to note at the end of this section that the relevant literature showed little concern about the

order of importance of major factors involved in the adoption process and did not provide much information about it. Hammons (1977) asked his audience in a presentation about barriers to effective instructional change, to select from a given list of obstacles to change the two most serious ones by filling out 3x5 cards designed for this purpose. The first choice was given two points and the second choice, one point. The results were as follows:

<u>Rank</u>	<u>Item</u>	<u>Points</u>
1	Lack of time	25
2	Lack of financial support	23
3	Lack of good communication	18
4	Change itself	16
5	Lack of good internal assistance	14

As can be seen, all of these factors considered to be the most important, except the fourth one, are subfactors of a major class of factors that Davis called resources. From this it might be concluded that the availability of resources will be the most important major factor influencing the adoption process.

Rogers and others (1975, p. 131) in their study of the adoption and diffusion of IMPACT innovations listed nine main reasons for non-adoption in approximate order of importance:

1. Lack of transferable computer program for implementing the IMPACT innovations of EXPER (SIM or TIPS).
2. Doubts about the usefulness of the computer-related instructional approach.

3. Students' negative attitudes toward computer use.
4. Lack of adequate information about the IMPACT innovations.
5. Unavailability of appropriate course-related subject matter.
6. Doubts about the ability of multiple-choice questions to measure course-related content.
7. Doubts about the effectiveness of students as counsellors, (for student-to-student counseling method).
8. Class size is too small to warrant use, as the innovation (TIPS) would be uneconomical.
9. Does not fit the needs of the responding request's institution.

From this list once again we also find that the resources take the largest proportions. Four (1, 4, 5, 6) of these nine factors belong to this major class. Two of these factors (2, 8) are related to faculty expectations of the outcomes. One of them (9) can be classified as institutional expectation. Number (3) can be classified as a subfactor of the class of factors, energizers.

The other researchers, theoretical as well as empirical, did not discuss this issue. One of the purposes of the present study is to measure the order of importance of the six major classes of factors, mentioned from faculty members' perspectives.

Summary

In chart 2-1, and in the next four pages it is demonstrated that all the subfactors suggested by theoretical literature and empirical research are included in Davis' six

Chart 2-1
The Relation of Present Literature to
Davis' Categories of Major Factors
Which Influence Adoption Innovations

	1	2	3	4	5	6
Researchers Pointed Out Subfactors	Knowledge and Learning Skills	Energizers	Expectations of the Outcomes	Resources	Motivators	Role Expectations
Evans & Leppanen (1967)	-Knowledge about the nature of innovations	-Attitude of faculty mem- bers toward innovations	-Expectations related to the area of specializa- tion (e.g., Does this innovation fit to teach math?)	-Faculty development programs in the institu- tion level	-Financial system in the institu- tions	-Programs to communicate role expecta- tions of in- stitutions
Ehle (1972)	-Knowledge about learn- ing & teach- ing approach- es (prepara- tion stage)	-Motivation of faculty members to change	-The goals of faculty mem- bers as fore- casts for ex- pectations of outcomes	-Evaluation system -Departmental faculty de- velopment programs	-Immediate rewards to any redistri- bution of any attempts of innovative behavior	-Departmental programs to communicate role expectations
Holbrook (1974)	-Knowledge about teach- ing approach- es (prepara- tion stage)	-Attitudes of faculty members to- ward teach- ing		-Evaluation system	-Rewards for teaching -Rewards for research	

Chart 2-1 Continued

	1	2	3	4	5	6
Researchers Pointed Out Subfactors	Knowledge and Learning Skills	Energizers	Expectations of the Outcomes	Resources	Motivators	Role Expectations
Rogers & Others (1975)	-Mastering Implementa- tion skills	-Attitudes of students toward inno- vations	-Expectations related to the area of specializa- tion	-Adequate Information about inno- vations -Availability of Measurement devices to measure the effectiveness of innovations		
Hummons (1977)	-Knowledge about updated information about teach- ing & learn- ing approach- es	-Awareness of need to change		-Evaluation system	-Financial support	
Cole (1978)	-Knowledge about updated information about teach- ing & learn- ing approach- es	-Attitudes of faculty mem- bers toward change		-Evaluation system		

Chart 2-1 Continued

	1	2	3	4	5	6
Researchers Pointed Out Subfactors	Knowledge and Learning Skills	Energizers	Expectations of the Outcomes	Resources	Motivators	Role Expectations
Davis (1979)	-Knowledge about the nature of the innovations -Implementa- tion skills	-Motivation of faculty members to change -Faculty member's cognitive dissonance	-Expectation related to faculty mem- ber himself (e.g. his salary, time, etc.) -Expectations related to students (e.g. better learning)	-Media equip- ments, money, etc. -Faculty de- velopment programs	-Intrinsic reward — faculty per- sonally sat- isfying -Extrinsic rewards — money to travel, in- crease in salary, etc.)	-Types of role expectations: o Role as teacher o Role as re- searcher o Role as stu- dents advisor o Role as ad- visor for others
Kozma (1979)				-Instruc- tional im- provement agencies	-Intrinsic rewards (per- sonally sat- isfying) -Extrinsic rewards (e.g. money, time for subleave, etc.)	

categories of major factors influencing the process of adoption of innovation. In addition to pointing out major factors, this section discusses how each factor influences the process of adoption. This section also includes a brief statement of what has been said concerning each category of factors.

1. Faculty member's knowledge and learning:

The role of faculty members' knowledge about teaching and learning approaches as well as their knowledge of implementation skills for innovations may be important for instructional adoption. Without this knowledge and skill, it is not expected that any adoption will take place, even if it was assumed that other factors are present which favor adoption. All these types of knowledge are the foundation and necessary conditions for any innovative behavior.

2. Energizers:

The faculty member's motivation to change, his attitude toward change, as well as his awareness of what to change and the need for that change, may have a major and perhaps direct influence upon the process of innovation adoption. Their role is to energize the faculty member to take action in order to restore the unbalanced situation that faculty members recognize in instruction.

3. Faculty member's expectation of the outcomes that will result from change:

A faculty member's expectation of the results of new approach to instruction may affect the attempt to change.

This is true whether the results are related to the faculty members or to their students. For instance, the faculty member who learns that there is high probability that his salary will increase if he adopts innovations may be encouraged to manifest innovative behavior. If this possibility is low, then discouragement may take place. This is also true in regard to the expectations of outcomes related to students. If there is a high probability that a student will learn better by using a innovation, then knowledge of this probability may encourage the faculty member to adopt the innovation. If no increased learning will result, then this may contribute the rejection of innovation.

4. Availability of Resources:

The relevant literature with regard to this category suggests that this factor indirectly influences the process of adoption. The availability of faculty development programs will provide the formal means of making faculty knowledgeable about instructional innovations as well as specific implementation skills. This knowledge may directly influence the action of adoption. Details about how each major factor influences the others will be discussed in the second part of this chapter.

The evaluation services is another resource whose availability is necessary. Its role is to provide the information that makes the faculty members aware of what needs to be changed, and to what extent the implemented new innovations are successful.

The media equipment exemplifies another type of resource. Their availability is a necessary condition for the development of innovation adoption. Sometimes the equipment is the innovation.

5. Motivators:

The relevant literature defined two types of motivators: extrinsic and intrinsic. The extrinsic motivator is that payoff that faculty members received as a result of an evaluation conducted by an external agent. These payoffs may be, for example, money or released time. An intrinsic motivator is that feeling of satisfaction of accomplishing a projected goal. Both motivators may play a major role in the process of innovation adoption. They reinforce the faculty members' willingness to continue to show innovative instructional behavior repeatedly.

In order to be effective, motivators should have three main characteristics: first, they should follow immediately after the adoption act; second, they should be of sufficient magnitude; third, they should be on a continuously reinforced basis.

6. Role expectations:

Individual members of groups take into consideration the standards that are established by the group to judge the accuracy of their behavior. Norms define the boundaries within which each individual works. If an individual tries to violate them, he may lose the support of this group.

A faculty member who wants to change to his way of teaching (unless this type of act is part of his colleagues' expectations about him) may be subject to finding himself in violation of his colleagues' expectations and therefore, he may lose their support. Consequently, faculty members may lose departmental incentives. This may explain why the role expectation violation often comes from faculty members who fall outside departmental incentive structure such as being full professors.

The faculty member plays several roles. He is a teacher in the classroom, a researcher inside or outside the university, an advisor for students and consultant for administrators as well as a member of his family. All these roles may be influenced by the expectations of the faculty member's colleagues and administrators.

With regard to the order of the importance of the factors involved in the adoption process, the available evidence suggests that availability of resources is primary. There is no suggestion about the order of other variables.

C. Instructional design field and some instructional design ideas.

1. Instructional design field:

In this section of literature review, Chapter II topics will be addressed. First, the field of instructional design, as one approach to improve instruction, will be defined and briefly discussed. This will be done in order to define the context from which five major instructional

design ideas and strategies came that will be presented to faculty members to accept or reject.

Second, each of the five ideas or strategies will be defined, examples will be presented and finally, the purposes will be listed. These ideas and strategies were selected because they are the most frequent instructional design ideas discussed and written about by instructional design experts.

Definition:

Gagnè and Briggs (1979) defined instructional design as "the means employed by teachers, designers of materials, curriculum specialists, and others whose purpose it is to develop an organized plan to promote learning." (p. 19) Davis, Alexander and Yelon (1974) defined it in a similar way from a teaching-learning process standpoint, "A learning system is an organized combination of people, materials, facilities, equipment, and procedures which interact to achieve a goal." (p. 303). They noted that from this definition, three fundamental characteristics of a learning system can be identified:

1. It is a planned arrangement of its component elements (people, materials, procedures, etc.).
2. Its elements are interdependent; that is, they are parts of a coherent whole where each contribute something to the others and every part is essential.
3. It has a goal which is to promote student learning. The system goal guides the system design process.

The role of an instructional designer then is to propose and test specific techniques to plan instruction. As Davis, Alexander and Yelon (1974) put it,

It is in an analogous position to the GM consultant. Frequently, his most critical decision concerns what technique to use and when to use it; however, such expertise is attained only after one has had experiences in analyzing and designing many learning systems. (p. 3).

The origin of instructional design is deeply rooted in psychology and especially in behavioral psychology. Geis (1980) pointed out that "behavioral psychology by the 1950s was ready to propose applications of its model to education. The birth date of one such application was the publication of B.F. Skinner's (1954) description of programmed instruction." (p. 114). Also behavioral psychology found its applications in military and industry settings. The accumulated experiences in these various settings gave the instructional design system a push ahead as an approach to the improvement of instruction. Davis, Alexander and Yelon, the authors of "Learning System Design" (1974) pointed out that their book "is the outgrowth of the authors' combined experience as learning system designers and training consultants for education, industry and military." (p. ix).

Geis (1980) contrasts the instructional system development activities with faculty development activities as two phases of the development of the amount and kind of resources for the improvement of instruction. He discussed major differences and similarities between the two. The first

major difference is that the faculty developer's activities consider all the roles of faculty members as researcher, teacher, administrator, scholar and learner. The instructional designer is primarily concerned about campus teaching functions and its components, not just the professor.

Second, the faculty developer perceives faculty members and the university as less governed by students, government agencies and even boards of governors. Instructional designers apparently have often viewed the university as an industrial organization; the administration as management; the faculty as employees; the students as consumers.

Third, the faculty developer is likely to perceive teaching as an attempt to transfer some part of a body of knowledge from expert to novice. The instructional designer is more likely to view teaching as a behavioral change with emphasis upon "performance" not on "content."

Fourth, faculty developers have (sometimes shyly) admitted faculty development as one of their academic activities while instructional designers have struggled to form a recognized visible discipline with its own professional organization and journals.

Fifth, faculty developers have kept their two feet in the academic world, colleges and universities. The instructional designers have kept one foot in the academic world and the other outside of it, in industrial and military training.

Now what are the similarities? The first one is that both faculty developers and instructional designers have addressed themselves much of the time to faculty members in improving face-to-face classroom teaching. Second, both groups are concerned with generating and learning about teaching techniques and educational innovation. Third, both groups are involved in studying change process, dissemination and the adoption of new ideas.

The aim of this contrast was not to arrive at a conclusion such as which approach is superior over the other. The two approaches, as Geis (1980) put it, "can serve different purposes, meet different needs on campuses." (p. 118). From this contrast it can be inferred that the two approaches can cooperate with each other to help faculty members to improve their instructional skills as well as offer colleges and universities new teaching-learning approaches. This cooperation is needed because each approach provides different types of information which all relate to instruction.

2. Instructional design ideas and strategies:

In the rest of this section, five major instructional design ideas and strategies, that were discussed by scholars in instructional design, are presented. These are the ideas that faculty members will be presented to accept or reject. Each idea or strategy will be defined, examples will be presented and finally the purpose will be listed.

IDEA 1: Learning Objective

Definition:

Most faculty members have some goals in their mind when they plan their course and lessons. These goals are often so vague and ambiguous that they become quite worthless for planning or evaluation purposes. As Gagné and Briggs (1979) put it,

We have seen that statements of course purposes as they are frequently given are not models of precision. They do not manage to reduce ambiguity to the level usually needed for instructional design. (p. 117).

The statement of the purpose "comprehending the concept of arithmetic mean" may mean "stating a definition of arithmetic mean" to one teacher; it may mean "calculating the arithmetic mean" to another; it may mean "interpreting the concept of the arithmetic mean" to a third and it may mean all of these to a fourth.

The instructional designer provided a procedure to avoid this ambiguity. This procedure requires faculty members to "operationally define the course's objectives" and that is by stating them in behavioral terms. Davis, Alexander and Yelon (1974) defined the objective that has this characteristic as "a description of the behavior expected of a learner after instruction." (p. 29). The objective statements that fit with this definition are usually called "learning objectives" while statements of objectives that are general and ambiguous are commonly called instructional goals. The learning objective is a clear and precise description of an

instructional goal. Here are examples of an instructional goal and a learning objective:

Instructional goal: "The students know how to calculate the arithmetic average."

Learning objective: "The students will write the arithmetic average in accord with the text's formula from 60 raw scores. The average must be equal to the sum of the raw scores divided by the number of scores. Calculator or text is prohibited."

Davis, Alexander and Yelon (1974) discussed the uses of learning objectives. Learning objectives are written to serve as guides for:

- 1 - Choosing subject matter content. In the above example the instructor should provide the students a definition of arithmetic average, definition of the formula that the text used is suggested and its terms, raw scores of actual or hypothetical data.
- 2 - Sequencing topics of the lesson. In the present example the instructor may first present the definition of the arithmetic average. Then explain the formula and its terms. Then apply the formula using the available data.
- 3 - Allocating teaching time. The instructor will be able to estimate the time that is needed to teach the topic more precisely than if the instructional objective was not written in a behavioral manner. In the present example, the teaching time may be one-half of an hour.

- 4 - Selection of materials and procedures to be employed in the actual teaching process. In the present example the text books that will be used should be available. Raw scores of data, actual or hypothetical.
- 5 - Providing standards for measuring student achievement. In the present example to know that the student did learn to calculate arithmetic average, the instructor will give each student 60 raw scores and ask him to write on paper the arithmetic average showing the steps of their work without using the text book or calculator.
- 6 - Learning objectives provide standards for evaluating the quality and efficiency of the instruction. This means that if the student shows from the test they were given that they are able to calculate the arithmetic mean, then this shows that the instructions given were successful. If not, this means that something went wrong in the process of instruction which should be discovered and corrected.

IDEA 2: Task Description and Task Analysis

Davis, Alexander and Yelon (1974) defined task description and task analysis as follows:

Task description is a written or diagrammed explanation of how a task in an instructional objective is to be properly performed. Task analysis is an examination of the task to analyze it to its different components which usually include skills, decisions, rules, principles, facts, concepts, and attitude. Some tasks may include some of these components and some may include all of them.

Example: If the topic of the lesson is how to write an essay, then the task description should have the following contents:

- 1 - Detailed explanations of how to write an essay.
- 2 - Detailed explanation of the characteristics of the introduction, contents and the conclusion of the essay -- which of these parts comes first and which comes last and which comes in the middle and why.
- 3 - Detailed explanation of the grammatic rules and principles of language.
- 4 - Detailed explanation about the organization of ideas.

Task analysis is to see the components of the description of how to write an essay. Therefore in the example presented we may find concepts such as essay, introduction, content and conclusion; rules such as not putting the introduction after the contents and putting the conclusion at the end; principles such as "if the introduction is put after the content then the reader will be confused just as he would be if you put the subject after the verb."

Also, the above scholars discussed eight purposes of task descriptions and analysis:

- 1 - to increase the probability that all content essential for the achievement of an objective
- 2 - to eliminate content which is irrelevant to the objective.

- 3 - to pinpoint the prerequisite requirement to precede and to successfully complete the course or lesson.
- 4 - to indicate the proper sequence for presenting the lesson materials.
- 5 - to assist students in following the important steps of a demonstration.
- 6 - to provide precise and accurate instructional methods for each type of learning included in the topic of the lesson.
- 7 - to make sure revisions in content and sequence can easily be made when necessary.
- 8 - to provide remediation for the students who make errors.

IDEA 3: Learning Hierarchies

Gagnè (1977) defined and discussed the uses of learning hierarchies. This discussion can be summarized as follows:

Many subjects taught in schools have an organization that can be readily expressed as learning hierarchies. That is, the learning objective may be shown to be composed of prerequisite skills and ideas which have been previously learned or they may have been just learned a while ago. For example, if the learning objective is that "the student will be able to compute in writing the arithmetic average from 60 raw scores," then by analysis this objective necessitates that the student must have previously learned how to add, subtract and divide numbers.

Learning hierarchies imply that learning has a cumulative character in which the acquisition of specified skills or ideas establish the possibility of learning a number of more complex ideas and skills. As a result, the students' intellectual development has occurred and therefore he/she will be able to solve a great variety of novel problems.

To maximize learning, the instructor should clearly arrange ideas and topics of the course or lesson into patterns which show the prerequisite relationships among them so the first idea in the topic becomes prerequisite to the next one and so on.

IDEA 4: Lesson Planning

Gagnè and Briggs (1979) defined the planning of a lesson as a whole as a set of procedures designed to support learning the topics of the lessons. They identified and discussed nine components of lesson planning.

- 1 - Gaining attention of the students. This can be done by introducing a novel situation in the introduction of the lesson, appealing to students' motives for understanding their environment. The instructor can achieve this by raising questions that need not be answered in the moment; also he can present objects, draw diagrams, etc. For example, if the topic is about the grammatical rule of "the subject" in the sentence then the instructor may ask students these questions: What does "subject" mean? Why do we need this concept to be in the sentences? What forms does it take?

- 2 - Informing the students of the objectives of the lesson. In this phase the instructor should establish a specific expectancy of what the students will be able to do when the lesson has been completed. In the example that has been given, the objective may be stated as "the student will be able to point out all noun and pronoun subjects that exist in a given paragraph of an essay and explain why they are so without text or help of instructor." The instructor can communicate this objective to the students in verbal or written form or both.
- 3 - Stimulating recall. In this phase of the plan the instructor should help the student recall the previously learned information that relates to the new topic. In the example presented, the instructor may use questions by asking students to define verbs, sentence, etc.
- 4 & 5 - Presenting the material to be learned and providing guidance to make this learning possible. A series of communications in the form of "hints" or questions or other may be said to have the function of learning guidance. They are helping the student to learn by discovering and they do not tell the students the answers. In the present example the instructor may ask the students to point out the word in the sentence that they consider the subject after giving a clear definition of "subject" instead of pointing out the word himself.

6 & 7 - Eliciting the performance and providing feedback.

In these two steps, the instructor should make an initial test by asking the students to show that they know how to do what has been taught. The instructor wants them not only to convince him/her, but to convince themselves as well. The instructor should give feedback concerning the correctness or degree of correctness of the lesson's performance. In the example given, the instructor may ask the student to point out the subjects in a written sentence, orally, and answer why he called this part of the sentence a subject. If any degree of correctness was not present, then the instructor should provide this part of the correctness.

8 - Enhancing retention and transfer. The instructor in the learning guidance stage should provide a meaningful context by which to learn the material. This has been found to offer the best assurance that the information can be recalled and it provides a number of different possibilities as cues for the retention of information. The way might be "practicing" -- that is, to provide more examples following the initial learning. In the present example, the instructor may give more examples of sentences which contain "subjects" in this phase of giving feedback to the statements.

As for assurance of transfer of learning, it appears that this can be best done by setting some variety of new tasks for learners -- tasks that differ substantially from those used for the learning itself. In the present example the instructor may ask the student to supply a sentence that includes a subject that differs from what has been presented while teaching.

- 9 - Assessing performance. In this phase of the lesson plan, the instructor should provide the means to show convincing evidence that the performance exhibited by the learner in eliciting the performance phase is valid and reliable; that the student does the performance accurately, reflecting on the objective and consistency across the situation. This can be done by conducting a formally-planned assessment which requires a construction of valid and reliable tests. In the given example, the instructor may construct a test that has the following elements:
 - a. a short essay followed by questions that ask the students to point out the subjects, their type, and why they are the subjects of the sentences.
 - b. questions which ask the student to supply sentences that include subjects.
 - c. a list of sentences that include subjects which are underlined and questions that ask why these are considered subjects.

IDEA 5: Personalized Self-Instruction

Personalized self instruction (PSI) is an instructional strategy that allows students to learn material and be tested at their own speed. The aim of this instructional method is to maximize learning by considering the individual differences among students in ability, speed of learning and background in the subject matter. Keller (1968) discussed five major characteristics of PSI which can be summarized as follows:

- 1 - The course is divided into units. The topics of the course are categorized into major groups according to their similarities. These major groups or units are organized according to their prerequisite relationships. The student must master one unit before going on to the next. The instructor may stipulate that 80 percent of the material should be learned from the first unit in order to allow students to go on to the second unit.
- 2 - The written word is the main mode of instruction. The topics of the course are made available to the students in clear and detailed notes and books. Video tapes and films supplement the text.
- 3 - Lectures are used to increase student motivation -- to learn rather than as means of conveying critical information. Class time can be used to answer questions.

- 4 - PSI permits students to pace themselves, proceeding through the course as quickly or as slowly as they wish.
- 5 - Tests, assignments, and feedback are done by each student when he is ready. The test and assignments for each unit can be repeated more than once. Usually the instructor provides different forms for repeating each unit test so that the student who fails in a first attempt will be given a different form the second time. Feedback is given to the student by the instructor after taking any test or doing an assignment.

D. Methodological Issues

In order to provide the readers a basis for comparing different studies that examine the factors involved in the adoption of instructional innovations, a discussion of two methodological issues will be presented in this section.

The first issue is about the argument that the most desired characteristic of any research design is comprehensiveness of design. By comprehensiveness, we mean the extent to which the study considered the theoretically defined variables related to the phenomena under study. The studies reviewed here vary with regard to this comprehensiveness. Evans and Leppman's first study (1967) considered only one factor, attitude of faculty members toward one type of innovations, ITV. Evans and Leppman in their second

study (1967) tried to include more variables such as the complexity of innovations and the way the faculty institute an innovation, failure or success of utilizing innovations, the reaction of faculty members to the nature of attitudes of the subject of the first study, and to the nature of the decision-making process with respect of innovation. Kozma (1978, 1979) considered four factors in his study (formal network, informal network, extrinsic rewards, and intrinsic rewards). Eble (1972) identified eight factors influencing instruction improvement; reward system, the importance of recognizing and accepting the goal which faculty establish for themselves, the preparation programs, the method of communicating departmental expectations between faculty members, the intervention during the middle and later years in faculty career patterns to keep the older faculty productive, encouragement of experimentation of innovation, and the teaching evaluation system.

These studies, considered very important factors, but did not include all factors that are considered theoretically important. As was mentioned in the first section of this chapter, the present study will consider the Davis' six major classes of factors which are strongly supported by theoretical literature and moderately supported by empirical studies. These six classifications of factors, as have been demonstrated, are more comprehensive than classifications used in other studies.

The second methodological issue that needs to be discussed, relates to the type of research method. In the studies cited, a range of types of research methods had been used. This range varies from experimental to survey to observational methods. Evans and Leppman's first study (1967) and Kozma's study (1978) used a research design that might be classified as quasi-experimental design. Generally, subjects were given pretests and then divided into experimental and control groups. The experimental groups were put in intervention situations such as attending faculty developmental programs. Then the two groups, experimental as well as control, were given posttests. By looking at the research questions posed by Evans and Kozma, the appropriateness of their designs can be assessed. Their basic question was "How are faculty members who are strongly favorable to teaching by ITV different from those who are hostile to it with regard to the ITV adoption?" Therefore, it was appropriate to make these two groups participate in activities, behavior related to ITV, and then measure the differences between these two groups in terms of manifesting ITV innovative behavior. The same thing can be said about Kozma's study whose research question was "Is there relationships between the instructional improvement agencies and the use of instructional innovations?" To answer this question, measurement of using innovations was obtained from all subjects. Then some subjects were selected to participate in a project where they received released time and

financial support for development and implementation of instructional innovations in their courses. In addition, each subject had access to technical assistance, equipment, training workshops, a series of seminars and personalized consultation with project staff. At the end of the project, a postmeasure of using innovations was obtained and then a test of significant differences was performed. This design then is appropriate to answer the researcher's question.

One major problem that this type design has, and was mentioned by Evans and Kozma, related to the generalizability. Cronbach (1975) expresses concern with the limited generalizability of controlled experiments because they tend to consider small numbers of variables as well as subjects. He contends that correlational studies are more environmentally valid.

As a result of the awareness of this problem, Evans and Leppman in their second study (1967), Rogers and others (1975), and Kozma (1979) did correlational studies to identify factors involved in the adoption of innovation.

In these correlational studies, the survey method was used including questionnaires and interviews. Using this method allowed researchers to consider larger numbers of variables than experimental studies. As a result, these studies are more comprehensive.

Eble (1972) used a third research method to investigate the factors involved in the institution improvements. This type of research can be classified as a participant observa-

tion and note-taking method. Eble visited 70 universities and colleges across the country where he participated in seminars and informal discussions and meetings with administrations, faculty members, and students. All of these activities were related to instructional methods improvement. The most serious problem facing Eble's methodology is the lack of systematic procedure to collect the data.

Conclusion

Choosing the right research method really depends upon the nature of the questions that are being asked. The experimental method may fit to answer certain questions that survey or observational methods cannot answer. There are certain questions that can be better answered if observational methods were used instead of survey methods and vice versa. The main questions in the present study are about the identification of factors involved in the adoption of instructional design ideas and the order of the importance of these factors as well as the identification of differences in considering these factors between those who are receptive or not receptive to instructional design ideas. The best type of research method for these questions is the survey method by means of questionnaire. Because the present study is concerned with the factors from the faculty's perspective, it is reasonable to ask faculty for their viewpoints. A questionnaire is a most efficient and systematic approach to assessing faculty perceptions.

In addition, the survey method provides a logical and comprehensive explanation to the event under study. As Babbie (1973) put it:

The format of survey research often permits the rigorous, step-by-step development and testing of logical explanation through the examination of hundreds and even thousands of survey respondents, moreover, it is possible to test complex propositions involving several variables in simultaneous interaction. (p 46)

Furthermore, the survey method is parsimonious. As Babbie (1973) pointed out:

Because the survey researcher has larger numbers of variables at his disposal, he is in an excellent position to carefully examine the relative relevance of each. Like all scientists, he would like to obtain the greatest amount of understanding from the fewest number of variables... (p 47)

Finally, most of the studies investigate similar topics used in the survey method (Evans and Leppman in their second study (1967), Rogers and others (1975), Kozma (1978)).

Details in the nature of the instrument that will be used by the present study to collect data can be found in Chapter Three.

Summary

In this chapter, six topics have been addressed. First, it is demonstrated that all the subfactors suggested by theoretical literature and empirical research are included in Davis' six categories of major factors. This includes a brief statement of what has been said concerning how each category influences the process of adoption.

Second, the issue of the order of importance of the factors has been reviewed and it is concluded that this issue was of little concern in previous studies.

Third, the field of instructional design as one approach to improve instruction has been defined and compared with faculty development approach. The instructional design system is defined as a field of study proposing specific ways to plan the elements of instruction (i.e., people, materials, procedures, etc.) in order to promote student learning. In contrast to the faculty development approach, it has been demonstrated that the instructional design system does provide information related to instruction that might not be provided by the faculty development approach. However, their cooperation is used to improve instruction.

Fourth, the definitions, examples and purposes of five instructional design ideas presented to faculty members to accept or reject were presented. These ideas are learning objectives, task description and task analysis, learning hierarchies, lesson planning, and personalized self-instruction. As mentioned previously, these ideas are particularly selected because they are the most frequent topics discussed by experts in the instructional design field.

Finally, methodological issues related to the types of research methods employed by previous studies to investigate similar problems is presented. It has been concluded that survey by means of questionnaire is the best research method

for the questions asked by the present study because of four reasons: (1) a questionnaire is the most efficient and systematic approach to assessing faculty perceptions, (2) the survey method provides a logical and comprehensive explanation to the event under study, (3) the survey method helps the researcher, as Babbie (1973) pointed out, "to obtain the greatest amount of understanding from the fewest number of variables," and (4) most of the studies investigating similar issues used the survey method.

CHAPTER III

RESEARCH DESIGN AND PROCEDURE

CHAPTER III

RESEARCH DESIGN AND PROCEDURE

Introduction:

The purpose of this study was threefold: First, it was to identify the reasons considered by faculty members in Saudi Arabian universities for accepting and the reason for rejecting specific instructional design ideas. Second, it was to explore which of those reasons affect faculty members' decisions more strongly than others. Third, it was to identify any differences in considering the reasons given by those who accept (receptive) and those who do not accept (unreceptive) instructional design ideas. To accomplish these purposes, a research design and procedure was followed. The purpose of this chapter is to provide a description of such design and procedures aspects.

The organization of this chapter will be as follows:

- A. Research Questions and Hypotheses.
- B. Population of the Study.
- C. Sample of the Study.
- D. Instrumentation.
- E. Data Collection.
- F. Data Analysis.

A. Research Questions and Hypotheses

Question 1: What are reasons given by faculty for accepting and reasons for rejecting specific ideas of instructional design?

Hypotheses 1-6. There will be no differences in the proportions of faculty members who accept instructional design ideas who given the reason:

1. Implementation skills - "I know how to apply the idea"
2. Motivation - "I see need for the idea"
3. Expectation - "I will succeed in applying the idea"
4. Resources - "I will get needed resources to apply the idea"
5. Rewards - "I will get rewards I desire when applying the idea"
6. Role expectation - "The idea will be acceptable in my department"

and those accepting faculty who do not give the reasons.

Hypotheses 7-12. There is no difference in the proportions of faculty members who do not accept instructional design ideas who give the reason:

1. Implementation skills - "I do not know how to apply the idea"
2. Motivation - "I do not see need for applying the idea"

3. Expectation - "I will not succeed in applying the idea"
4. Resources - "I will not get the needed resources"
5. Rewards - "I will not get rewards I desire"
6. Role expectation - "The idea will not be accepted in my department"

and those non-accepting faculty members who do not give the reason.

Question 2: Which of the reasons do faculty members report affect their decision more strongly than others?

Hypothesis 13. There are no differences in the reported strength of influence of the reasons on the decision given by those who do accept instructional ideas.

Hypothesis 14. There are no differences in the reported strength of influence of the reasons on the decision given by those who do not accept instructional ideas.

Question 3: Are there any differences in considering the reasons given between those who accept and those who do not accept instructional design ideas?

Hypotheses 15-20. There are no differences in considering the reasons given between those who accept and those who do not accept instructional design ideas.

B. Population

The target population of this study consists of all faculty members in Saudi Arabia's seven universities: King Saud University (Riyadh University), King Abdulaziz University in Jaddah, Mohammad Bin Saud Islamic University in Riyadh, King Feisal University in Dammam, Islamic University in Medina, University of Petroleum and Minerals in Duhran, Aum Alqura University in Makka, as well as the faculty members in six girls' colleges. (These six girls' colleges will be considered as forming a university since they are under one administration.) The population has a total of 5,841 which includes Saudian faculty as well as foreign faculty. The population includes the different levels of faculty academic ranks -- professor, associate professor, assistant professor, lecturer, demonstrator (teaching assistant). Table 1-3 presents the academic qualifications of faculty members by university and Table 2-3 tabluates faculty members by university, designation and sex.

C. Sample of the Study

Four hundred and seventy faculty members (e.g., 8.0 percent of the population) were selected using stratified sampling techniques. To achieve this the following steps was followed:

- A. Three variables [university (from 1-8), area of specialization (from 1-8), and faculty ranks (from 1-5)] were used to stratify the population to 320 subgroups. (See Figure 3-1 which illustrates the schema of sampling procedures).
- B. The names of population members were listed alphabetically in each cell.
- C. From each cell two subjects were selected randomly using the random numbers table. However, since not all universities are offering all the eight categories of areas of specialization, therefore some cells in Figure 3-1 will be empty and this will be indicated by the capital letter "X."

The 470 selected subjects were given the two parts of the questionnaire. The reasons for using this procedure of sampling was to make comparisons between groups of subjects with regard to the area of specialization and rank possible since equal numbers are needed.

Four hundred questionnaires were returned, that is 85 percent from the distributed questionnaires.

D. Instrumentation

The instrument used to collect data was a questionnaire that included two main parts. Each faculty member selected in the sample was given the two parts along with a cover letter to inform him about the purpose of the study as well as the directions to answer the questionnaire.

Table 1-3. Teaching Staff in Saudi Arabian Universities By University, Academic Qualification (Degree) and Sex, 1980/81*

University	Other		Bachelor		Higher Diploma		Master		Doctorate		Total	
	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi
Grand Total	105	46	509	1048	152	2	758	390	2291	540	3815	2026
Male	97	46	331	717	112	1	497	334	1958	526	2995	1624
Female	8	--	178	331	40	1	261	56	333	14	820	402
King Saud	53	36	129	85	27	-	169	57	581	223	959	401
Male	4	--	32	37	16	-	51	6	32	1	135	44
Female												
Islamic (Medina) Male	4	3	56	63	8	-	36	60	109	11	213	137
Petroleum of Minerals Male	8	-	50	99	11	-	96	72	222	63	387	234
Female	-	-	--	--	--	-	--	--	--	--	-	-
King Abdulizy Male	22	7	28	108	14	-	82	57	631	181	777	353
Female	2	-	20	80	8	-	41	35	98	10	169	125
Imam Mohammad Bin Saud Male	-	-	44	233	41	1	63	71	212	25	360	330
Female	-	-	--	--	1	-	1	--	--	--	2	-
King Faisal Male	10	-	24	129	11	-	50	17	175	22	270	168
Female	2	-	15	13	3	-	13	2	19	0	52	15
Girls Colleges Male	-	-	-	-	-	-	1	-	28	1	29	1
Female	-	-	111	201	12	1	155	13	184	3	462	218
												680

*The source is the department of higher education development in Higher Education Ministry, Saudi Arabia.

Table 2-3. Teaching Staff in Saudi Arabian Universities by University, Rank and Sex, 1980/81*

University	Teaching Asst.		Lecturer		Asst. Professor		Assoc. Professor		Professor		Total	
	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Saudi	Non-Saudi	Total
Grand Total	603	1076	776	342	1263	457	646	119	527	32	3815	5841
Male	410	744	525	287	1036	444	550	117	474	32	2995	4619
Female	193	332	251	55	227	13	96	2	53	--	820	1222
King Saud												
Male	151	103	190	54	323	185	165	41	130	18	959	1360
Female	22	37	78	6	26	1	6	-	3	-	135	179
Islamic (Medina) Male	62	63	37	53	60	14	38	7	16	-	213	350
Petroleum of Minerals												
Male	53	99	121	72	116	53	54	10	43	-	387	621
Female	-	-	-	-	-	-	-	-	-	-	-	-
King Abdulaziz												
Male	41	108	78	57	293	133	185	42	180	13	777	1130
Female	33	80	35	35	56	9	28	1	17	-	169	294
Imam Mohammad Bin Saud												
Male	72	242	75	34	119	38	46	15	48	1	360	690
Female	1	-	1	-	-	-	-	-	-	-	2	2
King Faisal												
Male	31	129	23	17	107	20	53	2	56	-	270	438
Female	15	13	8	2	20	-	7	-	2	-	52	67
Girls College												
Male	-	-	1	-	18	1	9	-	1	-	29	30
Female	122	202	129	12	125	3	55	1	31	-	462	680

*The source is the department of higher education development in Higher Education Ministry, Saudi Arabia.

Area of Special- ization	Ranks	1	2	3	University			7	8
					4	5	6		
Agricul- tural Sciences	Professor	N	N	N	X	X	X	X	X
	Assoc. Prof.	N	N	N	X	X	X	X	X
	Assoc. Prof.	N	N	N	X	X	X	X	X
	Lecturer	N	N	N	X	X	X	X	X
	Ass't. Teacher	N	N	N	X	X	X	X	X
Behavioral Sciences	Professor	N	N	N	N	X	N	X	N
	Assoc. Prof.	N	N	N	N	X	N	X	N
	Assoc. Prof.	N	N	N	N	X	N	X	N
	Lecturer	N	N	N	N	X	N	X	N
	Ass't. Teacher	N	N	N	N	X	N	X	N
Engineering & Math Sciences	Professor	N	N	N	N	N	X	X	X
	Assoc. Prof.	N	N	N	N	N	X	X	X
	Assoc. Prof.	N	N	N	N	N	X	X	X
	Lecturer	N	N	N	N	N	X	X	X
	Ass't. Teacher	N	N	N	N	N	X	X	X
Natural Sciences	Professor	N	N	N	N	N	X	X	N
	Assoc. Prof.	N	N	N	N	N	X	X	N
	Assoc. Prof.	N	N	N	N	N	X	X	N
	Lecturer	N	N	N	N	N	X	X	N
	Ass't. Teacher	N	N	N	N	N	X	X	N
Medical Sciences	Professor	N	N	N	N	X	X	X	X
	Assoc. Prof.	N	N	N	N	X	X	X	X
	Assoc. Prof.	N	N	N	N	X	X	X	X
	Lecturer	N	N	N	N	X	X	X	X
	Ass't. Teacher	N	N	N	N	X	X	X	X
Social Sciences	Professor	N	N	N	N	X	N	N	N
	Assoc. Prof.	N	N	N	N	X	N	N	N
	Assoc. Prof.	N	N	N	N	X	N	N	N
	Lecturer	N	N	N	N	X	N	N	N
	Ass't. Teacher	N	N	N	N	X	N	N	N

Area of Special- ization	Ranks	1	2	3	University			7	8
					4	5	6		
Languages Studies	Professor	N	N	N	N	N	N	N	N
	Assoc. Prof.	N	N	N	N	N	N	N	N
	Assoc. Prof.	N	N	N	N	N	N	N	N
	Lecturer	N	N	N	N	N	N	N	N
	Ass't. Teacher	N	N	N	N	N	N	N	N
Islamic Studies	Professor	N	N	N	N	N	N	N	N
	Assoc. Prof.	N	N	N	N	N	N	N	N
	Assoc. Prof.	N	N	N	N	N	N	N	N
	Lecturer	N	N	N	N	N	N	N	N
	Ass't. Teacher	N	N	N	N	N	N	N	N

Figure 3-1 Schema for Stratifying the Population for Sampling Purposes

Part One

This part contains questions of general information about respondents (area of specialization ranks, the highest degree earned ... etc.). The purpose of this part was to collect the data necessary to generate the categories of each of the respondent characteristics. First, the area of specialization as an independent variable has eight levels (social science, behavioral science, natural science, math and engineering science, medical science, agricultural science, Islamic studies and language studies). The rank variable has five levels (professor, associate professor, assistant professor, lecturer, and teaching assistant). The cultural hemisphere variable (the region from which the faculty member is from [their nationality]) has four levels (1 - Saudian, 2 - Arabian, 3 - Western, and 4 - Eastern).

The age variable has four levels (1 - [25-35], 2 - [36-45], 3 - [46-55], 4 - [56-65]). The sex variable has two levels (1 - male, 2 - female). Teaching experiences in higher education has five levels (1 - [0-5], 2 - [6-10], 3 - [11-15], 4 - [16-20], and 5 - [21-25]). And finally, the region the respondent earned his highest degree from has four levels, (1 - Saudi Arabia, 2 - any other Arabic region, 3 - Western region, 4 - Eastern region).

Part Two

Part two of the questionnaire had five sections, each including a description of one instructional design idea with definition, examples and explanation of use. The following five topics were used:

- a. learning objectives
- b. hierarchies of knowledge
- c. personalized self-instruction
- d. lesson planning
- e. task description and task analysis.

The following question followed the description of the instructional idea: Would you use this idea when planning your teaching? Then subjects were given a choice of two possible answers:

1	2
NO	YES

The next subjects were asked to respond to two other sets of questions depending on their previous decision:

Set 1:

If No

Please check (✓) the number of the statements below which represent your reasons for your decision.

- ___ a. I do not know how to apply this idea.
- ___ b. I do not see a need for using this idea.
- ___ c. I think I will not be successful in applying this idea.
- ___ d. I think I will not be able to get the resources needed to apply this idea.
- ___ e. If I applied this idea I will not get the rewards I desire.
- ___ f. I think this idea would not be acceptable in my department.

If Yes

Please check (✓) the number of the statements below which represent your reasons for your decision.

- ___ a. I know how to apply this idea.
- ___ b. I see a need for using this idea.
- ___ c. I think I will be successful in applying this idea.
- ___ d. I think I will be able to get the resources needed to apply this idea.
- ___ e. If I applied this idea I will get the rewards I desire.
- ___ f. I think this idea would be acceptable in my department.

Set 2:

Please circle the number on the scale which represents your best answer to the following questions.

- a. To what extent did your unfamiliarity about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5

very a mod- very

little little amt much much

Please circle the number on the scale which represents your best answer to the following questions.

- a. To what extent did your familiarity about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5

very a mod- very

little little amt much much

- b. To what extent did your perception of unneed of of this idea (reason 2) influence your decision?
- | | | | | | | | | | |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | | mod- | | | | | mod- | | |
| very | a | erate | | very | very | a | erate | | very |
| little | little | amt | much | much | little | little | amt | much | much |
- c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?
- | | | | | | | | | | |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | | mod- | | | | | mod- | | |
| very | a | erate | | very | very | a | erate | | very |
| little | little | amt | much | much | little | little | amt | much | much |
- d. To what extent did the unavailability of the needed resources (reason 4) influence your decision?
- | | | | | | | | | | |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | | mod- | | | | | mod- | | |
| very | a | erate | | very | very | a | erate | | very |
| little | little | amt | much | much | little | little | amt | much | much |
- e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?
- | | | | | | | | | | |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | | mod- | | | | | mod- | | |
| very | a | erate | | very | very | a | erate | | very |
| little | little | amt | much | much | little | little | amt | much | much |
- f. To what extent did the unacceptability of the idea by your department (reason 6) influence your decision?
- | | | | | | | | | | |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| | | mod- | | | | | mod- | | |
| very | a | erate | | very | very | a | erate | | very |
| little | little | amt | much | much | little | little | amt | much | much |

(See Appendix A for the Arabic and English version of the Questionnaire)

This questionnaire, with all its parts, was developed in four stages. In the initial stage, the first draft was prepared by the researcher after a careful review of the literature. In the second stage, the first draft was submitted to a research consultant from the Office of Research Consultation at the College of Education, Michigan State University to check whether the questionnaire met the general questionnaire constructing standards such as clarity, design and length. Given the purposes of the study, he agreed that these standards were met. Third, the researcher's dissertation committee chairman and members examined the questionnaire critically, and made their recommendations. Lastly, the questionnaire was submitted to a measurement specialist in the educational psychology department at Michigan State University who made his comments with regard to the scale used in the questionnaire, and that can be considered as an interval scale.

Translation of the Instrument

Since most of the respondents in this study are Arabs, the two parts of the questionnaire and the cover letter were translated from English to Arabic by the researcher.

In order to determine the accuracy of the translation, both the English and the Arabic versions of the questionnaire were given for review to the instructor of Arabic in the Department of Linguistics and Oriental and African

Languages at Michigan State University. After minor revision, the researcher's Arabic translation of the questionnaire was certified to be accurate and reliable. (See Appendix B, which includes a letter of certificate of the translation.)

Validity of the Instrument

For part two of the questionnaire, construct validity was conducted. Three scholars in educational psychology were asked to rate the items calling for reasons for acceptance or rejection with regard to what extent these items are relevant to Davis' six variables. This has been done through the following procedure:

1. Each scholar was given descriptions for Davis' six variables. These descriptions were quoted from Davis' article (1979).

2. After each description of each variable, the scholar was asked this question, "To what extent do you think the following statement is relevant to the above variable?" The statement was followed by this question and in the front of it a five-point scale (1-5) from non-relevant to very relevant was presented. The scholar was asked to circle the number that best represented his judgment.

3. Data were statistical described and analyzed to see the extent of agreement among the judgments of the three scholars in each item. Table 3-4 shows related data.

Table 3-4. The raw data, means and standard deviation of three scholars' judgments regarding the relevance of the items used in the questionnaire to Davis' six variables.

Reason	Rating	Judge 1	Judge 2	Judge 3	Mean	Standard Deviation
1. Implementation Skills		4	5	4	4.33	.22
2. Motivation		4	4	3	3.66	.22
3. Expectations of Success		4	4	4	4	0
4. Availability of Needed Resources		4	4	4	4	0
5. Rewards		3	4	3	3.33	.22
6. Acceptance of the Idea in the Department		4	4	4	4	0

As this table shows, all the items' relevance means are 3.33 and above which are considered satisfactory to the researcher as relevant levels to Davis' six variables. Also, Table 3-4 shows the variances between the judgment provided by three scholars in each item. As can be seen, the variance in items 3, 4 and 6 is zero which indicate complete agreement between judges. With regard to items 1, 2 and 5, the variance between judgments is .22 which indicates little disagreement. In general, it can be concluded that there is a high agreement between the three scholars (judges) in their judgment regarding the extent of the relevance of items to Davis' six variables.

Reliability of the Instrument

It was not possible to conduct a test of reliability of the instrument of this study. Such reliability tests as test-retest and equivalent form was not used since access to the respondents was limited to one administration of the questionnaire. Such tests as split-half or inter-item consistency are inappropriate since the instrument of this study does not attempt to measure a single trait.

Piloting the Instrument

The aim of piloting the instrument was to identify difficulties with reading, omission, ambiguities and alterations needed in the instrument. To achieve this aim, the questionnaire in its two versions (the Arabic and English versions) was given to 10 faculty members, five Arabic speakers and the other five are English speakers. There were some recommendations of rewording some words, especially in the Arabic version.

E. Data Collection

Data were collected by the researcher. He handed out the questionnaire to the subjects along with a letter informing each subject about the purpose and importance of the study and the need for their participation.

Since the subjects are a mixture of Arabic and non-Arabic speakers, both versions were used for data collection. In the pilot study, another letter also was handed

out in addition to the questionnaire and the letter stating the purpose of the study. This additional letter informed the subjects about the purpose of the pilot study. The English and Arabic versions of this letter are included in Appendix B.

For collecting the completed questionnaire and dealing with a non-respondent in the study, the researcher did the following:

For Male Faculty:

1. Each subject was asked to fill out the questionnaire at the same time the questionnaire was handed to him by the researcher. If the subject could not, then another visit was arranged to pick it up.

2. When the researcher made the second visit to pick up the completed questionnaires that were not completed in the first visit, he asked the subjects who did not complete the questionnaire yet to do so.

For Female Faculty:

1. Since the researcher could not contact the female subjects directly because of cultural reasons, they were given the questionnaire through the official offices set up for communication purposes. They were asked to return the completed questionnaire to the same offices in their colleges where the researcher can pick them up later.

2. When the researcher made the second visit to the offices to pick up the completed questionnaire, he asked the officials to remind the non-respondents to complete the questionnaire and another visit was arranged to pick them up.

F. Data Analysis

The data were manually coded on "computer laboratory coding forms" by the researcher. These forms were transformed into computer cards by the scoring center at Michigan State University. The punched cards were then sent to the computer at MSU for analysis. The Statistical Package for Social Science was used to facilitate the analysis.

The analyses were divided into two main sections: First the frequencies and percentages were used to analyze the demographic data included in part one of the questionnaire. Second, for each "Yes" and "No" response in each case of part two of the questionnaire, the following analyses were conducted:

1. For testing hypotheses 1-12. The percentages of faculty who checked the reasons and the percentages of those who did not check them were obtained. Test for the significance of the differences in the proportions was conducted using a Z-test with .05 level of significance (see hypotheses section).

2. For testing hypotheses 13 and 14. The means and standard deviations were computed after equaling Ns in each

reason by randomly dropping out the differences in N_s . This was done because it is necessary for the next step. Next a test for overall differences between the means of the six variables was performed using Multivariate Analysis of variance MANOVA for repeated measures. If there was overall significant differences between the means, then a test for significance of differences between means of pairs of variables was performed using F-univariate test with .01 level of significance (see hypotheses section, hypotheses 13 and 14).

3. For testing hypotheses 15-20. The percentage of receptive faculty who checked the reason (✓) and the percentages of unreceptive faculty who checked the reason (✓) were obtained. Test for the significant differences in these proportions was performed using Z-test with .05 level of significance (see hypotheses section, hypotheses 15-20).

It is appropriate to conclude this section by defining the statistical techniques that were used to analyze the data, and stating the conditions under which these techniques can be used.

1. Z-test for proportion in one sample case.

Z-test is statistically defined by the following formula:

$$Z = \frac{p - P}{\sqrt{P(1-P)/n}} \quad (1)$$

p is the proportion of sample that possesses the characteristic in question. $p = \frac{f}{n}$ where f is the number that possesses the characteristic in question, and n is the sample

size. P is the hypothesized proportion of the units in the population that possesses the characteristics in question. P equals the number of the units possessing the characteristics divided by the total number of units in the population.

n = is the sample size

This statistical test can be used only when:

A. There is a dichotomously measured variable (X) that equals 1 when the unit observed possesses the characteristics in question and 0 when it does not.

In the present study, the subjects responses to the second question in the second part of the questionnaire who were measured, the subjects who gave the reason (i.e., checked ($\checkmark$) in front of the item) were assigned 1 and who did not give the reason (i.e., did not check ($\checkmark$) in front of the item) were assigned 0. Therefore, there is a dichotomously measured variable.

B. There is a hypothesized value of P . In the present study nul hypotheses from 1-12 in each part of the second section in Chapter IV. P value was hypothesized to be equal to .50 (i.e., the proportion of faculty members population who may give the reason is 50%). Consequently, the proportion value of those who do not give the reason is equal to 50%. These values were hypothesized according to probability theory given that there is no empirical data about these values available.

These two reasons, having dichotomously measured variables and having hypothesized value of P, justified the use of this test to test the hypotheses (1-12) related to the first present study research question.

2. Z-test of proportion in two sample cases:

This test is statistically defined by the following formula:

$$Z = \frac{p_1 - p_2}{\sqrt{\left(\frac{f_1 + f_2}{n_1 + n_2}\right) \left(1 - \frac{f_1 + f_2}{n_1 + n_2}\right) \left(\frac{1}{n_1} - \frac{1}{n_2}\right)}} \quad (2)$$

All the terms in formula 2 have been defined previously except that number (1) refers to sample one and number (2) refers to sample two. The test as defined by formula 2 was used to test the hypotheses 15-20 in each part in section two of Chapter IV. It was used because of the same reasons presented previously. The only difference is that here we have two samples, 1 and 2 (i.e., sample 1 is the receptive group, sample 2 is the unreceptive group). The proportion of receptive faculty members who possess the characteristics being observed (i.e., gave the reason) is $p_1 = \frac{f_1}{n_1}$ and the proportion of unreceptive faculty members who possess the same characteristics being observed (i.e., gave the reason) is $p_2 = \frac{f_2}{n_2}$.

Hotellings' Multivariate Analysis of Variance for Repeated Measures.

Hotellings' test helps to determine whether a systematic difference exists between three or more means. The variables under study must be measured at interval levels and higher. This test only tells us about the overall differences between the means, but not between pairs of means. To do tests for the differences between each pair of means, univariate F-test should be used.

Hotellings' test and F-test are used by the present study to test the hypotheses 13-14 in each part. The nature of the data related to these hypotheses meet the conditions of the use of these tests.

Summary

To accomplish the purpose of the present study and answer its research questions, a questionnaire of two parts was distributed by the researcher to a sample of 470 faculty members. The questionnaire was developed by the researcher through stages and has been validated. The samples were randomly selected from a population of 5,841 faculty members in Saudi Arabian universities. Descriptive and inferential statistical techniques; frequencies; means; standard deviations; Z-test; multivariate and univariate analyses of variance for repeated measures were used to describe and analyze data from 400 returned questionnaires.

CHAPTER IV

DATA ANALYSIS

CHAPTER IV
Data Analysis

Introduction:

This study was conducted to answer the following research questions:

1. What are reasons given by faculty members in Saudi Arabian universities for accepting and reasons for rejecting specific instructional design ideas?
2. Which of those reasons do faculty members report affect their decisions more strongly than others?
3. Are there any differences in considering the reasons given between those who accept and those who do not accept instructional design ideas?

In this chapter, findings related to these research questions are presented in two sections; the first section includes summary data of the demographic characteristics of the respondents. The second section has five parts, each corresponding to an instructional design idea. In each part, data is presented relative to each research question and a test of its hypothesis (see research questions and hypotheses section in Chapter III).

Demographic Data

The first part of the questionnaire used for this study consisted of a set of questions designed to collect the data necessary to generate the categories of each of the following respondents' characteristics:

A. Educational characteristics:

1. Areas of specialization
2. Highest degree
3. Region from which the degree was earned

B. Personal characteristics:

1. Cultural hemisphere
2. Age
3. Sex

C. Professional characteristics:

1. Rank
2. Teaching experiences in higher education
3. Contract status
4. Teaching undergraduate
5. Teaching graduate
6. Consulting students
7. Consulting others
8. Conducting research
9. Attending academic committee meetings
10. Writing for publication

Tables 4-1, 4-2 and 4-3 show the absolute and relative frequencies in percent of the respondents for these characteristics.

Educational characteristics:

The data for the respondents' area of specialization, highest degree, and region from which the degree was earned are presented in Table 4-1. These data show that the respondents are almost equally distributed in terms of the

Table 4-1. Educational characteristics of the respondents

N Characteristics Category Labels	Absolute Frequency	Relative Frequency %
1. Areas of specialization		
-Social Sciences	60	15.00
-Behavioral Sciences	49	12.20
-Natural Sciences	60	15.00
-Math and Engineering	50	12.50
-Medical Sciences	43	10.80
-Agricultural Sciences	31	7.75
-Islamic Studies	51	12.75
-Language Studies	56	14.00
Total:	400	100%
2. Highest degree		
-Bachelor's Degree	67	16.7
-High Diploma	11	2.8
-Master's Degree	77	19.3
-Ph.D.	244	61.0
-Other	1	.2
Total:	400	100%
3. Region from which the degree was earned		
-Saudi Arabia	87	21.7
-Arabic Country	115	28.8
-Western Country	185	46.2
-Eastern Country	13	3.3
Total:	400	100%

Table 4-2. Personal characteristics of the respondents

N Characteristics Category Labels		Absolute Frequency	Relative Frequency %
1. Cultural Hemisphere			
	-Saudi ^s	124	31.2
	-Arabian	225	54.0
	-Western	33	8.3
	-Eastern	27	6.5
Total:		398*	100%
2. Age			
	-25-35 years	112	28.1
	-36-45 years	177	44.4
	-46-55 years	75	18.8
	-56-65 and above years	35	8.8
Total:		399**	100%
3. Sex			
	-Male	304	76.0
	-Female	96	24.0
Total:		400	100%

* Data is unavailable in the case of two respondents

** Data is unavailable in the case of one respondent

Table 4-3. Professional characteristics of the respondents

N Characteristics Category Labels		Absolute Frequency	Relative Frequency %
1. Academic Rank			
	-Professor	72	18.0
	-Associate Professor	85	21.2
	-Assistant Professor	93	23.3
	-Lecturer	71	17.7
	-Demonstrator	79	19.8
	Total:	400	100%
2. Teaching experience in higher education			
	- 1- 5 years	124	31.2
	- 6-10 years	107	27.0
	-11-15 years	64	16.0
	-16-20 years	37	9.4
	-21-25 and above years	65	16.4
	Total:	397*	100%
3. Contract status			
	-Full time	366	91.5
	-Part time	34	8.5
	Total:	400	100%
4. Teaching undergraduate			
	- 0% of weekly time	28	6.1
	- 1-25% of weekly time	87	21.7
	-26-50% of weekly time	205	51.3
	-51-75% of weekly time	58	14.5
	-76-100% of weekly time	22	5.5
	Total:	400	100%

N Characteristics Category Labels	Absolute Frequency	Relative Frequency %
5. Teaching graduate		
- 0% of weekly time	249	62.2
- 1-25% of weekly time	115	28.8
-26-50% of weekly time	36	9.0
-51-75% of weekly time	0	0.0
-76-100% of weekly time	0	0.0
Total:	400	100%
6. Consulting students		
- 0% of weekly time	69	17.2
- 1-25% of weekly time	282	75.5
-26-50% of weekly time	42	10.5
-51-75% of weekly time	4	1.0
-76-100% of weekly time	3	.7
Total:	400	100%
7. Consulting others		
- 0% of weekly time	188	47.0
- 1-25% of weekly time	198	49.5
-26-50% of weekly time	12	3.0
-51-75% of weekly time	0	0.0
-76-100% of weekly time	2	0.4
Total:	400	100%
8. Conducting research		
- 0% of weekly time	85	21.2
- 1-25% of weekly time	255	63.8
-26-50% of weekly time	42	10.5
-51-75% of weekly time	12	3.0
-76-100% of weekly time	6	1.5
Total:	400	100%

N Characteristics Category Labels	Absolute Frequency	Relative Frequency %
9. Attending academic committee meetings		
- 0% of weekly time	114	28.5
- 1-25% of weekly time	265	66.2
-26-50% of weekly time	19	4.7
-51-75% of weekly time	2	.5
-76-100% of weekly time	0	0.0
Total:	400	100%
10. Writing for publication		
- 0% of weekly time	140	35.0
- 1-25% of weekly time	243	60.7
-26-50% of weekly time	17	4.3
-51-75% of weekly time	0	0.0
-76-100% of weekly time	0	0.0
Total:	400	100%

*Data is unavailable in the case of three respondents.

eight different areas of specialization considered in the study with the exception of two areas; medical and agricultural science, where the proportions of respondents are 10.8% and 7.7%, respectively, which are much less than other areas. This decrease is because the proportion of the population in these two areas are less than other areas.

In terms of the respondents' highest degree, the data shows that the majority of respondents (61%) have Ph.D degrees. While only 19.3% have Master's degrees, 16.7% have Bachelor's degrees and 2.8% have a higher diploma. This distribution corresponds to the direction of the distribution in the population (See Table 1-1), except for the proportions of Bachelor's degrees which are found to be 26% in population, while in the sample only 16.7%. This decrease may be due to the recent encouragement by universities of demonstrators with Bachelor's degrees to complete their Master's and Ph.D degrees.

With regard to the region from which the highest degree was earned, the data show that the western region (mainly U.S.A. and British) has the lead. Almost half of the respondents (46.2%) earned their highest degree from western countries. The Arabic countries (not including Saudi Arabia) took the second place. More than one-fourth (28.8%) of the respondents earned their degree from the Arabic countries, mainly from Egypt. Saudi Arabia took the third place with 21.7% of the respondents having their highest degree. These degrees are mostly in the areas of Islamic

and Arabic language studies and recently in social and behavioral sciences. The eastern region is in fourth place. Only 3.3% of the respondents earned their highest degree from eastern countries, mainly Pakistan and India.

Personal characteristics:

The data for the respondents' personal characteristics, cultural hemisphere, age and sex are presented in Table 4-2. The data show that the majority of respondents (54.0%) are Arabians, not including Saudis, 31.2% are Saudis, while 8.3% of the respondents are westerners and 6.5% are easterners. This distribution is the same in the faculty members' population (See Table 1-1 for Saudian versus non-Saudian).

With regard to respondents' age, the data show that the majority (72.5%) are aged from 25-45 years. 42% from those are aged 25-35. This proportion of young faculty members are represented mostly (20%) by demonstrators who are usually employed directly after finishing their B.A. or B.S. degree and then sent abroad to complete their graduate studies. Respondents aged from 46-65 years and up represent 27.5%. From those, 68% are aged from 46-55, and only 32% from 56-65 and up. This distribution closely parallels to the distribution of this characteristic in the population.

There are 24.0% female respondents (about one-fourth) and 76% males. This distribution parallels the population distribution with regard to this characteristic (See Table 1-2).

Professional characteristics:

The data related to eight professional characteristics is presented in Table 4-3. These professional characteristics are:

1. Academic rank:

As the data show, respondents with regard to this characteristic are almost equally distributed, 18.0% are professors, 21.2% are associate professors, 23.3% are assistant professors, 17.7% are lecturers, and 19.8% are demonstrators. Compared to the distribution of this characteristic in the population (See Table 1-2), respondents' distribution is a little different and this is because of the sampling procedure that the researcher used (See Chapter III).

2. Teaching experiences in higher education:

The majority of respondents (58.2%) have from 1-10 years of teaching experience in higher education; 54% from those have only 1-5 years; 16% have teaching experience in higher education from 11-15 years; 16% have from 11-15 years; 9.4% have from 16-20 years and 16.4% have from 21-15 years and up.

3. Contract status:

Most of the respondents (91.5%) are full time and only 8.5% are part time. These proportions represent the population proportions and it reflects university policies which do not encourage part-time contracts (See Chapter I).

4. Teaching undergraduate:

The majority of respondents (51.3%) spend from 26-50% of their weekly time in teaching undergraduate; 21.7% spend from 1-25% weekly time; 14.5% spend from 51-75%; 6-10% do not spend any time in this type of teaching and only 5.5% spend from 76-100% from weekly time in teaching undergraduate.

5. Teaching graduate:

The majority of respondents (62.2%) do not spend any time in teaching graduates. This reflects the limited graduate programs that are offered by universities (See Chapter I). More than one-fourth of the respondents (28.8%) spend only 1-25% of weekly time; 9.0% spend 26-50% of their weekly time and none spend 51% and up in this level of teaching.

6. Consulting students:

The majority of respondents (75.5%) spend only from 1-25% of their weekly time in this type of activity; 17.2% do not spend any time, while only 12.3% spend from 26-100% of their time in this activity.

7. Consulting others:

Almost half of the respondents (49.5%) spend time consulting other than students from 1-25% of their weekly time, while almost the second half (47.0%) do not spend any time in this type of activity. Only 3.4% spend from 26% and up from their weekly time. This low involvement on the part of faculty members may be due to the government policy that regulates the consulting activities of faculty members outside the universities.

8. Conducting research:

The majority of respondents (63.8%) spend only from 1-25% of their weekly time conducting research. 21.2% do not spend any time in this activity and only 15% spend from 26% and up of their weekly time. The conduct of research in the universities studied is just beginning. This is clear from the recent establishment of the research centers in the universities (See Chapter I). This may explain the low involvement of faculty members in such type of activities.

9. Attending academic committee meetings:

The majority of respondents (66.2%) spent from 2-25% of their weekly time in committee meetings; 28.5% of respondents do not spend any time and this may be due to the policies of some universities that do not allow lecturers and demonstrators to attend committee meetings. Only 5.3% spend from 26-75% of their time in academic meetings and none spend 76-100% of their time in this activity.

10. Writing for publication.

The majority of respondents (60.7%) spend from 1-25% of their weekly time in writing for publication; 35% do not spend any time in this activity. Only 4.3% spend from 26-50% of weekly time and no one spends from 51% and up of the time in this type of activity.

In conclusion it can be said that the typical faculty member in this study of Saudi universities has the following characteristics: specialty in sciences; Ph.D degree earned from western region; Arabian, aged from 36-45 years; male;

assistant professor; teaching experience in higher education from 1-5 years; full-time faculty member; spending 26-50% of weekly time teaching undergraduate; not teaching on a graduate level; spending from 1-25% of weekly time in each of the following activities: consulting students, consulting others, conducting research, attending academic meetings and writing for publications.

Research Questions and Hypotheses

This section of the data analysis chapter has five parts. In each part data related to each idea of the five instructional design ideas are presented and analyzed. The organization of each will be as follows: the research questions are presented; each research question is followed by its hypotheses; then each hypothesis is tested and interpreted; and finally the findings related to each research question are summarized.

Part A:

Learning objectives idea:

Research Question 1:

The first research question of this study related to this idea of objectives was:

What were reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of learning objectives? Related to this question there were 12 hypotheses which were tested and interpreted.

Tables 4-4A and 4-5A show the data* related to these hypotheses. These tables include, a list of the six reasons considered by the present study, the proportions of faculty members who give (check) the reason (P_1), the proportions of faculty members who did not give (did not check) the reason (P_2), the number of receptive faculty members who accept the use of the idea in Table 4-4A (N), and the number of unreceptive faculty members who reject the use of the idea in Table 4-5A, and Z-test values for testing the significance of the difference in the proportions for each reason.

Hypothesis 1:

There is no difference in the proportions of receptive faculty members to the ideas of learning objectives who give the reason "I know how to apply the idea" and those not giving the reason.

This hypothesis was rejected. Table 4-4A shows the Z-test results for reason 1 (13.67) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason is higher than the proportion of those who did not. Therefore, skill in how to apply learning objective ideas was considered by receptive faculty members as a reason influencing their acceptance of this idea.

Hypothesis 2:

There is no difference in the proportions of receptive faculty members to the idea of learning objectives who give the reason "I see need for using this idea" and those not giving the reason.

*Data is unavailable in the case of 24 respondents.

Table 4-4A: Proportions of receptive faculty members to the idea of learning objectives who do and do not give each of the six reasons considered and Z-test values for the difference in these proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I know how to apply the idea."	90.60	9.40	339	13.67**
2. <u>Motivation</u>				
"I see a need for using the idea."	89.10	10.90	339	13.03**
3. <u>Expectation of success</u>				
"I think I will be successful in applying the idea."	84.10	15.90	339	11.33**
4. <u>Resources</u>				
"I think I will be able to get the resources needed to apply this idea."	77.90	22.10	339	9.30**
5. <u>Rewards</u>				
"If I applied this idea, I will get the rewards I desire."	62.50	37.50	339	4.16**
6. <u>Role expectation</u>				
"I think this idea would be acceptable in my department."	73.20	26.80	339	7.67**

** Significant at P<.01 level

Table 4-5A: Proportions of unreceptive faculty members who do and do not give each of the six reasons considered and Z-test values for the difference in these proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I do not know how to apply the idea."	63.20	36.80	57	1.99*
2. <u>Motivation</u>				
"I do not see a need for using the idea."	75.40	24.60	57	3.83**
3. <u>Expectation of success</u>				
"I do not think I will be successful in applying the idea."	47.40	52.60	57	-.39
4. <u>Resources</u>				
"I do not think I will be able to get the resources needed to apply this idea."	50.90	49.10	57	.14
5. <u>Rewards</u>				
"If I applied this idea, I will not get the rewards I desire."	45.60	44.40	57	-.63
6. <u>Role expectation</u>				
"I think this idea would not be acceptable in my department."	66.70	33.30	57	2.52*

** Significant at P<.01 level

* Significant at P<.05 level

This hypothesis was rejected. Table 4-4A shows the Z-test result for reason 2 (13.03) which was significant at $P < .01$. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore "perceiving need to use this instructional design idea" was considered by receptive faculty members as a reason influencing their acceptance of this idea.

Hypothesis 3:

There is no difference in the proportions of receptive faculty members who give the reason "I will be successful in applying this idea" and those not giving the reason.

This hypothesis was rejected. Table 4-4A shows a Z-test result for reason 3 (11.33) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "expectation of success" was considered by receptive faculty members as a reason influencing their acceptance of this idea in their teaching.

Hypothesis 4:

There is no difference in the proportions of receptive faculty members to the idea of learning objectives who give the reason "I will get the needed resources" and those not giving the reason.

This hypothesis was rejected. Table 4-4A shows a Z-test result 4 (9.30) at level $P < .01$. There was a difference in the proportions. The proportion of receptive faculty

members who gave the reason was higher than the proportion of those who did not. Therefore, the availability of needed resources was considered by receptive faculty members in their acceptance of this idea in their teaching.

Hypothesis 5:

There is no difference in the proportions of receptive faculty members to the idea of "learning objectives" who give the reason "I will get the rewards I desire" and those not giving the reason.

Table 4-4A shows a Z-test result for reason 5 (4.16) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, rewards were considered by receptive faculty members as a reason influencing their acceptance of this idea in their teaching.

Hypothesis 6:

There is no difference in the proportions of receptive faculty members to the idea of "learning objectives" who give the reason "this idea will be acceptable in my department" and those not giving the reason.

This hypothesis was rejected. Table 4-4A shows the Z-test result for reason 6 (7.16) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "acceptance of the idea in the department" was considered by receptive faculty members as a reason influencing their acceptance of this idea in their teaching.

Hypothesis 7:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning objective" who give the reason "I do not know how to apply" and those not giving the reason.

This hypothesis was rejected. Table 4-5A shows the Z-test result for reason 1 (1.99) which was significant at $P < .05$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason was greater than those who did not. Therefore "unfamiliarity with how to apply this idea" was considered by unreceptive faculty members as a reason influencing their rejection of this idea in their teaching.

Hypothesis 8:

There is no difference in the proportions of unreceptive faculty members to the idea of learning objectives who give the reason "I do not see need for using this idea" and those not giving the reason.

This hypothesis was rejected. Table 4-5A shows the Z-test results for reason 2 (3.83) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore "not perceiving need to use this idea" was considered by unreceptive faculty members as a reason influencing their rejection of this idea in their teaching.

Hypothesis 9:

There is no difference in the proportions of unreceptive faculty members to the idea of learning objective who give the reason "I will not be successful in applying this idea" and those who do not give the reason.

This hypothesis was not rejected. Z-test results for reason 2 is (-.39) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore it cannot be said whether unreceptive faculty members did or did not consider "the expectation of being unsuccessful" as reason influencing their rejection of the idea in their teaching.

Hypothesis 10:

There is no difference in the proportions of unreceptive faculty members to the idea of learning objectives who give the reason "I will not get the needed resources" and those who do not give the reason.

This hypothesis was not rejected. The value of Z-test for reason 3 is (.14) which was not significant at $P < .05$. There was no difference in the proportions. Therefore, it cannot be said whether unreceptive faculty members did or did not consider "the unavailability of needed resources" as reason influencing their rejection of this idea in their teaching.

Hypothesis 11:

There is no difference in the proportions of unreceptive faculty members to the idea of learning objectives who give the reason "I will not get the rewards I desire" and those not giving the reason.

This hypothesis was not rejected. The value of Z-test for reason 5 is (-.63) which was not significant at $P < .05$. The proportion of unreceptive faculty members who give this reason do not differ from the proportion of those who do not give the reason. Therefore, it cannot be said whether "the

unavailability of desired rewards" was or was not considered by unreceptive faculty members as a reason influencing their rejection of this idea in their teaching.

Hypothesis 12:

There is no difference in the proportions of unreceptive faculty members to the idea of learning objectives who give the reason "the idea would not be acceptable in my department" and those not giving the reason.

This hypothesis was rejected. There was a significant difference. Table 4-5A shows the Z-test result for reason 6 (2.52) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who give the reason was higher than those who did not give the reason. Therefore, this reason was considered by unreceptive faculty members as a reason influencing their rejection of this idea in their teaching.

Summary:

Findings related to the first research question "What are the reasons given by faculty members in Saudi Arabian universities for accepting or rejecting the idea of learning objectives?" can be summarized as follows:

1. All six variables, knowledge and skills, motivation, expectation of success, availability of resources, rewards and role expectations were considered by receptive faculty members as reasons influencing their acceptance of this idea in their teaching.

2. Only three variables (knowledge and skills, motivation and role expectations) were considered by unreceptive faculty members as a reason influencing their rejection of this idea. As to the other three variables (expectation of success, availability of resources and rewards), there was no evidence whether they were considered or not by unreceptive faculty members as a reason influencing their rejection of this idea in their teaching.

Research Question 2:

Which of the reasons do faculty members report affect their decision to accept or reject the idea of learning objectives more strongly than others? Related to this question there were two hypotheses which were tested and the results interpreted. Tables 4-6A, 4-7A, 4-8A, 4-9A, 4-10A and 4-11A show the related data which include the means and standard deviations of the reported influencing strength of the six reasons given by receptive and unreceptive faculty members to the idea, the Hotellings' Multivariate analysis of variance of the overall differences between these means and finally Univariate F-test for comparing pairs of these means.

Hypothesis 13:

There are no differences in the reported strength of influence of the reasons on the decision given by those who do accept using the idea of learning objectives.

Table 4-6A. Means and standard deviation of the six reasons' influence strength given by receptive faculty members to learning objectives.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	3.77	.99	199
2.	Motivation	3.99	.99	199
3.	Expectations of Success	3.75	.98	199
4.	Resources Availability	3.29	1.17	199
5.	Rewards	2.47	1.40	199
6.	Role Expectations	3.07	1.27	199

Table 4-7A. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	1.0510	40.7772**	5	194.00	.00001

Table 4-8A. Univariate F-test with (1,198) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		6.5702**	.0699	31.0279**	135.6833**	45.8312**
2			8.3757**	48.8024**	174.7963**	69.0141**
3				34.2117**	124.8533**	50.4117**
4					47.6394**	4.8197*
5						29.1209**
6						

** significant at $P < .01$ level.

* significant at $P < .05$ level.

Table 4-9A. Means and standard deviation of the six reasons' influence strength given by unreceptive faculty members to the idea of learning objectives.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	2.35	1.15	23
2.	Motivation	3.35	1.19	23
3.	Expectations of Success	2.83	1.23	23
4.	Resources Availability	2.65	1.19	23
5.	Rewards	2.61	1.41	23
6.	Role Expectations	3.22	1.31	23

Table 4-10A. Hotellings' Multivariate analysis of variance of the overall differences between the means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.75681	2.7245	5.00	18.00	.05

Table 4-11A. Univariate F-test with (1,22) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		10.1200**	3.2384	1.3441	.5698	5.7441
2			2.6622	3.2706	4.5741	.1255
3				.2983	.7994	1.1482
4					.0151	2.2561
5						3.2617
6						

** significant at P<.01 level

This hypothesis was rejected. Table 4-7 shows Hotellings' Multivariate test results for overall six means differences which were significant at $P < .01$ level. This indicates that there were overall differences in the strength of influence of the six reasons. From the data in Table 4-6 and 4-8, the order of the strength of the six reasons can be pointed out. The reason "motivation" had the highest mean (3.99) which was significantly different from all other means at $P < .01$ level. Therefore, it had the highest influence on the decision to accept this idea.

Knowledge and skills and expectations of success had means of 3.77 and 3.75 which were not significantly different at $P < .01$ level from each other, but they were significantly different at level $P < .01$ from other means. This means that together they share the second and third rank (2.5) in terms of the strength of the influence upon the decision to accept this idea.

The reason "resources availability" had a mean of 3.29 and was significantly different from all other means at $P < .01$ level, except the sixth mean (role expectation) which was significant at $P < .05$ level. Therefore, they share the fourth and fifth rank (4.5) in terms of the strength of the influence upon the decision to accept this idea.

Finally, the reason "rewards" had the lowest mean (2.47) which was significantly different from all other means at $P < .01$ level. Therefore it takes the sixth rank in terms of the strength of influence upon the decision to accept this idea.

Hypothesis 14:

There is no difference in the reported strength of influence of the reason on the decision given by the unreceptive faculty members to the idea of learning objectives.

This hypothesis was not rejected. Table 4-10A shows Hotellings' Multivariate test results which were not significant at $P < .01$ level. This indicates that there was no overall difference in the means of the strength of influence of the six reasons means. The reasons "motivation, role expectations, expectations of success, availability of resources, rewards and knowledge and skills" had means of 3.35, 3.22, 2.83, 2.65, 2.61 and 2.35 respectively. These means were not significantly different from each other at $P < .01$. Therefore, all the six reasons had equal influence upon the unreceptive faculty members' rejection of the learning objectives idea.

Summary:

Findings related to the second research question "Which of the reasons do faculty members report affect their decision to accept or reject the idea of learning objectives more strongly than others?" can be summarized as follows:

1. There were differences between the six reasons which influence strength in the acceptance of this idea. The rank order from highest to lowest of the influencing strength of the six reasons is:

	Rank Order
Motivation	1
Knowledge and Skills	2.5
Expectation of Success	2.5
Availability of Resources	4.5
Role Expectation	4.5
Rewards	6

2. There were no differences between the six variables' influence strength on unreceptive faculty members' rejection of the idea of learning objectives.

Research Question 3:

Are there any differences in considering the reasons given between receptive and unreceptive to the idea of learning objectives? Related to this question there were six hypotheses which were tested and interpreted. Table 4-12A shows the related data* which includes the six variables considered in this study, the proportion of receptive faculty members who give the reason (P_1), the proportion of unreceptive faculty members who give the reason (P_2), the number of receptive and unreceptive faculty members to the idea of learning objectives (N_1)(N_2), and the Z-values of testing the difference between proportions in the two groups.

Hypothesis 15:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning objectives who give the reason "knowledge and skills".

*Data is unavailable in the case of 24 respondents.

Table 4-12A: The proportions of receptive and unreceptive groups who give the reasons and Z-test for the differences.

Reason	P ₁	P ₂	N ₁	N ₂	Z
1. Knowledge and Skills	90.60	63.20	339	57	5.59**
2. Energizer (Motivation)	89.10	75.40	339	57	2.80**
3. Expectations of Success	84.10	47.40	339	57	6.22**
4. Availability of Resources	77.90	50.90	339	57	4.29**
5. Rewards	62.50	45.60	339	57	2.38*
6. Role Expectation	73.20	66.70	339	57	1.00

** Significant at P<.01 level

* Significant at P<.05 level

This hypothesis was rejected. Table 4-12A shows a Z-test value for reason 1 (5.59) which was significant at $P < .01$ level. The proportion of receptive faculty members who give this reason was larger than the proportion of unreceptive faculty members. Therefore, there was a difference between the two groups in considering the reason "knowledge and skills" in their decision to accept or reject the idea of learning objectives.

Hypothesis 16:

There is no difference between the proportions of receptive and unreceptive faculty members who give the reason "energizer (motivation)" to the idea of learning objectives.

This hypothesis was rejected. Table 4-12A shows a Z-test value for reason 2 (2.80) which was significant at $P < .01$ level. The proportion of receptive faculty members who gave the reason was larger than the proportion of unreceptive faculty members. Therefore, there was a difference between the two groups in considering the reason "motivation" in their decision to accept or reject using the idea of learning objectives in their teaching.

Hypothesis 17:

There is no difference between the proportions of receptive and unreceptive to learning objective idea who give the reason "expectation of success."

This hypothesis was rejected. Table 4-12A shows a Z-test value for reason 3 (6.22) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the

reason was larger than the proportion of unreceptive faculty members. Therefore, there was a difference between the two groups in considering the "expectation of success" reason to make their decision to accept or reject the idea of learning objectives. This reason was considered by the receptive group more than by the unreceptive one.

Hypothesis 18:

There is no difference between the proportions of receptive faculty members and unreceptive to the learning objective ideas who give the reason "availability of needed resources."

This hypothesis was rejected. Table 4-12A shows a Z-test value for reason 4 (4.29) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was larger than the proportion of unreceptive faculty members. Therefore, there was a difference between the two groups in considering this "availability of needed resources" reason in their decision to accept or reject the idea of learning objectives. This reason was considered by the receptive group more than by the unreceptive one.

Hypothesis 19:

There is no difference between the proportions of receptive and unreceptive faculty members to the idea of learning objective who give the reason "rewarded."

This hypothesis was rejected. Table 4-12A shows a Z-test value for reason 5 (2.38) which was significant at $P < .05$ level. There was a difference in the proportions.

The proportion of receptive faculty members who gave the reason was larger than the proportion of unreceptive faculty members. Therefore, there was a difference between the two groups in considering the reason "rewards" in their decision to accept or reject the idea of learning objectives. This reason was considered by the receptive group more than by the unreceptive one.

Hypothesis 20:

There is no difference between the proportions of receptive and unreceptive faculty members to the idea of learning objective who give the reason "the acceptance of the idea in the department."

This hypothesis was not rejected. Table 4-12A shows a Z-test value for reason 6 (1.0) which was not significant at $P < .05$ level. Therefore, there was no difference between the two groups in considering the reason "role expectation" in their decision to accept or reject the use of the idea of learning objectives.

Summary:

Findings related to the third research question "Are there differences in considering the reason given between receptive and unreceptive groups to the idea of learning objectives?" can be summarized as follows:

There was a difference between receptive and unreceptive faculty members in considering five variables (knowledge and skills, motivation, expectation of success, resources availability, and rewards) as reasons influencing their decision

to accept or reject the use of the learning objective idea. All of these five variables were considered more by receptive faculty members than unreceptive faculty members. There was no difference between the two groups in considering the sixth variable "role expectation" which means that it was considered equally by the two groups as a reason influencing their decisions.

Part B:

Task descriptions and analysis:

Research Question 1:

What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of task descriptions and analysis? Related to this question there were 12 hypotheses which were tested and interpreted. Tables 4-13B and 4-14B show the related data* to these hypotheses. These tables include, a list of the six reasons considered by the present study, the proportions of faculty members who give (checked) the reasons (P_1), the proportions of faculty members who did not give (did not check) the reasons (P_2), the number of receptive faculty members in Table 4-13B and the number of unreceptive faculty members in Table 4-14B (N). Z-test values for testing the significance of the difference in the proportions.

Hypothesis 1:

There is no difference in the proportions of receptive faculty members to the idea of "task descriptions and analysis" who give the reason "I know how to apply the idea" and those not giving the reason.

This hypothesis was rejected. Table 4-13B shows the Z-test results for reason 1 (13.87) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of the receptive faculty members who gave the reason was higher than those who did not give the

*Data is unavailable in the case of three respondents.

Table 4-13B: Proportions of receptive faculty members to the idea of task descriptions and analysis who do and do not give each of the six reasons considered and Z-test values for the differences in the proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I know how to apply the idea."	91.60	8.40	357	13.87**
2. <u>Motivation</u>				
"I see a need for using the idea."	88.00	12.00	357	12.67**
3. <u>Expectation of success</u>				
"I think I will be successful in applying the idea."	81.80	18.20	357	10.00**
4. <u>Resources</u>				
"I think I will be able to get the resources needed to apply this idea."	76.80	23.20	357	8.93**
5. <u>Rewards</u>				
"If I applied this idea, I will get the rewards I desire."	60.50	39.50	357	3.50**
6. <u>Role expectation</u>				
"I think this idea would be acceptable in my department."	72.80	27.20	357	7.60**

** Significant at P<.01 level

Table 4-14B: Proportions of unreceptive faculty members to the idea of task descriptions and analysis who do and do not give each of the six reasons considered and Z-test values for the differences in these proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I do not know how to apply the idea."	67.50	32.50	40	2.21*
2. <u>Motivation</u>				
"I do not see a need for using the idea."	90.00	10.00	40	5.00**
3. <u>Expectation of success</u>				
"I do not think I will be successful in applying the idea."	52.50	47.50	40	.31
4. <u>Resources</u>				
"I do not think I will be able to get the resources needed to apply this idea."	47.50	52.50	40	-.31
5. <u>Rewards</u>				
"If I applied this idea, I will not get the rewards I desire."	52.50	47.50	40	.31
6. <u>Role expectation</u>				
"I think this idea would not be acceptable in my department."	60.00	40.00	40	1.25

** Significant at P<.01 level

* Significant at P<.05 level

reason. Therefore, the reason "implementation skill" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 2:

There is no difference in the proportions of receptive faculty members to the idea of "task descriptions and analysis" who give the reason "I see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-13B shows a Z-test value for reason 2 (12.67) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, "perceiving need to use this idea" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 3:

There is no difference in the proportions of receptive faculty members to the idea of task descriptions and analysis who give the reason "I will be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-13B shows a Z-test value for reason 3 (10.00) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave this reason was higher than those who did not. Therefore, the

reason "expectation of success" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 4:

There is no difference in the proportions of receptive faculty members to the idea of "task description and analysis" who give the reason "I will get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-13B shows a Z-test value for reason 4 (8.93) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "resources availability" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 5:

There is no difference in the proportions of receptive faculty members to the idea of "task descriptions and analysis" who give the reason "I will get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-13B shows a Z-test value for reason 5 (3.50) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than those who did not give the reason.

Therefore, the reason "getting the desired rewards" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 6:

There is no difference in the proportions of receptive faculty members to the idea of "task descriptions and analysis" who give the reason "This idea will be acceptable in my department" and those who did not give the reason.

This hypothesis was rejected. Table 4-13B shows a Z-test value for reason 6 (7.60) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than that of those who did not give the reason. Therefore, the reason "acceptance of the idea in the department" was considered by receptive faculty members as reason influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

Hypothesis 7:

There is no difference in the proportions of unreceptive faculty members to the idea of task descriptions and analysis who give the reason "I do not know how to apply this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-14B shows Z-test value for reason 1 (2.21) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, the reason

"unfamiliarity" with how to apply this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 8:

There is no difference in the proportions of unreceptive faculty members to the idea of "task descriptions and analysis" who give the reason "I do not see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-14B shows Z-test value for reason 2 (5.00) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "not perceiving need to use this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 9:

There is no difference in the proportions of unreceptive faculty members to the idea of "task descriptions and analysis" who give the reason "I will not be successful in applying this idea" and those who do not give the reason.

This hypothesis was not rejected. Table 4-14B shows a Z-test value for reason 3 (.31) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore, it cannot be said whether unreceptive faculty members did or did not consider the reason "the expectation

of being unsuccessful" as a reason influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 10:

There is no difference in the proportions of unreceptive faculty members to the idea of "task descriptions and analysis" who give the reason "I will not get the needed resources" and those who do not give the reason.

This hypothesis was not rejected. Table 4-14B shows Z-test value for reason 4 (-.31) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore, it cannot be said whether the unreceptive group did or did not consider the reason "the unavailability of needed resources" as a reason influencing rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 11:

There is no difference in the proportions of unreceptive faculty members to the idea of "task descriptions and analysis" who give the reason "I will not get the rewards I desire" and those who do not give the reason.

This hypothesis was not rejected. Table 4-14B shows Z-test value for reason 5 (-.31) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore, it cannot be said whether the unreceptive faculty members did or did not consider the reason "not getting the desired rewards" as a reason influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 12:

There is no difference in the proportions of unreceptive faculty members to the idea of "task descriptions and analysis" who give the reason "the idea will not be acceptable in my department" and those who do not give the reason.

This hypothesis was not rejected. Table 4-14B shows Z-test value for reason 6 (1.25) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore, it cannot be said whether the reason "the unacceptance of the idea in the department" was or was not considered by unreceptive faculty members as a reason influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Summary:

Findings related to the first research question "What are the reasons given by faculty members in Saudi Arabia universities for accepting or rejecting the idea of task descriptions and analysis?" can be summarized as follows:

1. All six variables, knowledge and skills, motivation, expectation of success, availability of resources, reward and role expectations, were considered by receptive faculty members as reasons influencing their acceptance to use the idea of task descriptions and analysis in their teaching.

2. Only two variables, knowledge and skills and motivation, were considered by unreceptive faculty members as reasons influencing their rejection to use this idea in

their teaching. With the other four variables, expectation of success, availability of resources, rewards, and role expectations, there was no evidence whether they were considered or not by unreceptive faculty members as reasons influencing their rejection to use the idea of task descriptions and analysis in their teaching.

Research Question 2:

Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of task descriptions and analysis more strongly than others? Related to this question there were two hypotheses which were tested and interpreted. Tables 4-15B, 4-16B, 4-17B, 4-18B, 4-19B and 4-20B show the related data which include the means and standard deviations of the reported influencing strength of the six reasons on the acceptance or rejection to use the idea, the Hotellings' Multivariate analysis of variance of the overall difference between the means of the six reasons and finally Univariate F-test for pair comparisons between the six reasons' means.

Hypothesis 13:

There are no differences in the reported strength of influence of the reasons on the decision given by receptive faculty members to the idea of task descriptions and analysis.

This hypothesis was rejected. Table 4-16B shows Hotellings' Multivariate test results for overall differences which were significant at $P < .01$ level. This indicates that there were overall differences in the strength of influence

Table 4-15B. Means and standard deviation of the six reasons' influence strength given by receptive faculty members to the idea of task descriptions and analysis.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	3.94	.91	207
2.	Motivation	4.05	.92	207
3.	Expectations of Success	3.85	.95	207
4.	Resources Availability	3.39	1.14	207
5.	Rewards	2.54	1.38	207
6.	Role Expectations	3.24	1.24	207

Table 4-16B Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	1.22412	49.4543	5.00	202	.00001

Table 4-17B. Univariate F-test with (1,206) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		2.0690	1.6583	51.3813**	181.2652**	63.7250**
2			8.1652**	57.0488**	204.0855**	69.3388**
3				35.7254**	178.4500**	49.4804**
4					67.5349**	3.4112
5						52.6346**
6						

** significant at $P < .01$ level.

* significant at $P < .05$ level.

Table 4-18B. Means and standard deviation of the six reasons' influence strength given by unreceptive faculty members to the idea of task descriptions and analysis.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	2.50	1.38	18
2.	Motivation	3.33	1.28	18
3.	Expectations of Success	2.67	1.23	18
4.	Resources Availability	2.83	1.34	18
5.	Rewards	2.28	1.36	18
6.	Role Expectations	2.89	1.32	18

Table 4-19B. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.62842	1.6339	5	13.00	.2198

Table 4-20B. Univariate F-test values with (1,17) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		3.1955	.2208	1.2143	.28727	.7190
2			2.7200	.9745	7.5859**	1.3600
3				.1619	1.5284	.4072
4					1.4214	.0172
5						4.7071
6						

** significant at P<.01 level

of the six reasons. From the data in Table 4-15B and 4-17B, the order of the strength of the six reasons' influence can be pointed out. The reason "motivation" had the highest mean (4.05) and significantly different at $P < .01$ from all the other means except the reason "knowledge and skills" (3.94) which did not significantly differ. Therefore, the reason "motivation" and the reason "knowledge and skills" together shared the first and second highest rank of influence on the acceptance of the idea of task descriptions and analysis.

The reason "expectation of success" had a mean of (3.85) which was significant from all other reasons' means at $P < .01$ level except from the reason "knowledge and skills" mean which did not differ from it. Therefore, they together share the second and third highest rank influencing the acceptance to use this idea. As mentioned above, the reason "knowledge and skills" also shared the reason "motivation" the first and second highest rank of influence.

The reason "resource availability" had a mean of 3.39, which was significant from all other reasons' means at $P < .01$ level, except from the reason "role expectations" which had a mean of 3.23. Therefore, they shared the fourth and fifth ranks of influence on the acceptance to use the idea of task descriptions and analysis.

The reason "rewards" had a mean of 2.54 which was significantly different from all the other five means at $P < .01$

level. Therefore, it had the sixth rank of influence on the acceptance to use the idea of task descriptions and analysis.

Hypothesis 14:

There are no differences in the reported strength of influence of the reasons on the decision given by unreceptive faculty members to the idea of task descriptions and analysis.

This hypothesis was not rejected. Table 4-19B shows Hotellings' Multivariate test results (1.63390) which was not significant at level $P < .01$. All six reasons' means did not differ from each other. Therefore, all the six reasons have equal influencing strength upon the decision of unreceptive faculty members to reject using the idea of task descriptions and analysis.

Summary:

Findings related to the second research question "Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of task descriptions and analysis more strongly than others?" can be summarized as follows:

1. There was a difference in the reported influence's strength of the six reasons on the acceptance of using the idea of task descriptions and analysis. The rank order of the influencing strength of the six reasons was:

	Rank Order
Motivation	1.5
Knowledge and Skills	1.5 (2.5)
Expectation of Success	2.5
Availability of Resources	4.5
Role Expectation	4.5
Rewards	6

2. There was no difference in the reported strength of the influence of the six reasons on the rejection to use the idea of task descriptions and analysis. All have equal influence on that decision.

Research Question 3:

Are there any differences in the reasons given between receptive and unreceptive faculty members to the idea of task descriptions and analysis? Related to this question there were six hypotheses which were tested and interpreted. Table 4-21B shows the related data which includes, the six variables considered in this study, the proportions of receptive faculty members who gave the reasons (P_1), the proportions of unreceptive faculty members who gave the reasons (P_2), the number of receptive faculty members to the idea of task descriptions and analysis (N_1), the number of unreceptive faculty members to this idea (N_2), and the Z-test values of testing the differences in proportions of the two groups.

Table 4-21B: The proportions of receptive and unreceptive groups to the idea of task descriptions and analysis who give the reasons and Z-test for the differences.

Reason	P ₁	P ₂	N ₁	N ₂	Z
1. Knowledge and Skills	91.60	67.50	357	40	4.64**
2. Energizer (Motivation)	88.00	90.00	357	40	-.37
3. Expectations of Success	81.80	52.50	357	40	4.31**
4. Availability of Resources	76.80	47.50	357	40	4.01**
5. Rewards	60.50	52.50	357	40	.98
6. Role Expectation	72.80	60.00	357	40	1.71

** Significant at P<.01 level

Hypothesis 15:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "knowledge and skills."

This hypothesis was rejected. Table 4-21B shows Z-test value for reason 1 (4.64) which was significant at $P < .01$ level. There was a difference in the proportions of the two groups. The proportions of receptive faculty members was higher than the proportions of unreceptive faculty members. Therefore, the reason "knowledge and skills" was considered by the receptive group more than by unreceptive in their acceptance or rejection to use the idea of the task descriptions and analysis in their teaching.

Hypothesis 16:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "motivation."

This hypothesis was not rejected. Table 4-21B shows a Z-test value for reason 2 (-.37) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "motivation" was considered equally by the receptive and unreceptive groups in their acceptance or rejection to use the idea of task descriptions and analysis in their teaching.

Hypothesis 17:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "expectation of success."

This hypothesis was rejected. Table 4-21B shows Z-test value for reason 3 (4.31) which was significant at $P < .01$ level. There was a difference in the proportions of the two groups. The proportion of the receptive group was higher than the proportion of the unreceptive group. Therefore, the reason "expectation of success" was considered by the receptive group more than by unreceptive in accepting or rejecting the use of the idea of task descriptions and analysis in their teaching.

Hypothesis 18:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "availability of needed resources."

This hypothesis was rejected. Table 4-21B shows Z-test value for reason 4 (4.01) which was significant at $P < .01$ level. There was a difference in the proportions of the two groups. The proportion of the receptive group was higher than the proportion of the unreceptive group. Therefore, the reason "availability of needed resources" was considered by receptive faculty members more than by unreceptive in accepting or rejecting the use of the task descriptions and analysis idea in their teaching.

Hypothesis 19:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "rewards."

This hypothesis was not rejected. Table 4-21B shows Z-test value for reason 5 (.98) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "rewards" was considered equally by the receptive and unreceptive faculty members in accepting or rejecting the use of the task descriptions and analysis idea in their teaching.

Hypothesis 20:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of task descriptions and analysis who give the reason "role expectations."

This hypothesis was not rejected. Table 4-21B shows Z-test value for reason 6 (1.71) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "role expectations" was considered equally by receptive and unreceptive faculty members in accepting or rejecting the use of the task descriptions and analysis idea in their teaching.

Summary:

Findings related to the third research question "Are there any differences in considering the reasons given between receptive and unreceptive faculty members to the idea of task descriptions and analysis?" can be summarized as follows:

1. There was a difference between the receptive and unreceptive faculty members to the idea of task descriptions and analysis in considering three reasons, knowledge and

skills, expectation of success, and availability of needed resources. The receptive groups considered these three reasons more than the unreceptive.

2. There was no difference between the receptive and unreceptive faculty members to the idea of task descriptions and analysis in considering three given reasons, motivation, rewards, and role expectations. Therefore, all three were considered equally by the two groups in accepting or rejecting to use the task descriptions and analysis idea in their teaching.

Part C:

Learning hierarchies:

Research Question 1:

What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of learning hierarchies? Related to this question there are 12 hypotheses which were tested and interpreted. Tables 4-22C and 4-23C show the related data* to these hypotheses. These tables include, a list of the six reasons considered by the present study, the proportions of faculty members who give (checked) the reasons (P_1), the proportions of faculty members who did not give (did not check) the reasons (P_2), the number of receptive faculty members in Table 4-22C and the number of unreceptive faculty members in Table 4-23C (N). Z-test values for testing the significance of the difference in the proportions.

Hypothesis 1:

There is no difference in the proportions of receptive faculty members to the idea of "learning hierarchies" who give the reason "I know how to apply the idea" and those not giving the reason.

This hypothesis was rejected. Table 4-22C shows the Z-test results for reason 1 (14.07) which was significant at $P < .01$ level. There was a difference in the proportion. The proportions of the receptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "implementation skill" was considered

*Data is unavailable in the case of seven respondents.

Table 4-22C: Proportions of receptive faculty members to the idea of learning hierarchies who do and do not give the six reasons considered and Z-test values for testing the differences in the proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I know how to apply the idea."	92.20	7.80	372	14.07**
2. <u>Motivation</u>				
"I see a need for using the idea."	88.40	11.60	372	12.80**
3. <u>Expectation of success</u>				
"I think I will be successful in applying the idea."	83.10	16.90	372	11.03**
4. <u>Resources</u>				
"I think I will be able to get the resources needed to apply this idea."	75.30	24.70	372	8.43**
5. <u>Rewards</u>				
"If I applied this idea, I will get the rewards I desire."	59.90	40.10	372	3.30**
6. <u>Role expectation</u>				
"I think this idea would be acceptable in my department."	72.60	27.40	372	7.53**

** Significant at P<.01 level

Table 4-23C: Proportions of unreceptive faculty members to the idea of learning hierarchies who do and do not give the six reasons considered and Z-test values for testing the differences in proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I do not know how to apply the idea."	76.20	23.80	21	2.38*
2. <u>Motivation</u>				
"I do not see a need for using the idea."	85.70	14.30	21	3.25**
3. <u>Expectation of success</u>				
"I do not think I will be successful in applying the idea."	66.70	33.30	21	1.52
4. <u>Resources</u>				
"I do not think I will be able to get the resources needed to apply this idea."	71.40	28.60	21	1.96
5. <u>Rewards</u>				
"If I applied this idea, I will not get the rewards I desire."	71.40	28.60	21	1.96
6. <u>Role expectation</u>				
"I think this idea would not be acceptable in my department."	76.20	23.80	21	2.38*

** Significant at P<.01 level

* Significant at P<.05 level

by receptive faculty members as reason influencing their acceptance to use the idea of learning hierarchies in their teaching.

Hypothesis 2:

There is no difference in the proportions of receptive faculty members to the idea of "learning hierarchies" who give the reason "I see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-22C shows a Z-test value for reason 2 (12.80) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, "perceiving need to use this idea" was considered by receptive faculty members as reason influencing their acceptance to use the idea of learning hierarchies in their teaching.

Hypothesis 3:

There is no difference in the proportions of receptive faculty members to the idea of learning hierarchies who give the reason "I will be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-22C shows a Z-test value for reason 3 (11.03) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave this reason was higher than those who did not. Therefore, the

reason "expectation of success" was considered by receptive faculty members as reason influencing their acceptance to use the idea of learning hierarchies in their teaching.

Hypothesis 4:

There is no difference in the proportions of receptive faculty members to the idea of "learning hierarchies" who give the reason "I will get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-22C shows a Z-test value for reason 4 (8.43) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "resources availability" was considered by receptive faculty members as reason influencing their acceptance to use the idea of learning hierarchies in their teaching.

Hypothesis 5:

There is no difference in the proportions of receptive faculty members to the idea of "learning hierarchies" who give the reason "I will get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-22C shows a Z-test value for reason 5 (3.30) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "getting the desired rewards" was con-

sidered by receptive faculty members as reason influencing their acceptance to use the idea of learning hierarchies in their teaching.

Hypothesis 6:

There is no difference in the proportions of receptive faculty members to the idea of "learning hierarchies" who give the reason "This idea will be acceptable in my department" and those who did not give the reason.

This hypothesis was rejected. Table 4-22C shows a Z-test value for reason 6 (7.53) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than that of those who did not give the reason. therefore, the reason "acceptance of the idea in the department" was considered by receptive faculty members as reason influencing their which is not significant at .05 level. Therefore, faculty members' rank and the type of decision are independent from each other. This means that the receptive and unreceptive group to the idea of learning hierarchies do not differ with regard to rank.

Hypothesis 7:

There is no difference in the proportions of unreceptive faculty members to the idea of learning hierarchies who give the reason "I do not know how to apply this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-23C shows Z-test value for reason 1 (2.38) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, the reason "unfamiliarity" with how to apply this idea" was

considered by unreceptive faculty members as reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 8:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning hierarchies" who give the reason "I do not see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-23C shows Z-test value for reason 2 (3.25) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "not perceiving need to use this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 9:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning hierarchies" who give the reason "I will not be successful in applying this idea" and those who do not give the reason.

This hypothesis was not rejected. Table 4-23C shows a Z-test value for reason 3 (1.52) which was not significant at $P < .05$ level. There was no difference in the proportions. Therefore, it cannot be said whether unreceptive faculty members did or did not consider the reason "the expectation of being unsuccessful" as a reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 10:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning hierarchies" who give the reason "I will not get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-23C shows Z-test value for reason 4 (1.96) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than that of those who did not give the reason. Therefore, the reason "the unavailability of needed resources" was considered by unreceptive faculty as a reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 11:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning hierarchies" who give the reason "I will not get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-23C shows Z-test value for reason 5 (1.96) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than that of those who did not. Therefore, the reason "not getting the desired rewards" was considered by unreceptive faculty as a reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 12:

There is no difference in the proportions of unreceptive faculty members to the idea of "learning hierarchies" who give the reason "the idea will not be acceptable in my department" and those who do not give the reason.

This hypothesis was rejected. Table 4-23C shows Z-test value for reason 6 (2.38) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than that of those who did not give the reason. Therefore, the reason "the unacceptance of the idea in the department" was considered by unreceptive faculty members as a reason influencing their rejection to use the idea of learning hierarchies in their teaching.

Summary:

Findings related to the first research question "What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of learning hierarchies?" can be summarized as follows:

1. All six variables, knowledge and skills, motivation, expectation of success, availability of resources, reward and role expectations, were considered by receptive faculty members as reasons influencing their acceptance to use the idea of learning hierarchies in their teaching.

2. Five variables, knowledge and skills, motivation, availability of resources, rewards, and role expectation were considered by unreceptive faculty members as reasons influencing their rejection to use the idea of learning

hierarchies in their teaching. The variable "expectation of success" showed no evidence whether it was considered or not by unreceptive faculty members as reasons influencing their rejection to use the idea of learning hierarchies in their teaching.

Research Question 2:

Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of learning hierarchies more strongly than others? Related to this question two hypotheses were tested and interpreted. Tables 4-24C, 4-25C, 4-26C, 4-27C, 4-28C and 4-29C show the related data which include the means and standard deviations of the reported influencing strength of the six reasons on the acceptance or rejection to use the idea, the Hotellings' Multivariate analysis of variance of the overall difference between the six means and finally Univariate F-test for all pairs comparisons of the six means.

Hypothesis 13:

There are no differences in the reported strength of influence of the reasons on the decision given by receptive faculty members to the idea of learning hierarchies.

This hypothesis was rejected. Table 4-25C shows Hotellings' Multivariate test results for overall differences between means which were significant at $P < .01$ level. This indicates that there were overall differences in the strength of influence of the six reasons. From the data in Table 4-24C and 4-25C, the order of the strength of the six

Table 4-24C. Means and standard deviations of the six reasons' influence strength given by receptive faculty members to the idea of learning hierarchies.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	4.02	.97	220
2.	Motivation	4.29	.85	220
3.	Expectations of Success	4.02	.92	220
4.	Resources Availability	3.54	1.10	220
5.	Rewards	2.65	1.39	220
6.	Role Expectations	3.47	1.30	220

Table 4-25C Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	1.10510	47.5195	5.00	215.00	.00001

Table 4-26C. Univariate F-test values with (1,219) DF for all pairs' difference of the six means.

Reasons	1	2	3	4	5	6
1		13.5431**	0.0000	35.5159**	171.2460**	31.3800**
2			16.7745**	68.7926**	233.3779**	69.0808**
3				40.6832**	173.8521**	33.5470**
4					82.0930**	.7273
5						70.2405**
6						

** significant at $P < .01$ level.

Table 4-27C. Means and standard deviations of the six reasons' influence strength given by unreceptive faculty members to the idea of learning hierarchies.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	2.92	1.12	13
2.	Motivation	2.69	1.11	13
3.	Expectations of Success	2.85	1.41	13
4.	Resources Availability	2.92	1.19	13
5.	Rewards	2.15	1.21	13
6.	Role Expectations	2.69	1.44	13

Table 4-28C. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.70147	1.12235	5.00	8.00	.4202

Table 4-29C. Univariate F-test values with (1,12) DF for all pairs differences of the six means.

Reasons	1	2	3	4	5	6
1		.4091	.1875	0.0000	4.1379	.5807
2			.1333	.5807	2.4697	0.0000
3				.1333	4.4587	.1702
4					5.04202	.67500
5						1.4483
6						

reasons' influence can be pointed out. The reason "motivation" had the highest mean (4.29) and significantly different at $P < .01$ from all the other means. Therefore, the reason "motivation" had the highest rank of influence on the acceptance of the idea of learning hierarchies.

The reason "expectation of success" had a mean of (4.02) which was significantly different from all other reasons' means at $P < .01$ level except from the reason "knowledge and skills" mean (4.02) which was equal to it. Therefore, they together shared the second and third highest ranks influencing the acceptance to use the idea.

The reason "resource availability" had a mean of 3.54, which was significantly different from all other reasons' means at $P < .01$ level, except from the reason "role expectations" which had a mean of 3.47. Therefore, they were sharing the fourth and fifth ranks of influence on the acceptance to use the idea of task descriptions and analysis.

The reason "rewards" had a mean of 2.65 which was significantly different from the other five means at $P < .01$ level. Therefore, it had the sixth rank of influence on the acceptance to use the idea of learning hierarchies.

Hypothesis 14:

There are no differences in the reported strength of influence of the reasons on the decision given by unreceptive faculty members to the idea of learning hierarchies.

This hypothesis was not rejected. Table 4-28C shows Hotellings' Multivariate test results which were not significant at level $P < .01$. All six reasons' means presented in Table 4-27C did not significantly differ. Therefore, all the six reasons had equal influencing strength upon the decision of receptive faculty members to reject using the idea of learning hierarchies.

Summary:

Findings related to the second research question "Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of learning hierarchies more strongly than others?" can be summarized as follows:

1. There was a difference in the reported influence's strength of the six reasons on the acceptance of using the idea of learning hierarchies. The rank order of the influencing strength of the six reasons was:

	Rank Order
Motivation	1
Knowledge and Skills	2.5
Expectation of Success	2.5
Availability of Resources	4.5
Role Expectation	4.5
Rewards	6

2. There was no difference in the reported strength of the influence of the six reasons on the rejection to use the idea of learning hierarchies. All had equal influence on that decision.

Research Question 3:

Are there any differences in considering the reasons given between receptive and unreceptive faculty members to the idea of learning hierarchies? Related to this question six hypotheses were tested and interpreted. Table 4-30C shows the related data* which includes, the six variables considered in this study, the proportions of receptive faculty members who gave the reasons (P_1), the proportions of unreceptive faculty members who gave the reasons (P_2), the number of receptive faculty members to the idea of learning hierarchies (N_1), the number of unreceptive faculty members to this idea (N_2), and the Z-test values of testing the differences in proportions of the two groups.

Hypothesis 15:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "knowledge and skills."

This hypothesis was rejected. Table 4-30C shows Z-test value for reason 1 (2.46) which was significant at $P < .05$ level. There was a difference in the proportions of the two groups. The proportions of receptive faculty members was higher than the proportions of unreceptive faculty members. Therefore, the reason "knowledge and skills" was considered by the receptive group more than by unreceptive in their acceptance or rejection to use the idea of the learning hierarchies in their teaching.

*Data is unavailable in the case of seven respondents.

Table 4-30C: The proportions of receptive and unreceptive groups to the idea of learning hierarchies who give the six reasons and Z-test values for the differences in proportions.

Reason	P ₁	P ₂	N ₁	N ₂	Z
1. Knowledge and Skills	92.20	76.20	372	21	2.46*
2. Energizer (Motivation)	88.40	85.70	372	21	0.37
3. Expectations of Success	83.10	66.70	372	21	1.89
4. Availability of Resources	75.30	71.40	372	21	0.40
5. Rewards	59.90	71.40	372	21	-1.04
6. Role Expectation	72.60	76.20	372	21	-0.36

** Significant at P<.01 level

* Significant at P<.05 level.

Hypothesis 16:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "motivation."

This hypothesis was not rejected. Table 4-30C shows a Z-test value for reason 2 (.37) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "motivation" was considered equally by the receptive and unreceptive groups in their acceptance or rejection to use the idea of learning hierarchies in their teaching.

Hypothesis 17:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "expectation of success."

This hypothesis was not rejected. Table 4-30C shows Z-test value for reason 3 (1.89) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "expectation of success" was considered equally by the receptive and unreceptive groups in accepting or rejecting the use of the idea of learning hierarchies in their teaching.

Hypothesis 18:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "availability of needed resources."

This hypothesis was not rejected. Table 4-30C shows Z-test value for research 4 (.40) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "availability of needed resources" was considered equally by receptive and unreceptive groups in accepting or rejecting the use of the learning hierarchies idea in their teaching.

Hypothesis 19:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "rewards."

This hypothesis was not rejected. Table 4-30C shows Z-test value for reason 5 (-1.04) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "rewards" was considered equally by the receptive and unreceptive faculty members in accepting or rejecting the use of the learning hierarchies idea in their teaching.

Hypothesis 20:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of learning hierarchies who give the reason "role expectations."

This hypothesis was not rejected. Table 4-30C shows Z-test value for reason 6 (-0.36) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "role expectations" was considered equally by receptive and unreceptive faculty

members in accepting or rejecting the use of the learning hierarchies idea in their teaching.

Summary:

Findings related to the third research question "Are there any differences in considering the reasons given between receptive and unreceptive faculty members to the idea of "learning hierarchies?" can be summarized as follows:

1. There was a difference between the receptive and unreceptive faculty members to the idea of learning hierarchies in considering the reason knowledge and skills. The receptive groups considered this reason more than the unreceptive.

2. There was no difference between the receptive and unreceptive faculty members to the idea of learning hierarchies in considering five given reasons, motivation, rewards, role expectations, availability of resources, and expectations of success. Therefore, all five were considered equally by the two groups in accepting or rejecting to use the learning hierarchies idea in their teaching.

Part D:

Lesson planning:

Research Question 1:

What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of lesson planning? Related to this question there were 12 hypotheses which are tested and interpreted. Tables 4-31D and 4-32D show the related data* to these hypotheses. These tables include, a list of the six reasons considered by the present study, the proportions of faculty members who give (checked) the reasons (P_1), the proportions of faculty members who did not give (did not check) the reasons (P_2), the number of receptive faculty members in Table 4-31D and the number of unreceptive faculty members in Table 4-32D (N). Z-test values for testing the significance of the difference in the proportions.

Hypothesis 1:

There is no difference in the proportions of receptive faculty members to the idea of "lesson planning" who give the reason "I know how to apply the idea" and those not giving the reason.

This hypothesis was rejected. Table 4-31D shows the Z-test results for reason 1 (13.20) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of the receptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "implementation skill" was

*Data is unavailable in the case of nine respondents.

Table 4-31D: Proportions of receptive faculty members to the idea of lesson planning who do and do not give each of the six reasons considered and Z-test values for the differences in the proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I know how to apply the idea."	89.60	10.40	365	13.20**
2. <u>Motivation</u>				
"I see a need for using the idea."	88.80	11.20	365	12.93**
3. <u>Expectation of success</u>				
"I think I will be successful in applying the idea."	81.90	18.10	365	10.63**
4. <u>Resources</u>				
"I think I will be able to get the resources needed to apply this idea."	74.00	26.00	365	8.00**
5. <u>Rewards</u>				
"If I applied this idea, I will get the rewards I desire."	59.20	40.80	365	3.06**
6. <u>Role expectation</u>				
"I think this idea would be acceptable in my department."	70.10	29.90	365	6.70**

** Significant at P<.01 level

Table 4-32D: Proportions of unreceptive faculty members to the idea of lesson planning who do and do not give each of the six reasons considered and Z-test values for the differences in these proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I do not know how to apply the idea."	76.90	23.20	26	2.69*
2. <u>Motivation</u>				
"I do not see a need for using the idea."	92.30	7.70	26	4.23**
3. <u>Expectation of success</u>				
"I do not think I will be successful in applying the idea."	73.10	26.90	26	2.31*
4. <u>Resources</u>				
"I do not think I will be able to get the resources needed to apply this idea."	73.10	26.90	26	2.31*
5. <u>Rewards</u>				
"If I applied this idea, I will not get the rewards I desire."	73.10	26.90	26	2.31*
6. <u>Role expectation</u>				
"I think this idea would not be acceptable in my department."	80.80	19.20	26	3.08**

** Significant at P<.01 level

* Significant at P<.05 level

considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 2:

There is no difference in the proportions of receptive faculty members to the idea of "lesson planning" who give the reason "I see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-31D shows a Z-test value for reason 2 (12.93) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, "perceiving need to use this idea" was considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 3:

There is no difference in the proportions of receptive faculty members to the idea of lesson planning who give the reason "I will be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-31D shows a Z-test value for reason 3 (10.63) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave this reason was higher than those who did not. Therefore, the reason "expectation of success" was considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 4:

There is no difference in the proportions of receptive faculty members to the idea of "lesson planning" who give the reason "I will get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-31D shows a Z-test value for reason 4 (8.00) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "resources availability" was considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 5:

There is no difference in the proportions of receptive faculty members to the idea of "lesson planning" who give the reason "I will get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-31D shows a Z-test value for reason 5 (3.06) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "getting the desired rewards" was considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 6:

There is no difference in the proportions of receptive faculty members to the idea of "lesson planning" who give the reason "This idea will be acceptable in my department" and those who did not give the reason.

This hypothesis was rejected. Table 4-31D shows a Z-test value for reason 6 (6.70) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than that of those who did not give the reason. Therefore, the reason "acceptance of the idea in the department" was considered by receptive faculty members as reason influencing their acceptance to use the idea of lesson planning in their teaching.

Hypothesis 7:

There is no difference in the proportions of unreceptive faculty members to the idea of lesson planning who give the reason "I do not know how to apply this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows Z-test value for reason 1 (2.69) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, the reason "unfamiliarity with how to apply this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of lesson planning in their teaching.

Hypothesis 8:

There is no difference in the proportions of unreceptive faculty members to the idea of "lesson planning" who give the reason "I do not see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows Z-test value for reason 2 (4.23) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not give the reason. Therefore, the reason "not perceiving need to use this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of lesson planning in their teaching.

Hypothesis 9:

There is no difference in the proportions of unreceptive faculty members to the idea of "lesson planning" who give the reason "I will not be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows a Z-test value for reason 3 (2.31) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, faculty members did consider the reason "the expectation of being unsuccessful" as a reason influencing their rejection to use the idea of lesson planning in their teaching.

Hypothesis 10:

There is no difference in the proportions of unreceptive faculty members to the idea of "lesson planning" who give the reason "I will not get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows Z-test value for reason 4 (2.31) which was significant at $P < .05$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, it can be said that the unreceptive group did consider the reason "the unavailability of needed resources" as a reason influencing rejection to use the idea of lesson planning in their teaching.

Hypothesis 11:

There is no difference in the proportions of unreceptive faculty members to the idea of "lesson planning" who give the reason "I will not get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows Z-test value for reason 5 (2.31) which was significant at $P < .05$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, it can be said that the unreceptive faculty members did consider the reason "not getting the desired rewards" as a reason influencing their rejection to use the idea of lesson planning in their teaching.

Hypothesis 12:

There is no difference in the proportions of unreceptive faculty members to the idea of "lesson planning" who give the reason "the idea will not be acceptable in my department" and those who do not give the reason.

This hypothesis was rejected. Table 4-32D shows Z-test value for reason 6 (3.08) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason was higher than those who did not. Therefore, it can be said that the reason "the unacceptance of the idea in the department" was considered by unreceptive faculty members as a reason influencing their rejection to use the idea of lesson planning in their teaching.

Summary:

Findings related to the first research question "What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of task descriptions and analysis?" can be summarized as follows:

1. All six variables, knowledge and skills, motivation, expectation of success, availability of resources, reward and role expectations, were considered by receptive faculty members as reasons influencing their acceptance to use the idea of lesson planning in their teaching.

2. All these variables (reasons) were considered by unreceptive faculty members as reasons influencing their rejection to use this idea in their teaching.

Research Question 2:

Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of lesson planning more strongly than others? Related to this question there were two hypotheses which were tested and interpreted. Tables 4-33D, 4-34D, 4-35D, 4-36D, 4-37D and 4-38D show the related data which include the means and standard deviations of the reported influencing strength of the six reasons on the acceptance or rejection to use the idea, the Hotellings' Multivariate analysis of variance of the overall difference between the means of the six reasons and finally Univariate F-test for pair comparisons between the six reasons' means.

Hypothesis 13:

There are no differences in the reported strength of influence of the reasons on the decision given by receptive faculty members to the idea of lesson planning.

This hypothesis was rejected. Table 4-34D shows Hotellings' Multivariate test results for overall differences which were significant at $P < .01$ level. This indicates that there were overall differences in the strength of influence of the six reasons. From the data in Tables 4-33D and 4-35D, the order of the strength of the six reasons' influence can be pointed out. The reason "motivation" had the highest mean (4.26) and was significantly different from all other reasons. Therefore, it had the first rank of influence on the acceptance of the idea of lesson planning.

Table 4-33D. Means and standard deviation of the six reasons' influence strength given by receptive faculty members to the idea of lesson planning.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	4.00	.97	205
2.	Motivation	4.26	.91	205
3.	Expectations of Success	3.93	.96	205
4.	Resources Availability	3.50	1.11	205
5.	Rewards	2.64	1.42	205
6.	Role Expectations	3.39	1.26	205

Table 4-34D Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	1.10028	44.0110	5.00	200.00	.0003

Table 4-35D. Univariate F-test with (1,204) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1	13.3246**	1.1143	39.9356**	148.0281**	45.3257**	
2		20.5933**	84.2963**	188.9269**	89.5731**	
3			38.4879**	145.4554**	43.2216**	
4				61.8360**	1.9550	
5					54.8359**	
6						

** significant at $P < .01$ level.

Table 4-36D. Means and standard deviation of the six reasons' influence strength given by unreceptive faculty members to the idea of lesson planning.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	2.94	1.14	18
2.	Motivation	3.56	1.04	18
3.	Expectations of Success	3.28	1.02	18
4.	Resources Availability	3.22	1.22	18
5.	Rewards	2.83	1.47	18
6.	Role Expectations	2.89	1.18	18

Table 4-37D. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.26125	.6793	5.00	13.00	.6470

Table 4-38D. Univariate F-test values with (1,17) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		2.7030	1.3077	.8551	.0730	.0379
2			1.3407	1.0000	3.2173	3.0909
3				.0412	1.5723	1.2757
4					.9204	1.5455
5						.0270
6						

The reason "knowledge and skills" had the second highest mean (4.00); the reason "expectation of success" mean had the third highest mean (3.85). These two means did not significantly differ from each other, they differed from others significantly at $P < .01$. Therefore they together shared the second and third rank of influence.

The reasons "resource availability" and "role expectations" had the third and fourth highest means (3.50 and 3.39), respectively. These two means did not differ significantly from each other, but each of them differed significantly from other means; therefore, they together had the fourth and fifth rank of influence.

Finally, the reason "rewards" had a mean of (2.64) which is the lowest mean and differed significantly from all other means; therefore, it had the sixth rank of influence.

Hypothesis 14:

There are no differences in the reported strength of influence of the reasons on the decision given by unreceptive faculty members to the idea of lesson planning.

This hypothesis was not rejected. Table 4-37D shows Hotellings' Multivariate test results (.26125) which was not significant at level $P < .05$. All six reasons' means did not differ from each other. Therefore, all the six reasons had equal influencing strength upon the decision of unreceptive faculty members to reject using the idea of lesson planning.

Summary:

Findings related to the second research question "Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of lesson planning more strongly than others?" can be summarized as follows:

1. There was a difference in the reported influence's strength of the six reasons on the acceptance of using the idea of lesson planning. The rank order of the influencing strength of the six reasons was:

	Rank Order
Motivation	1
Knowledge and Skills	2.5
Expectation of Success	2.5
Availability of Resources	4.5
Role Expectation	4.5
Rewards	6

2. There was no difference in the reported strength of the influence of the six reasons on the rejection to use the idea of lesson planning. All had equal influence on that decision.

Research Question 3:

Are there any differences in the reasons given between receptive and unreceptive faculty members to the idea of lesson planning? Related to this question there were six hypotheses which were tested and interpreted. Table 4-39D shows the related data* which includes, the six variables considered in this study, the proportions of receptive

*Date is unavailable in the case of nine respondents.

Table 4-39D: The proportions of receptive and unreceptive groups to the idea of lesson planning who give the reasons and Z-test values for testing the differences.

Reason	P ₁	P ₂	N ₁	N ₂	Z
1. Knowledge and Skills	89.60	76.90	365	26	1.98**
2. Energizer (Motivation)	88.80	92.30	365	26	-.55
3. Expectations of Success	81.90	73.10	365	26	1.09
4. Availability of Resources	74.00	73.10	365	26	.10
5. Rewards	59.20	73.10	365	26	-1.39
6. Role Expectation	70.10	80.80	365	26	1.15

** Significant at P<.01 level

faculty members who gave the reasons (P_1), the proportions of unreceptive faculty members who gave the reasons (P_2), the number of receptive faculty members to the idea of lesson planning (N_1), the number of unreceptive faculty members to this idea (N_2), and the Z-test values of testing the differences in proportions of the two groups.

Hypothesis 15:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "knowledge and skills."

This hypothesis was rejected. Table 4-39D shows Z-test value for reason 1 (1.98) which was significant at $P < .05$ level. There was a difference in the proportions of the two groups. The proportions of receptive faculty members was higher than the proportions of unreceptive faculty members. Therefore, the reason "knowledge and skills" was considered by the receptive group more than by unreceptive in their acceptance or rejection to use the idea of the lesson planning in their teaching.

Hypothesis 16:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "motivation."

This hypothesis was not rejected. Table 4-39D shows a Z-test value for reason 2 (-.55) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "motivation" was

considered equally by the receptive and unreceptive groups in their acceptance or rejection to use the idea of lesson planning in their teaching.

Hypothesis 17:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "expectation of success."

This hypothesis was not rejected. Table 4-39D shows Z-test value for reason 3 (1.09) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "expectation of success" was considered equally by the receptive and unreceptive in accepting or rejecting the use of the idea of lesson planning in their teaching.

Hypothesis 18:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "availability of needed resources."

This hypothesis was not rejected. Table 4-39D shows Z-test value for research 4 (.10) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "availability of needed resources" was considered equally by receptive and unreceptive groups in accepting or rejecting the use of lesson planning idea in their teaching.

Hypothesis 19:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "rewards."

This hypothesis was not rejected. Table 4-39D shows Z-test value for reason 5 (-1.39) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "rewards" was considered equally by the receptive and unreceptive faculty members in accepting or rejecting the use of the lesson planning idea in their teaching.

Hypothesis 20:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of lesson planning who give the reason "role expectations."

This hypothesis was not rejected. Table 4-39D shows Z-test value for reason 6 (1.15) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "role expectations" was considered equally by receptive and unreceptive faculty members in accepting or rejecting the use of the lesson planning idea in their teaching.

Summary:

Findings related to the third research question "Are there any differences in considering the reasons given between receptive and unreceptive faculty members to the idea of lesson planning?" can be summarized as follows:

1. There was a difference between the receptive and unreceptive faculty members to the idea of lesson planning in considering the reason of knowledge and skills. The receptive groups considered this reason more than the unreceptive.

2. There was no difference between the receptive and unreceptive faculty members to the idea of lesson planning in considering five given reasons, motivation, expectation of success, availability of needed resources, rewards, and role expectations. Therefore, all five were considered equally by the two groups in accepting or rejecting to use the lesson planning idea in their teaching.

Part E:

Personalized-Self Instruction:

Research Question 1:

What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of personalized-self instruction? Related to this question there were 12 hypotheses which are tested and interpreted. Tables 4-40E and 4-41E show the related data* to these hypotheses. These tables include, a list of the six reasons considered by the present study, the proportions of faculty members who gave (checked) the reasons (P_1), the proportions of faculty members who did not give (did not check) the reasons (P_2), the number of receptive faculty members in Table 4-40E and the number of unreceptive faculty members in Table 4-41E (N). Z-test values for testing the significance of the difference in the proportions.

Hypothesis 1:

There is no difference in the proportions of receptive faculty members to the idea of "personalized-self instruction" who give the reason "I know how to apply the idea" and those not giving the reason.

This hypothesis was rejected. Table 4-40E shows the Z-test results for reason 1 (12.43) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of the receptive faculty members who gave the reason was higher than those who did not give the

*Data is unavailable in the case of ten respondents.

Table 4-40E: Proportions of receptive faculty members to the idea of personalized-self instruction who do and do not give each of the six reasons considered and Z-test values for the differences in the proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I know how to apply the idea."	87.30	12.70	259	12.43**
2. <u>Motivation</u>				
"I see a need for using the idea."	90.00	10.00	259	13.33**
3. <u>Expectation of success</u>				
"I think I will be successful in applying the idea."	83.40	16.60	259	11.13**
4. <u>Resources</u>				
"I think I will be able to get the resources needed to apply this idea."	78.80	21.20	259	9.60**
5. <u>Rewards</u>				
"If I applied this idea, I will get the rewards I desire."	61.80	38.20	259	3.93**
6. <u>Role expectation</u>				
"I think this idea would be acceptable in my department."	74.50	25.50	259	8.17**

** Significant at P<.01 level

Table 4-41E: Proportions of unreceptive faculty members to the idea of personalized-self instruction who do and do not give each of the six reasons considered and Z-test values for the differences in these proportions.

Reason	P ₁	P ₂	N	Z
1. <u>Knowledge skills</u>				
"I do not know how to apply the idea."	60.30	39.70	131	2.35*
2. <u>Motivation</u>				
"I do not see a need for using the idea."	79.40	20.60	131	6.68**
3. <u>Expectation of success</u>				
"I do not think I will be successful in applying the idea."	61.10	38.90	131	2.52*
4. <u>Resources</u>				
"I do not think I will be able to get the resources needed to apply this idea."	70.20	29.80	131	4.69**
5. <u>Rewards</u>				
"If I applied this idea, I will not get the rewards I desire."	63.40	36.60	131	3.07**
6. <u>Role expectation</u>				
"I think this idea would not be acceptable in my department."	72.50	27.50	131	5.11**

** Significant at P<.01 level

* Significant at P<.05 level

reason. Therefore, the reason "implementation skill" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 2:

There is no difference in the proportions of receptive faculty members to the idea of "personalized-self instruction" who give the reason "I see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-40E shows a Z-test value for reason 2 (13.33) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, "perceiving need to use this idea" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 3:

There is no difference in the proportions of receptive faculty members to the idea of personalized-self instruction who give the reason "I will be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-40E shows a Z-test value for reason 3 (11.13) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave this reason was higher than those who did not. Therefore, the

reason "expectation of success" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 4:

There is no difference in the proportions of receptive faculty members to the idea of "personalized-self instruction" who give the reason "I will get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-40E shows a Z-test value for reason 4 (9.60) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not. Therefore, the reason "resources availability" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 5:

There is no difference in the proportions of receptive faculty members to the idea of "personalized-self instruction" who give the reason "I will get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-40E shows a Z-test value for reason 5 (3.93) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of receptive faculty members who gave the reason was higher than the proportion of those who did not

give the reason. Therefore, the reason "getting the desired rewards" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 6:

There is no difference in the proportions of receptive faculty members to the idea of "personalized-self instruction" who give the reason "This idea will be acceptable in my department" and those who did not give the reason.

This hypothesis was rejected. Table 4-40E shows a Z-test value for reason 6 (8.17) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than that of those who did not give the reason. Therefore, the reason "acceptance of the idea in the department" was considered by receptive faculty members as reason influencing their acceptance to use the idea of personalized-self instruction in their teaching.

Hypothesis 7:

There is no difference in the proportions of unreceptive faculty members to the idea of personalized-self instruction who give the reason "I do not know how to apply this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows Z-test value for reason 1 (2.35) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason was higher than that of those who did not give the reason.

Therefore, it can be said that the reason "unfamiliarity with how to apply this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 8:

There is no difference in the proportions of unreceptive faculty members to the idea of "personalized-self instruction" who give the reason "I do not see need for using this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows Z-test value for reason 2 (6.68) which was significant at $P < .01$ level. There was a difference in the proportions. The proportions of unreceptive faculty members who gave the reason was higher than the proportions of those who did not give the reason. Therefore, the reason "not perceiving need to use this idea" was considered by unreceptive faculty members as reason influencing their rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 9:

There is no difference in the proportions of unreceptive faculty members to the idea of "personalized-self instruction" who give the reason "I will not be successful in applying this idea" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows a Z-test value for reason 3 (2.52) which was significant at $P < .05$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason "I will not be successful in applying this idea" was

higher than the proportion of those who did not. Therefore unreceptive faculty members did consider the reason "the expectation of being unsuccessful" as a reason influencing their rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 10:

There is no difference in the proportions of unreceptive faculty members to the idea of "personalized-self instruction" who give the reason "I will not get the needed resources" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows Z-test value for reason 4 (4.69) which was significant at $P < .01$ level. There was a difference in the proportions. The proportion of unreceptive faculty members who gave the reason was higher than the proportion of those who did not give the reason. Therefore, the unreceptive group did consider the reason "the unavailability of needed resources" as a reason influencing rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 11:

There is no difference in the proportions of unreceptive faculty members to the idea of "personalized-self instruction" who give the reason "I will not get the rewards I desire" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows Z-test value for reason 5 (3.07) which was significant at $P < .05$ level. There was a difference in the proportions. The proportions of receptive faculty members who gave the reason

was higher than that of those who did not give the reason. Therefore, it can be said that the unreceptive faculty members did consider the reason "not getting the desired rewards" as a reason influencing their rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 12:

There is no difference in the proportions of unreceptive faculty members to the idea of "personalized-self instruction" who give the reason "the idea will not be acceptable in my department" and those who do not give the reason.

This hypothesis was rejected. Table 4-41E shows Z-test value for reason 6 (5.11) which was significant at $P < .05$ level. There was a difference in the proportions. The proportion of unreceptive faculty member who gave the reason was higher than the proportion of those who did not give the reason. Therefore, the reason "the unacceptance of the idea in the department" was considered by unreceptive faculty members as a reason influencing their rejection to use the idea of personalized-self instruction in their teaching.

Summary:

Findings related to the first research question "What are reasons given by faculty members in Saudi Arabia universities for accepting and reasons for rejecting the idea of personalized-self instruction?" can be summarized as follows:

1. All six variables, knowledge and skills, motivation, expectation of success, availability of resources, reward and role expectations, were considered by receptive faculty members as reasons influencing their acceptance to use the idea of personalized-self instruction in their teaching.

2. All the six variables, knowledge and skills, rewards, expectation of success, availability of resources, motivation, and role expectations, were considered by unreceptive faculty members as reasons influencing their rejection to use the idea of personalized-self instruction in their teaching.

Research Question 2:

Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of task personalized-self instruction more strongly than others? Related to this question there were two hypotheses which were tested and interpreted. Tables 4-42E, 4-43E, 4-44E, 4-45E, 4-46E and 4-47E show the related data which include the means and standard deviations of the reported influencing strength of the six reasons on the acceptance or rejection to use the idea, the Hotellings' Multivariate analysis of variance of the overall difference between the means of the six reasons and finally Univariate F-test for pair comparisons between the six reasons' means.

Table 4-42E. Means and standard deviation of the six reasons' influence strength given by receptive faculty members to the idea of personalized-self instruction.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	3.86	.95	156
2.	Motivation	4.03	.88	156
3.	Expectations of Success	3.69	1.00	156
4.	Resources Availability	3.56	1.03	156
5.	Rewards	2.54	1.34	156
6.	Role Expectations	3.29	1.15	156

Table 4-43E. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.98378	29.7103**	5.00	151.00	.00001

Table 4-44E. Univariate F-test with (1,155) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1		3.4438	5.0892	13.3150**	114.5840**	32.0120**
2			16.3406**	24.8560**	143.0820**	48.9897**
3				2.9345	102.8252**	14.2666**
4					84.0261**	6.9528**
5						60.4815**
6						

** significant at $P < .01$ level.

Table 4-45E. Means and standard deviation of the six reasons' influence strength given by unreceptive faculty members to the idea of personalized-self instruction.

No.	Reason	$\bar{X}$	S.D.	N
1.	Knowledge and Skills	2.62	1.44	61
2.	Motivation	3.61	1.28	61
3.	Expectations of Success	3.23	1.23	61
4.	Resources Availability	2.97	1.26	61
5.	Rewards	2.54	1.47	61
6.	Role Expectations	2.92	1.42	61

Table 4-46E. Hotellings' Multivariate analysis of variance of the overall differences between the six means.

Test Name	Value	Exact F	Hypothesis DF	Error DF	Significance
Hotellings	.62587	7.0098	5.00	56.00	.00004

Table 4-47E. Univariate F-test values with (1,60) DF comparing the difference between pairs of the six means.

Reasons	1	2	3	4	5	6
1	22.8475**	12.1797**	2.8962	.1347	1.3465	
2		2.8678	7.9550**	17.7795**	7.3808**	
3			2.8678	10.5104**	2.0281	
4				3.4113	.0611	
5					3.6558	
6						

** significant at $P < .01$ level.

Hypothesis 13:

There are no differences in the reported strength of influence of the reasons on the decision given by receptive faculty members to the idea of personalized-self instruction.

This hypothesis was rejected. Table 4-43E shows Hotelings' Multivariate test results for overall differences which were significant at $P < .01$ level. This indicates that there were overall differences in the strength of influence of the six reasons. From the data in Tables 4-42E and 4-44E, the rank order of the strength of the six reasons' influence on the acceptance of use of the idea of personalized-self instruction is as follows: The reasons "motivation" and "knowledge and skills" had the first and second highest means (4.03) and (3.86), respectively. These two means did not differ significantly from each other at .01 level, but each of them was significantly higher than other means at .01 level, with some exceptions which will be mentioned later; therefore they together shared the first and second rank of influence on the acceptance to use this idea.

The reason "expectations of success" had the third highest mean (3.69) which differed significantly from all other means at $P < .01$ level, except from the "knowledge and skills" mean (3.88). Therefore, they together shared the second and third rank of influence. The reason "resources availability" had the fourth highest mean (3.56) which significantly differed from all other means with the exception of the mean of "expectation of success" reason. Therefore,

they together shared the third and fourth rank of influence on the acceptance to use the idea of personalized-self instruction.

The reason "role expectation" had the fifth highest mean (3.29) which was significantly different from all other means. Therefore, it had the fifth rank of influence on the acceptance of use of the idea personalized-self instruction.

Finally, the reason "rewards" had a mean of (2.54), the lowest mean which significantly differed from all other means at $P < .01$ level. Therefore, it had the sixth rank of influence on the acceptance to use the idea of personalized-self instruction.

Hypothesis 14:

There are no differences in the reported strength of influence of the reasons on the decision given by unreceptive faculty members to the idea of personalized-self instruction.

This hypothesis was rejected. Table 4-46E shows Hotelings' Multivariate test results which was significant at level $P < .01$. This indicates that there were overall differences in the strength of influence of the six reasons. From the data in Table 4-46E and 4-47E, the rank order of this strength of influence upon the rejection to use the idea of personalized-self instruction can be pointed out.

The reason "motivation" had the highest mean (3.61) which significantly differed from all other means at $P < .01$, except from the mean of the reason "expectation of success" (3.23). Therefore, these two means together shared the first and second rank of the strength.

The reasons "knowledge and skills," "resources availability," "rewards," and "role expectations" had means of (2.62), (2.97), (2.54), and (2.92), respectively. These means were not significantly different from each other at $P < .01$ level. Also the reasons "expectation of success," "resources availability" and "role expectation" were not significantly different from each other at $P < .01$. Therefore, it might be said that these three later reasons were shared the second, third and fourth ranks. While the former four reasons were sharing the third, fourth, fifth and sixth ranks of influence strength.

Summary:

Findings related to the second research question "Which of the reasons do faculty members report affect their acceptance or rejection to use the idea of personalized-self instruction more strongly than others?" can be summarized as follows:

1. There was a difference in the reported influence's strength of the six reasons on the acceptance to use the idea of personalized-self instruction. The rank order of the influence's strength was:

Reason	Rank Order
Motivation	1.5
Knowledge and Skills	1.5 (2.5)
Expectation of Success	2.5 (3.5)
Resource Availability	3.5
Role Expectations	5
Rewards	6

2. There was no difference in the reported influence's strength of the six reasons on the rejection to use the idea of personalized-self instruction. The rank order of the influence's strength was:

Reason	Rank Order
Motivation	1.5
Expectation of Success	1.5 (2.5)
Resource Availability	2.5 (4.5)
Role Expectation	4.5
Knowledge and Skills	4.5
Rewards	4.5

Research Question 3:

Are there any differences in the reasons given between receptive and unreceptive faculty members to the idea of personalized-self instruction? Related to this question there were six hypotheses which were tested and interpreted. Table 4-48E shows the related data* which includes, the six variables considered in this study, the proportions of receptive faculty members who gave the reasons (P_1), the proportions of unreceptive faculty members who gave the reasons (P_2), the number of receptive faculty members to the idea of personalized-self instruction (N_1), the number of unreceptive faculty members to this idea (N_2), and the Z-test values of testing the differences in proportions of the two groups.

*Data is unavailable in the case of ten respondents.

Table 4-48E: The proportions of receptive and unreceptive groups to the idea of personalized-self instruction who give the reasons and Z-test values for testing the differences.

Reason	P ₁	P ₂	N ₁	N ₂	Z
1. Knowledge and Skills	87.30	57.30	259	131	6.52**
2. Energizer (Motivation)	90.00	79.40	259	131	2.79**
3. Expectations of Success	83.40	61.10	259	131	4.75**
4. Availability of Resources	78.80	70.20	259	131	1.83*
5. Rewards	61.80	53.40	259	131	1.56
6. Role Expectation	74.50	72.50	259	131	.42

** significant at P<.01 level

* significant at P<.05 level.

Hypothesis 15:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "knowledge and skills."

This hypothesis was rejected. Table 4-48E shows Z-test value for reason 1 (6.52) which was significant at $P < .01$ level. There was a difference in the proportions of the two groups. The proportion of receptive faculty members was higher than the proportion of unreceptive faculty members. Therefore, the reason "knowledge and skills" was considered by the receptive group more than by unreceptive in their acceptance or rejection to use the idea of the personalized-self instruction in their teaching.

Hypothesis 16:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "motivation."

This hypothesis was rejected. Table 4-48E shows a Z-test value for reason 2 (2.79) which was significant at $P < .01$ level. There is a difference in the proportions of the two groups. The proportion of receptive faculty members was higher than the proportion of unreceptive faculty members. Therefore, the reason "motivation" was considered by the receptive more than by unreceptive groups in their acceptance or rejection to use the idea of personalized-self instruction in their teaching.

Hypothesis 17:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "expectation of success."

This hypothesis was rejected. Table 4-48E shows Z-test value for reason 3 (4.75) which was significant at $P < .01$ level. There was difference in the proportions of the two groups. The proportion of the receptive group was higher than the proportion of the unreceptive group. Therefore, the reason "expectation of success" was considered by the receptive group more than by unreceptive in accepting or rejecting the use of the idea of personalized-self instruction in their teaching.

Hypothesis 18:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "availability of needed resources."

This hypothesis was not rejected. Table 4-48E shows Z-test value for research 4 (1.83) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "availability of needed resources" was considered equally by receptive faculty members and by unreceptive in accepting or rejecting the use of the personalized-self instruction idea in their teaching.

Hypothesis 19:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "rewards."

This hypothesis was not rejected. Table 4-48E shows Z-test value for reason 5 (1.56) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "rewards" was considered equally by the receptive and unreceptive faculty members in accepting or rejecting the use of the personalized-self instruction idea in their teaching.

Hypothesis 20:

There is no difference in the proportions of receptive and unreceptive faculty members to the idea of personalized-self instruction who give the reason "role expectations."

This hypothesis was not rejected. Table 4-48E shows Z-test value for reason 6 (.42) which was not significant at $P < .05$ level. There was no difference in the proportions of the two groups. Therefore, the reason "role expectations" was considered equally by receptive and unreceptive faculty members in accepting or rejecting the use of the personalized-self instruction idea in their teaching.

Summary:

Findings related to the third research question "Are there any differences in considering the reasons given between receptive and unreceptive faculty members to the idea of personalized-self instruction?" can be summarized as follows:

1. There was a difference between the receptive and unreceptive faculty members to the idea of personalized-self instruction in considering three reasons, knowledge and

skills, expectation of success, and motivation. The receptive groups considered these three reasons more than the unreceptive.

2. There was no difference between the receptive and unreceptive faculty members to the idea of personalized-self instruction in considering three given reasons, availability of needed resources, rewards, and role expectations. Therefore, all three were considered equally by the two groups in accepting or rejecting to use this idea in their teaching.

CHAPTER V

CONCLUSIONS, DISCUSSION, AND IMPLICATIONS

CHAPTER V

Conclusions and Implications

Introduction:

The purpose of this study was threefold: First, it was to identify the reasons considered by faculty members in Saudi Arabian universities for accepting or rejecting specific instructional design ideas. Second, it was to identify which of those reasons affect faculty members' decisions more strongly than others. Third, it was to identify any differences in considering the reasons given by those who accept and those who do not accept instructional design ideas.

Questionnaires were distributed to a sample of 470 faculty members in the seven Saudi Arabian universities and girls' colleges. Data from 400 returned questionnaires were analyzed and interpreted.

The organization of this chapter will be as follows:

1. Reminder about the limitations of this study will be presented.
2. Conclusions related to each of the four purposes of this study will be presented along with rationale explaining each conclusion and discussion of these possible uses.
3. A list of recommendations to those who are responsible for improving instruction in Saudi Arabian universities will be pointed out.
4. Suggestions about further research will be discussed.

5. Finally, a summary of conclusions will be presented.

Study Limitations

1. The results of the present study are limited only to the faculty members of Saudi Arabian universities and girls' colleges. Generalization of the results to other higher institutions in Saudi Arabia or other countries' universities and higher institutions should be done with caution. Since other reasons or factors may affect or be affected by cultural or organizational aspects, the faculty members of institutions outside the scope of this study may have different perceptions of the reasons for accepting or rejecting instructional design ideas.

2. Generalization of the results of this study to the population should be done with caution because of a lack of proportional representation.

3. Also the results of this study should be limited to the types of instructional design ideas used in the study.

4. The study's conclusions are limited by the extent to which the personal procedure of distributing the questionnaire affected responses.

5. The study's conclusions are limited by the extent to which the investigator is able to objectively describe, analyze and interpret the data.

6. Also one of the major limitations of the study lies in the fact that respondents may purposefully or unconsciously distort the actual reasons for accepting or rejecting the suggested instructional design idea.

7. Finally, the study findings are limited by the fact that some faculty members may have adopted some of the ideas and that faculty members were asked to make this decision in a hypothetical way.

Conclusions, Discussion and Implications

The following conclusions are related to the first purpose of the study; identification of reasons considered by faculty members in Saudi Arabian universities for accepting and reasons for rejecting suggested instructional design ideas.

Conclusion No. 1:

Six reasons were considered by receptive faculty members for accepting the use of five suggested instructional design ideas (learning objectives, task description and analysis, learning hierarchies, lesson planning, and personalized self-instruction in their teaching. These reasons were:

1. Learning implementation skills needed to apply these instructional design ideas.
2. Motivation (perceiving needs to use these instructional design ideas).
3. Expectations of success in using these ideas.
4. The availability of needed resources to apply these ideas.
5. The availability of desirable rewards when applying these ideas.
6. Acceptability of the ideas by department in which faculty members are teaching.

This conclusion is supported by findings of prior empirical research discussed in Chapter II. Evans and Leppman 1967, Eble 1972, Rogers and others 1975, Kozma 1979 collectively found that the above six reasons are related to the process of the adoption of instructional ideas by faculty members.

This conclusion also provides empirical data as evidence for the accuracy of Davis' model (1979) as a model for predicting and understanding the decisions of faculty members to change their instructional practices. In his model, Davis laid out six major factors that he considered affecting the process of changing instructional practices. As mentioned in Chapter II, these six major factors were used in the present study to see whether faculty members in Saudi Arabian universities considered them as reasons for accepting or rejecting the use of suggested instructional design ideas. As this conclusion states, these six reasons (or factors) were considered by receptive faculty members as reasons for their acceptance of the suggested instructional design idea. Therefore, Davis' model is supported by the present study findings with regard to the types of reasons (factors) involved in the early stage of the adoption of instructional design ideas (i.e., accepting to use).

Implications of Conclusion 1:

There are two implications of being able to identify these six reasons for the acceptance to use suggested instructional design ideas in teaching. First, these reasons may be used to predict whether an individual faculty

member is more likely to be receptive to an instructional design idea. Second, this information may be used to devise strategies and approaches to continue and maximize the level of acceptance to use these ideas.

The first implication of this conclusion states that if the individual faculty member who is knowledgeable about the idea, has the needed skills to apply it, perceives a need to use it, has high expectations to be successful in applying it, has the needed resources available to him, has the high expectation that he will be rewarded for this and has the psychological support from his department to use the idea, then he is more than likely to accept suggested instructional design ideas. This prediction will help the administrators and those who are responsible for improving instruction in higher education to design, conduct and evaluate their activities. This implies that these reasons (predictor variables) should be used as an essential objective for any types of activity that aim to maximize and continue the level of receptiveness to instructional design ideas in those who are already receptive. Such activities should find ways to (1) provide the individual receptive faculty members with the resources such as providing information about instructional design ideas through newsletters or magazines circulated to faculty, (2) provide reward systems that encourage the use of such ideas, and (3) provide workshop sessions that can be used from time to time to create an environment that sharpens the faculty skills about instructional design.

Conclusion 2A:

Six reasons were considered by unreceptive faculty members for rejecting to use three out of five suggested instructional design ideas (learning hierarchies, lesson planning and personalized self-instruction in their teaching. The reasons are:

1. The unfamiliarity and lack of skill about these instructional design ideas.
2. The perception of these ideas being needless.
3. Expectation of failure in applying these ideas.
4. The unavailability of needed resources to apply these ideas.
5. Expectation of not getting the desirable rewards when applying these ideas.
6. The unacceptability of these ideas in the department where the faculty member is teaching.

Conclusion 2B:

Three reasons were considered by unreceptive faculty members for rejecting the idea of task description and analysis.

1. The unfamiliarity with and lack of skill in using this idea.
2. The perception of this idea being needless.
3. The unacceptability of this idea in the department where the faculty member is teaching.

With regard to the other three reasons, expectation of failure in applying these ideas; the availability of needed resources; and the expectation of not getting the desirable rewards, the data does not provide significant evidence that these reasons were considered or not by the unreceptive group. That is, the proportion of unreceptive faculty members who gave the reasons (i.e., checked them) and the proportion of those who did not are statistically equal.

Conclusion 2C:

Two reasons were considered by unreceptive faculty members for rejecting to use the idea of learning objectives in their teaching. These reasons are:

1. The unfamiliarity with and lack of skill in using this idea.
2. The perception of needlessness of this idea.

With regard to the other four reasons, expectation of failure in applying this idea; the unavailability of needed resources; expectation of not getting the desirable rewards; and the unacceptability of this idea in the department, the data does not provide significant evidence that these reasons are considered or not by unreceptive faculty members to this idea. That is, the proportion of unreceptive faculty members who gave the reasons (i.e., checked them) and the proportion of those who did not are statistically equal.

Conclusions 2A, 2B and 2C state the reasons considered by unreceptive faculty members in Saudi Arabian universities as barriers for not using the suggested instructional design

ideas. These conclusions are supported by the findings of prior empirical research. Evans and Leppman (1967); Eble (1972); Rogers and others (1975); Kozma (1979); collectively found that these six reasons are related to the decisions of rejection to use instructional ideas by faculty members.

Also these conclusions support the rationales of the theoretical literature related to the barriers to the adoption of instructional ideas; Holbrook (1974); Hammons (1977); and Cole (1978). Collectively these theoreticians discussed the six reasons used by the present study in the context of their relation to the rejection by faculty members of new instructional ideas.

These conclusions provide empirical data that support Davis' model with regard to the types of factors he proposed involving the process of not using suggested instructional ideas. The discussion of the relation of the Davis' model to Conclusion 1 is applicable here. Davis' model includes six suggested factors that may be used to predict whether the individual faculty is more likely to change his instructional practices or not. Conclusions 2A, 2B and 2C state that these six factors (reasons) were considered by unreceptive faculty members to the instructional design ideas as reasons for their objection.

Implications of Conclusion 2A, 2B and 2C:

Being able to identify these six reasons for rejection of design ideas in teaching can be useful in predicting whether an individual faculty member is more likely to be

unreceptive to a suggested instructional design idea or not. This implies that the faculty member who is not knowledgeable or skillful with regard to an idea; does not expect to succeed in applying it; does not have the needed resources available to him; does not expect to get the desirable rewards, and does not have the support of his department to use these ideas, is more likely to be unreceptive to suggested instructional design ideas. This information may be useful to administrators and others who are responsible for improving instruction in Saudi Arabian universities in directing their efforts to design, conduct and evaluate strategies to remove the barriers which create unreceptive faculty members. These strategies may include some type of evaluation system that help faculty members realize the need to try new instructional design ideas to improve the effectiveness of instruction. Then, change agents could establish some type of learning system that provides the faculty members with sources to learn about what is new and useful in instruction literature; seminars, workshops, lectures, and newsletters. These activities should be accompanied by a reward system that encourages attempts to use learned instructional ideas. The reward system may also provide a psychological support, a necessary elements in the process. These activities are likely to be effective only if all of them are considered. Considering only one will make the final goals unachievable, and will make the subgoals for each element in the process unachievable. For example,

providing an evaluation system, that will be used by faculty members voluntarily, will not be effective without making sure that faculty members will be provided with resources, as well as with material and psychological support as signs of recognition of this effort of faculty members. So the faculty members can expect to find help, support, and rewards for seeking help.

The following conclusions are related to the second purpose of the study; to identify which of those reasons affect faculty members' decisions more strongly than others.

Conclusion 3:

The approximate order of the importance of the six reasons to accept the five suggested instructional design ideas is:

1. Motivation (perception of need to use these ideas).
2. Knowledge and skills about these ideas and expectation of success in applying them.
3. Availability of needed resources and the acceptance of these ideas in the departments.
4. Getting desirable rewards.

This is an approximation of the order because it was drawn as a composite from the order of the importance of these factors in each instructional design idea. As has been mentioned in the literature review chapter (Chapter II), the relevant literature showed little concern about the order of importance of factors involved in the adoption or

rejection of instructional ideas. Studies done by Hammons (1976) and by Rogers and others (1975) reported some findings that suggest the availability of needed resources which might be the most important factor considered by faculty members. As Conclusion 3 stated, the availability of needed resources was in third place along with the expectation of the acceptance of these ideas in the department. The difference in these findings may be attributed to the nature of instructional ideas used in both studies. The implementation of instructional ideas suggested by Rogers and others is more dependent on the availability of resources that must be provided by the institutions such as computers, computer programmers, etc., while the implementation of instructional ideas suggested by the present study is less dependent on the availability of such resources or similar ones. Therefore, the faculty members may give this factor different weight according to the types of instructional ideas used in the context of the study.

Motivation as measured by the perception of need to use the instructional design ideas was in first place in the order of the importance of the six factors. This finding supports psychological rationale, such as that discussed by Hull 1943; Atkinson, 1958, 1964; and Vroom, 1964, regarding the importance of the role of motivation in influencing

performance. In the present situation, the performance is the change of the instructional practices or more specifically the acceptance to use the suggested instructional ideas in instruction.

The knowledge and skills factor, and expectation of success factor were in second place. Being together in the second place may reflect the importance of the role of each factor as well as the close relationship between these factors. As Davis (1979) pointed out, to be useful, individual models of faculty performance in the change process must recognize that learning plays a central role in successful innovation. Learning affects faculty performance in two ways (1) indirectly, by changing his expectations of success; that is, the more information a faculty member has about an innovation, the more accurate his estimate of the probability of success, and (2) directly by providing specific implementation skills needed to successfully innovate.

Finally the reward factors was in fourth and last rank in the order of the importance. Kozma (1979) found that rewards took second place among four factors that he considered with relationship to the number of innovations used by faculty members. One possible interpretation of the findings of the present study is that the only recognized rewarding element in Saudi Arabian universities is promotion and the quality of faculty members instruction and his effort to improve it is not considered as a criteria to

evaluate his performance in order to be promoted. Therefore, this may make the faculty member have low expectation that his effort to improve instruction will be a source of rewards.

Implication of Conclusion 3:

Conclusion 1 suggests that six factors (reasons) were considered by receptive faculty members as factors influenced their decision to accept the suggested instructional design ideas. These factors, as has been mentioned in the implication of this conclusion, should be used by those who are responsible to design, conduct and evaluate instruction improvement programs as guidelines to state the objectives of such programs. However, additional information regarding the order of the importance of each factor in the decision to accept will help those who are responsible for improvement programs to be more capable in designing, conducting and evaluating these programs.

Conclusion 3 provides such information which suggests that even though all of these factors (reasons) should be considered in designing and conducting such programs, the weight and level of emphasizing each or pairs of these factors should be different from others. As Conclusion 3 suggests, the first thing needed to promote instructional changes is a creation of an unbalanced state in the individual faculty member's mind that he needs to improve his present instructional practices. This internal feeling will serve the motivating force for the faculty member to search

for a better approach to teaching. Second, programs to promote instructional change should provide a faculty member channels and sources of information about alternative instructional ideas. This knowledge about alternative ideas will help a faculty member to have more positive expectation of success. Third, programs to promote instructional change should provide resources that are needed to implement ideas, such as money, workshops for training, and consultations. Programs should also provide a supportive environment for innovative behavior in the departments. This may be done through group seminars in the departments or colleges that aim to create awareness in the faculty members about the importance of innovations in the instructional improvement process. Fourth, programs need to include creation of reward systems that consider instructional quality.

Conclusion 4:

The six reasons have the same level of importance when used in the rejection of the five suggested instructional design ideas except that the motivational factor (perceiving no need to use this idea) took first place in the rejection of personalized and self-instruction idea.

As has been mentioned previously, little has been said in the literature related to the order of the importance of barriers to accept using suggested instructional ideas. Rogers and others (1975) findings suggest that the unavailability of needed resources might be the most important factor. The findings of the present study suggest that the

six factors considered have the same importance. However for four of the instructional ideas, the motivation factor has the highest mean value of the strength of influence upon the decision. This may suggest that when the unreceptive faculty members perceive no need to use the suggested idea, the importance of the differences of other factors, implementation skills; expectation of being unsuccessful; unavailability of needed resources; not getting the desirable rewards, and unacceptability of the ideas in the department, will be a secondary concern to him. In other words, the other factors are equally unimportant to him in his decision to reject the instructional ideas.

Implication of Conclusion 4:

The implication of this conclusion is that the people who are responsible for designing, conducting, and evaluating programs encouraging unreceptive faculty members to improve their present instructional practices should give all these factors the same level of emphasis and concern to make these programs effective even though the emphasis of some factors should be delayed to a later stage of progress implementation (see implication of conclusions for further discussion on this point).

The following conclusion is related to the third purpose of considering the present study, the identification of differences in reasons given by receptive and unreceptive groups.

Conclusion 5:

The six reasons are considered equally by receptive and unreceptive groups to the suggested instructional design ideas. However, the following exceptions exist:

1. The factor relating to knowledge and skill is considered more by receptive faculty when deciding on all of the five suggested ideas.

2. The factors motivation and expectation of success are considered more by receptive groups when deciding on three of the suggested ideas; learning objectives, task description and analysis, and personalized self-instruction.

3. The factor availability of needed resources is considered more by receptive groups when deciding on only two suggested ideas, learning objectives and task description and analysis.

4. The factor rewards is considered more by receptive groups in only the learning objectives idea.

There is no discussion in previous studies of differences between receptive and unreceptive faculty members in considering the factors involved in the adoption process. However, knowledge about these differences, if any, is important to design programs that fit each group. For this reason, the present study tried to investigate this issue. As Conclusion 5 shows, the findings are mixed across the suggested instructional design ideas. That is, in some of the instructional ideas, some factors are considered more by receptive than unreceptive faculty members. One possible

interpretation to this mixed findings may be due to an interaction between differences in the suggested ideas and the factors. However, a general statement that can be made about this is that for most of the instructional ideas, the receptive and unreceptive groups did consider most of the factors used in the present study equally.

Implication of Conclusion 5:

As Conclusion 5 suggests in general, the persons who are responsible for instruction improvement should emphasize these factors equally when designing programs for receptive and unreceptive faculty members. However, some exceptions might exist such as learning of implementation skills and the expectation of success might be emphasized when designing programs for receptive more than when designing programs for unreceptive faculty members taking into consideration the nature of the ideas that these programs are offering. This is because for receptive group the initial step to adopt ideas, i.e., accepting the use of suggested ideas, is already established. Then learning how to apply the ideas should be emphasized at this stage for this group. This learning will contribute to make the receptive faculty member more confident that he will be successful in implementing the ideas. For the unreceptive group, however, the initial step is not yet established. Therefore, emphasizing learning how to apply the ideas at this stage will be of little useful effect. Then what is needed at this stage for the unreceptive group is emphasizing other factors that will

help establish acceptance, such as making unreceptive faculty members realize the need for suggested ideas. This can be achieved by providing them with information regarding the level of their present instructional practices quality as well as with information about the advantages of the suggested ideas.

Recommendation for Instructional Improvement

From the findings of present study and previous studies, the following recommendations are suggested to those involved in instructional improvement in Saudi Arabian universities.

1. There is a need to establish learning -- teaching and evaluation services centers in each university. The general aim of these centers should be to provide help to the individual faculty members to (a) diagnose his present instructional practices in a comprehensive and continuing manner, (b) to get the needed feedback by providing him with information about alternative instructional ideas and strategies. These services should not be imposed on faculty members, but should create an environment that makes an individual faculty member voluntarily seek help.

2. To increase the probability of achieving the aims of these centers, an effective reward system should exist. This reward system should consider all the roles of the faculty members as teacher, as researcher, as writer and as consultant. Therefore, the quality of teaching should be

taken into consideration whenever an evaluation is made of the faculty members' activities. This will prevent faculty members from overemphasizing other roles while making the instructional role a secondary activity. Also, the reward system should vary the types of rewards: leaves, time to travel, money and promotions. In addition, the numbers of each type of reward should be maximized. This will help to achieve the aim of rewarding all types of faculty members' roles, as well as rewarding any innovative behavior in each of the different roles. Also, timing of these rewards might be better if it is not on an annual or equal interval basis. This variation might increase the probability that faculty members will be continually active.

3. There is a need for strategies that help a faculty member to be aware of his identity as a teacher and not just as an academic scholar or researcher. Achieving this might be through two types of activities under two types of conditions. The first type for those who are already faculty members; the second for those who will be selected in the future. In the first condition, those who are responsible for instruction achievement might organize seminars and lectures on campus that discuss the nature of the role of faculty members as teachers and its relationship to other faculty members' roles. In the second, the selection process should consider the preparation for teaching as important criteria. This of course with the assumption that

the graduate programs, from which the faculty members will be selected, did consider this factor. However, the present condition of graduate programs does not help to rely on this assumption. The graduate programs are not considering the preparation for teaching as an element in their design and plans. Therefore, those who are responsible for instruction improvement should use all possible channels to make these programs aware of this matter.

All of these activities, conducting seminars and lectures about teaching; selecting faculty members that have background and experience in teaching; and making graduate programs prepare their graduates for this role, will be enough to create a level of awareness in the individual which in turn will contribute to the success of the efforts that are designed to give faculty members services in specific instructional ideas and practices.

4. The above-mentioned intellectual ideas need sufficient and consistent financial support in order to be implemented. Therefore, those who are responsible for the improvement of instruction should parallel their work with an effort to find sufficient sources for financing their activities. This may suggest that other sources, other than government sources, should be sought from the private sectors such as industrial and business. This not only will help to guarantee sufficient financial support, but also

will help to create accurate and clear exchange relationships between the universities and these social and economical institutions in the general context of development process in the society as a whole.

Recommendations for Further Research

This study represents an initial step in trying to better understand the factors involved in the adoption and rejection of instructional design ideas, which is an important step in the instructional improvement process. Two areas of future research are needed. First, this study should be replicated with better controls. Second, the relationships between the factors should be investigated.

Replication with better controls: This study deals with the factors involved in the acceptance and the rejection of instructional design ideas. Acceptance and rejection are measured on the basis of self reports with no attempt to verify whether these reports were accurate. This is not the same as studying the actual adoption or rejection. This suggests that the actual adoption or rejection should be documented by further research.

Replication is also needed to provide more precise measures of the variables (factors). These more precise measures could be used to increase the reliability of subject responses.

The replication is also needed to provide answers to the question of "What is the causal relationship between the factors and the use or nonuse of the suggested instructional design ideas?" The answer to this question is not apparent from a correlational study. To be answered accurately, true experimental design is needed. In such a design, the factors (independent variables) need to be manipulated in addition to controlling possible confounding variables.

Interrelationships between the factors: The second area of research that needs to be investigated is the interrelationships between the six classes of variables (factors). That is the question "How these six factors influence each other in the context of the adoption or rejection of suggested instructional design ideas?" Davis (1979) proposed a theoretical model to such relationships which need to be tested. Findings related to these questions have important implications in how instructional improvement programs should be organized in order to maximize their effectiveness.

Summary of Conclusions

The conclusions of the present study can be summarized as follows:

1. The factors or reasons given regarding the acceptance of suggested instructional design ideas in Saudi Arabian universities are:

- a. Knowledge and learning of the implementation skills of the ideas.
- b. Perceiving the need to use the ideas (motivation).
- c. The expectation of success to apply these ideas.
- d. The availability of needed resources.
- e. Getting desirable rewards.
- f. Acceptance of the ideas by the departments.

2. The factors or reasons given for rejection by the suggested instructional design ideas in Saudi Arabian universities are:

- a. The absence of the implementation skills of the ideas.
- b. Perceiving no need to use these ideas.
- c. Expectation of failure in applying these ideas.
- d. The unavailability of needed resources.
- e. The expectation of not getting the desirable rewards.
- f. The unacceptability of the ideas in faculty members' departments.

3. The approximate order of the importance of the six factors or reasons to accept ideas is (a) motivation, (b) skills to implement the ideas and expectation of success of implementation, (c) availability of needed resources and the acceptance of these ideas in the departments, and (d) getting desirable rewards.

4. There are no differences between the six factors or reasons on terms of level of importance in the rejection of the five suggested instructional design ideas.

5. Receptive and unreceptive faculty members generally considered the six factors or reasons equally in their decisions.

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APPENDICES

APPENDIX A

ENGLISH AND ARABIC VERSIONS OF THE COVERLETTER AND THE QUESTIONNAIRE

Purpose and the Importance of the Present Study

Dear Faculty Member:

As you know, the role of higher education in our society development is important since it is the main source for providing the manpower that determines development in the different aspects of life. Saudi Arabian universities these days are facing enormous responsibilities in providing the educational environment which makes the students able to meet their needs as well as their interests and therefore have a better accommodation in society.

The professor in the university is considered one of the most important elements in higher education and therefore his quality and effectiveness has an effect on the improvement of the quality of this level of education. For this reason, in the universities around the world, effort is being made to provide possible ways to develop the quality of faculty members. Universities in Saudi Arabia are concerned about the importance and the necessity of providing the means to achieve such goals. A clear insight as to the type of these means is needed. Faculty members are the first ones who should be considered for identifying these means because they are the persons most directly involved in the process of education. Therefore, the purpose of the present study is to ask your opinions about the factors that you see having an important effect in the adoption of instructional innovations. The importance of this study is to provide some information which might help the faculty members, as well as the administration, to develop an effective as well as a more economic way.

Dear faculty member, the questionnaire which is between your hands consists of three main parts:

Part 1 - General information which will be used only for the purpose of this study.

Part 2 - Description of instructional design ideas are presented: 1) Learning objectives, 2) task description and task analysis, 3) learning hierarchies, 4) lesson planning, and 5) personalized self-instruction method. After each idea description, a question is asked whether you would use this idea or not. Your answer to this question will be to check (X) either the Yes box or the No box. Then check the number of the statements given which represent your reason for your decision. Under each reason state the degree of influence that the reason had on your decision by circling one number on the five-point scale (1, 2, 3, 4, 5). Number one indicates very little influence and number five indicates very much influence.

Directions for answering this questionnaire:

1. This questionnaire was designed to measure your opinions; your opinions will be confidential and no one will be able to recognize that these are your opinions. Therefore, do not write anything that might identify you such as your name or the university in which you teach.

2. Please do not discuss this questionnaire with others -- even to clarify something. If you have questions about the questionnaire, feel free to ask the researcher.

3. Please read each idea description and then answer all the questions following the descriptions.

I am grateful for your cooperation.

Sincerely,

Saleh I. AL-Lihiedan
Researcher

Part Two

Instructions:

Each of the following cases represents a new idea for teaching. Under each case you will find a number of reasons that might or might not influence you in deciding to employ this idea or not. Each reason has a scale of five points representing five degrees of influence for this reason. Your task for every case is, first, to point out whether you would use this idea or not in the present time in planning your teaching by a checkmark (X) in the Yes or No boxes. Second, to check the number of the statements below which represent your reasons for your decision. Third, circle the number on the scale under each questions which ask to state the degree of influence that the reasons had on your decision.

IDEA 1:

Learning Objective:

Descriptions of the idea:

Most faculty members have some goals in mind when they plan their course and lessons. These goals are often so vague and ambiguous that they become quite worthless for planning or evaluation purposes. A learning objective, on the other hand, is a clear and precise description of an instructional goal -- "It is a description of the behavior expected of students after teaching."

Example of an instructional goal and a learning objective:

Instructional goal: "The students know how to calculate the arithmetic average."

Learning objective: "The students will write the arithmetic average in accord with the text's formula from 60 raw scores. The average must be equal to the sum of the raw scores divided by the number of scores. Calculator or text is prohibited."

Uses of learning objectives:

Learning objectives are written to serve as guides for:

- 1 - Choosing subject matter content. In the above example the instructor should provide the students a definition of arithmetic average, definition of the formula that the text used is suggested and its terms, raw scores of actual or hypothetical data.
- 2 - Sequencing topics of the lesson. In the present example the instructor may first present the definition of the arithmetic average. Then explain the formula and its terms. Then apply the formula using the available data.
- 3 - Allocating teaching time. The instructor will be able to estimate the time that is needed to teach the topic more precisely than if the instructional objective was not written in a behavioral manner. In the present example, the teaching time may be one-half of an hour.
- 4 - Selection of materials and procedures to be employed in the actual teaching process. In the present example the text books that will be used should be available. Raw scores of data, actual or hypothetical.
- 5 - Providing standards for measuring student achievement. In the present example to know that the student did learn to calculate arithmetic average,

the instructor will give each student 60 raw scores and ask him to write on paper the arithmetic average showing the steps of their work without using the text book or calculator.

- 6 - Learning objectives provide standards for evaluating the quality and efficiency of the instruction. This means that if the student shows from the test they were given that they are able to calculate the arithmetic mean, then this shows that the instructions given were successful. If not, this means that something went wrong in the process of instruction which should be discovered and corrected.

Please answer the three sets of questions below:

1 - Would you use this idea when planning your teaching?

NO

YES

If No

If Yes

2. Please check (☐) the number of the statements below which represent your reasons for your decision.

2. Please check (☐) the number of the statements below which represent your reasons for your decision.

☐ 1. I do not know how to apply this idea.

☐ 1. I know how to apply this idea.

☐ 2. I do not see a need for using this idea.

☐ 2. I see a need for using this idea.

☐ 3. I think I will not be successful in applying this idea.

☐ 3. I think I will be successful in applying this idea.

☐ 4. I think I will not be able to get the resources needed to apply this idea.

☐ 4. I think I will be able to get the resources needed to apply this idea.

☐ 5. If I applied this idea I will not get the rewards I desire.

☐ 5. If I applied this idea I will get the rewards I desire.

☐ 6. I think this idea would not be acceptable in my department.

☐ 6. I think this idea would be acceptable in my department.

3. Please circle the number on the scale which represents your best answer to the following questions.

3. Please circle the number on the scale which represents your best answer to the following questions.

a. To what extent did your unfamiliarities about how to apply this idea (reason 1) influence your decision?

a. To what extent did your familiarities about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5
 moder-
very a ate very
little little amt much much

1 2 3 4 5
 moder-
very a ate very
little little amt much much

b. To what extent did your perception of your need of this idea (reason 2) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did unavailability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did unacceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

b. To what extent did your need for the idea (reason 2) influence your decision.

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your expectations of success (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did the availability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the availability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did acceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

IDEA 2:

Task Description and Task Analysis:

Task description is a written or diagrammed explanation of how a task in an instructional objective is to be properly performed. Task analysis is an examination of the task to analyze it to its different components which usually include skills, decisions, rules, principles, facts, concepts, and attitude. Some tasks may include some of these components and some may include all of them.

Example: If the topic of the lesson is how to write an essay, then the task description should have the following contents:

- 1 - Detailed explanations of how to write an essay.
- 2 - Detailed explanation of the characteristics of the introduction, contents and the conclusion of the essay -- which of these parts comes first and which comes last and which comes in the middle and why.
- 3 - Detailed explanation of the grammatic rules and principles of language.
- 4 - Detailed explanation about the organization of ideas.

Task analysis is to see the components of the description of how to write an essay. Therefore in the example presented we may find concepts such as essay, introduction, content and conclusion; rules such as not putting the introduction after the contents and putting the conclusion at the end; principles such as "if the introduction is put after the content then the reader will be confused just as he would be if you put the subject after the verb."

Purposes of use are:

- 1 - to increase the probability that all content essential for the achievement of an objective
- 2 - to eliminate content which is irrelevant to the objective.
- 3 - to pinpoint the prerequisite requirement to precede and to successfully complete the course or lesson.
- 4 - to indicate the proper sequence for presenting the lesson materials.
- 5 - to assist students in following the important steps of a demonstration.

- 6 - to provide precise and accurate instructional methods for each type of learning included in the topic of the lesson.
- 7 - to make sure revisions in content and sequence can easily be made when necessary.
- 8 - to provide remediation for the students who make errors.

Please answer the three sets of questions below:

1 - Would you use this idea when planning your teaching?

NO

YES

If No

If Yes

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

— 1. I do not know how to apply this idea.

— 1. I know how to apply this idea.

— 2. I do not see a need for using this idea.

— 2. I see a need for using this idea.

— 3. I think I will not be successful in applying this idea.

— 3. I think I will be successful in applying this idea.

— 4. I think I will not be able to get the resources needed to apply this idea.

— 4. I think I will be able to get the resources needed to apply this idea.

— 5. If I applied this idea I will not get the rewards I desire.

— 5. If I applied this idea I will get the rewards I desire.

— 6. I think this idea would not be acceptable in my department.

— 6. I think this idea would be acceptable in my department.

3. Please circle the number on the scale which represents your best answer to the following questions.

3. Please circle the number on the scale which represents your best answer to the following questions.

a. To what extent did your unfamiliarities about how to apply this idea (reason 1) influence your decision?

a. To what extent did your familiarities about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5
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1 2 3 4 5
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very a ate very
little little amt much much

b. To what extent did your perception of your need of this idea (reason 2) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did unavailability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did unacceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

b. To what extent did your need for the idea (reason 2) influence your decision.

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your expectations of success (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did the availability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
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e. To what extent did the availability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
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f. To what extent did acceptability of the idea by your department (reason 6) influence your decision?

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IDEA 3:
Learning Hierarchies:

Many subjects taught in schools have an organization that can be readily expressed as learning hierarchies. That is, the learning objective may be shown to be composed of prerequisite skills and ideas which have been previously learned or they may have been just learned a while ago. For example, if the learning objective is that "the student will be able to compute in writing the arithmetic average from 60 raw scores, then by analysis this objective necessitates that the student must have previously learned how to add, subtract and divide numbers.

Learning hierarchies imply that learning has a cumulative character in which the acquisition of specified skills or ideas establish the possibility of learning a number of more complex ideas and skills. As a result the students' intellectual development has occurred and therefore he/she will be able to solve a great variety of novel problems.

To maximize learning, the instructor should clearly arrange ideas and topics of the course or lesson into patterns which show the prerequisite relationships among them so the first idea in the topic becomes prerequisite to the next one and so on.

Please answer the three sets of questions below:

1 - Would you use this idea when planning your teaching?

NO

YES

If No

If Yes

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

— 1. I do not know how to apply this idea.

— 1. I know how to apply this idea.

— 2. I do not see a need for using this idea.

— 2. I see a need for using this idea.

— 3. I think I will not be successful in applying this idea.

— 3. I think I will be successful in applying this idea.

— 4. I think I will not be able to get the resources needed to apply this idea.

— 4. I think I will be able to get the resources needed to apply this idea.

— 5. If I applied this idea I will not get the rewards I desire.

— 5. If I applied this idea I will get the rewards I desire.

— 6. I think this idea would not be acceptable in my department.

— 6. I think this idea would be acceptable in my department.

3. Please circle the number on the scale which represents your best answer to the following questions.

3. Please circle the number on the scale which represents your best answer to the following questions.

a. To what extent did your unfamiliarities about how to apply this idea (reason 1) influence your decision?

a. To what extent did your familiarities about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5
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1 2 3 4 5
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little little amt much much

b. To what extent did your perception of your need of this idea (reason 2) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
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c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?

1	2	3	4	5
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d. To what extent did unavailability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
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f. To what extent did unacceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

b. To what extent did your need for the idea (reason 2) influence your decision.

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your expectations of success (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did the availability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the availability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did acceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

IDEA 4:
Lesson Planning

The planning of a lesson as a whole is a set of procedures designed to support learning the topics of the lessons. Instructional design experts defined nine components of lesson planning.

- 1 - Gaining attention of the students. This can be done by introducing a novel situation in the introduction of the lesson, appealing to students' motives for understanding their environment. The instructor can achieve this by raising questions that need not be answered in the moment; also he can present objects, draw diagrams, etc. For example, if the topic is about the grammatical rule of "the subject" in the sentence then the instructor may ask students these questions: What does "subject" mean? Why do we need this concept to be in the sentences? What forms does it take?
- 2 - Informing the students of the objectives of the lesson. In this phase the instructor should establish a specific expectancy of what the students will be able to do when the lesson has been completed. In the example that has been given, the objective may be stated as "the student will be able to point out all noun and pronoun subjects that exist in a given paragraph of an essay and explain why they are so without text or help of instructor." The instructor can communicate this objective to the students in verbal or written form or both.
- 3 - Stimulating recall. In this phase of the plan the instructor should help the student recall the previously learned information that relates to the new topic. In the example presented, the instructor may use questions by asking students to define verbs, sentence, etc.
- 4 & 5 - Presenting the material to be learned and providing guidance to make this learning possible. A series of communications in the form of "hints" or questions or other may be said to have the function of learning guidance. They are helping the student to learn by discovering and they do not tell the students the answers. In the present example the instructor may ask the students to point out the word in the sentence that they consider the subject after giving a clear definition of "subject" instead of pointing out the word himself.
- 6 & 7 - Eliciting the performance and providing feedback. In these two steps, the instructor should make an initial test by asking the students to show that

they know how to do what has been taught. The instructor wants them not only to convince him/her, but to convince themselves as well. The instructor should give feedback concerning the correctness or degree of correctness of the lesson's performance. In the example given, the instructor may ask the student to point out the subjects in a written sentence, orally, and answer why he called this part of the sentence a subject. If any degree of correctness was not present, then the instructor should provide this part of the correctness.

- 8 - Enhancing retention and transfer. The instructor in the learning guidance stage should provide a meaningful context by which to learn the material. This has been found to offer the best assurance that the information can be recalled and it provides a number of different possibilities as cues for the retention of information. The way might be "practicing" -- that is, to provide more examples following the initial learning. In the present example, the instructor may give more examples of sentences which contain "subjects" in this phase of giving feedback to the statements.

As for assurance of transfer of learning, it appears that this can be best done by setting some variety of new tasks for learners -- tasks that differ substantially from those used for the learning itself. In the present example the instructor may ask the student to supply a sentence that includes a subject that differs from what has been presented while teaching.

- 9 - Assessing performance. In this phase of the lesson plan, the instructor should provide the means to show convincing evidence that the performance exhibited by the learner in eliciting the performance phase is valid and reliable; that the student does the performance accurately, reflecting on the objective and consistency across the situation. This can be done by conducting a formally-planned assessment which requires a construction of valid and reliable tests. In the given example, the instructor may construct a test that has the following elements:

- a. a short essay followed by questions that ask the students to point out the subjects, their type, and why they are the subjects of the sentences.
- b. questions which ask the student to supply sentences that include subjects.
- c. a list of sentences that include subjects which are underlined and questions that ask why these are considered subjects.

Please answer the three sets of questions below:

1 - Would you use this idea when planning your teaching?

NO

YES

If No

If Yes

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

— 1. I do not know how to apply this idea.

— 1. I know how to apply this idea.

— 2. I do not see a need for using this idea.

— 2. I see a need for using this idea.

— 3. I think I will not be successful in applying this idea.

— 3. I think I will be successful in applying this idea.

— 4. I think I will not be able to get the resources needed to apply this idea.

— 4. I think I will be able to get the resources needed to apply this idea.

— 5. If I applied this idea I will not get the rewards I desire.

— 5. If I applied this idea I will get the rewards I desire.

— 6. I think this idea would not be acceptable in my department.

— 6. I think this idea would be acceptable in my department.

3. Please circle the number on the scale which represents your best answer to the following questions.

3. Please circle the number on the scale which represents your best answer to the following questions.

a. To what extent did your unfamiliarities about how to apply this idea (reason 1) influence your decision?

a. To what extent did your familiarities about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5
 moder-
very a ate very
little little amt much much

1 2 3 4 5
 moder-
very a ate very
little little amt much much

b. To what extent did your perception of your need of this idea (reason 2) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did unavailability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did unacceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

b. To what extent did your need for the idea (reason 2) influence your decision.

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your expectations of success (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did the availability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the availability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did acceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

IDEA 5:

Personalized Self-Instruction

Personalized self instruction (PSI) is an instructional strategy that allows students to learn material and be tested on it at their own speed. The aim of this instructional method is to maximize learning by considering the individual differences between students in ability, speed of learning and background in the subject matter. PSA has five major characteristics:

- 1 - The course is divided into units. The topics of the course are categorized into major groups according to their similarities. These major groups or units are organized according to their prerequisite relationships. The student must master one unit before going on to the next. The instructor may stipulate that 80 percent of the material should be learned from the first unit in order to allow students to go on to the second unit.
- 2 - The written word is the main mode of instruction. The topics of the course are made available to the students in clear and detailed notes and books. Video tapes and films supplement the text.
- 3 - Lectures are used to increase student motivation -- to learn rather than as means of conveying critical information. Class time can be used to answer questions.
- 4 - PSI permits students to pace themselves, proceeding through the course as quickly or as slowly as they wish.
- 5 - Tests, assignments, and feedback are done by each student when he is ready. The test and assignments for each unit can be repeated more than once. Usually the instructor provides different forms for repeating each unit test so that the student who fails in a first attempt will be given a different form the second time. Feedback is given to the student by the instructor after taking any test or doing an assignment.

Please answer the three sets of questions below:

1 - Would you use this idea when planning your teaching?

NO

YES

If No

If Yes

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

2. Please check (✓) the number of the statements below which represent your reasons for your decision.

— 1. I do not know how to apply this idea.

— 1. I know how to apply this idea.

— 2. I do not see a need for using this idea.

— 2. I see a need for using this idea.

— 3. I think I will not be successful in applying this idea.

— 3. I think I will be successful in applying this idea.

— 4. I think I will not be able to get the resources needed to apply this idea.

— 4. I think I will be able to get the resources needed to apply this idea.

— 5. If I applied this idea I will not get the rewards I desire.

— 5. If I applied this idea I will get the rewards I desire.

— 6. I think this idea would not be acceptable in my department.

— 6. I think this idea would be acceptable in my department.

3. Please circle the number on the scale which represents your best answer to the following questions.

3. Please circle the number on the scale which represents your best answer to the following questions.

a. To what extent did your unfamiliarities about how to apply this idea (reason 1) influence your decision?

a. To what extent did your familiarities about how to apply this idea (reason 1) influence your decision?

1 2 3 4 5
 moder-
very a ate very
little little amt much much

1 2 3 4 5
 moder-
very a ate very
little little amt much much

b. To what extent did your perception of your need of this idea (reason 2) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your perception of not being successful in applying this idea (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did unavailability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the unavailability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did unacceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

b. To what extent did your need for the idea (reason 2) influence your decision.

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

c. To what extent did your expectations of success (reason 3) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

d. To what extent did the availability of the needed resources (reason 4) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

e. To what extent did the availability of desirable rewards (reason 5) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

f. To what extent did acceptability of the idea by your department (reason 6) influence your decision?

1	2	3	4	5
		moder-		
very	a	ate		very
little	little	amt	much	much

- بسم الله الرحمن الرحيم -

أهداف وأهمية البحث

المحترم .

المكرم - عضو هيئة التدريس

السلام عليكم ورحمة الله وبركاته وبعد ،

أخي الكريم ان للتعليم الجامعي كما تعلم دورا كبيرا وسهاما في حياة المجتمعات حيث يعتبر من الركائز الهامة في اعداد هذه المجتمعات بالقوى البشرية التي تدار بها عجلة التطور في مختلف ميادين الحياة . ان الجامعات اليوم في المملكة العربية السعودية تواجه مسؤولية عظمى في تهيئة الجوال العلمي الذي يمكنها من مواجهة متطلبات التطور الذي --- تمينه البلاد في الفترة الحاضرة في شتم لمادين . وكما تعلم فان الأستاذ الجامعي يعتبر حجر الزاوية في العملية التربوية في التعليم العالي ولتنوعية وكفاءة الأستاذ الأثر الكبير في رفع مستوى هذا النوع من التعليم ، من هنا كانت الجامعات في مختلف دول العالم تسعى حاهدة لوضع السبل التي تكفل رفع مستوى كفاءة هيئة التدريس بها حتى تؤدي دورها بشكل فعال ومستمر . ان الجامعات في المملكة اليوم تشعر بضرورة وأهمية توفير السبل التي ترفع من مستوى وكفاءة عضو هيئة التدريس والتي من بينها توفر جميع الامكانيات التي بها يستطيع الأستاذ ان يجدد ويبتكر في طرق تدريسه التي تعتبر من أهم العناصر التي تجعل عملية التعلم والتعليم مؤثرة وشرية . ان تهيئة هذه الامكانيات لا بد وان يقوم على أساس من وضوح الرؤية النوعية لهذه الامكانيات . وعضو هيئة التدريس هو أول وأهم مصدر لتحديد هذه النوعية وأهميتها حيث انه يعيش ملامسات وطروف عملية التدريس . ان الدراسة التي أقوم بها أخي الكريم انما تهدف في أساسها الى معرفة وجهة نظرك اتجاه العوامل المؤثرة عليك في عملية التجديد والتطوير في طرق التدريس ان أهمية هذه الدراسة تكمن في انها ستوفر لهيئة التدريس وجهته الادارية في الجامعات على حد سواء بعض المعلومات التي ستساعدهم على تكوين رؤية واضحة لهذه العوامل ما يجعل النهوض بكفاءة التدريس بشكل عام وكفاءة الأساناد الجامعي بشكل خاص يسرا وفعالا .

أخي الكريم عضو هيئة التدريس ان هذا الاستبيان الذي بين يديك يحتوي على جزئين :

الجزء الأول - ويهدف الى جمع معلومات عامة بموضوع التخصص والدرجة العلمية والجنس والعمر الخ . . . هذه المعلومات لن تستخدم الا لخدمة هذه الدراسة .

الجزء الثاني - ويحتوي على وصف خمسة أفكار من مآخذ يعتبر تجديدا في طرق التدريس

(١ - صيغة الهدف التعليمي ٢ - وصف المهمة التعليمية وتحليلها الى مكوناتها .

٣ - التعليم التسلسلي ٤ - خطة عرض الدرس ٥ - الطريقة الفردية في التعليم)

يتبع كل تعريف عام بهذه الافكار ما يلي :

- ١ - سؤال من مدى رغبتك في تطبيق هذه الفكرة واجابتك عن هذا السؤال تكون بوضع علامة (x) في المربع الذي بجانب كلمة نعم أو لا .
- ٢ - مجموعة من العبارات التي قد تكون سببا في أخذ القرار باستعمال هذه الفكرة أو عدم استعمال هذه الفكرة والذي عليك هو أن تضع علامة (x) أمام العبارة أو العبارات التي تراها سببا في اتخاذ قرارك .
- ٣ - مجموعة الأسئلة التي تدور حول درجة تأثير الأسباب التي اعتبرتها في اجابتك على السؤال الثاني والذي عليك أن تضع دائرة حول الرقم الذي يمثل درجة تأثير هذه العوامل على قرارك .
- كذلك ستجد فراغا في نهاية هذا الاستبيان للكتابة بأرائك ومقترحاتك حول هذه الدراسة - أخيرا أخصي عضو هيئة التدريس أود أن اذكرك ببعض الارشادات التي يجب أن تؤخذ بعين الاعتبار في اجابة هذا الاستبيان :- تذكر
- ١ - هذا الاستبيان يهدف للتعرف على وجهة ألتقاء الموضوع المذكور آنفا ولهذا فان آرائك ستكون سرية ولا أحد سوف يستطيع أن يعرف أن هذاه الآراء آرائك . لهذا لا تكتب أى شئ * يدل على شخصيتك كاسلك أو اسم الجامعة التي تعمل بها في أى جزء من هذا الاستبيان .
- ٢ - من فضلك لا تسأل أحد من زملائك أو غيرهم حتى ولو كان لتوضيح ما قد يخفض عليك وذلك من أجل تحرى موضوعية البحث .
- ٣ - اذا كان هناك غموض في أى جزء من أجزاء هذا الاستبيان فلا تتردد في سؤال الباحث .
- ٤ - من فضلك اقرأ التعريف بكل فكرة ثم اجب على الأسئلة التي تعقبها .
- شاكرًا لكم تعاونكم .

الباحث
صالح ابراهيم الكيدانه
جامعة بومام محمد بن سعود
بومام

الجزء الأول .

معلومات عامة :-

ارشادات :-

أخى عنوهية التدريس ضع من فضلك علامة (✓) أمام الاجابة المناسبة أو

اكتب الاجابة المطلوبة فى الفراغ المناسب :-

١ - تخمعه : _____

٢ - المستوى العلمى : _____

أستاذ : _____ أستاذ مشارك : _____

أستاذ مساعد : _____ محاضر : _____ معيد : _____

٣ - الدرجة العلمية التى تحطها : _____

بكالوريوس : _____ دبلوم : _____ ماجستير : _____

دكتوراه : _____ درجة أخرى غير ما سبق : _____

٤ - الجهة التى تحملت منها على أعلى درجة علمية : الملكة العربية السعودية _____

قطر عمى : _____ قطر غمى : _____ قطر شرقى : _____

٥ - طبعة العمل (من ناحية المقد) _____

خفرغ : _____ غير خفرغ : _____

٦ - الجنسية : _____

٧ - العمر : _____ سنة .

٨ - الجنس : _____

ذكور : _____ انثى : _____

٩ - مدة الخبرة فى التدريس الجامعى : _____ سنة .

١٠ - قدر النسبة المئوية للوقت الذى تقضيه اسبوعيا فى أداء كل من النشاطات

الآتية :-

النسبة المئوية	نوعية النشاط
	١- التدريس فى : المرحلة الجامعية مرحلة الدراسات العليا
	٢- الخدمات : ارشادات الطلبة . ارشاد اخرين غير الطلبة .
	٣- عمل بمـ _____
	٤- كتابة بمـ _____
	٥- حضور اجتماعات لأعمال أكاديمية .
	المجموع ١٠٠ %

الجزء الثاني -

ارشادات :

أخى عضو هيئة التدريس :-

كل فكرة من الأفكار التالية قد تحتل فكرة جديدة فى طرق التدريس بعد التعريف العام بكل فكرة هناك عدد من المواقف التى قد تدفعك أو تمنعك استخدام هذه الأفكار والمفاهيم .

هذه المواقف ذات درجة تأثير من قليل جدا الى كثير جدا (١-٥) والذي عليكم أخى الكريم حيال كل فكرة أن تعمل ما يلى :-

١ - أن تبين ما اذا كنت تريد أن تطبق هذه الفكرة فى التخطيط لتدريسك أم لا وذلك بوضع علامة (x) فى المربع أمام نعم أو لا .

٢ - ضع علامة (/) أمام العبارة أو العبارات التى تراها سهبا فى اتخاذ قرارك سوى كان نعم أو بلا .

٣ - ضع دائرة حول الرقم الذى يمثل درجة تأثير هذه المواقف على قرارك عند اجابتك على الأسئلة الخاصة بهذا الموضوع .

الفكرة الأولى :-

صفة الهدف التعليمى :-

أكثر أعضاء هيئة التدريس يكون لديهم بعض الاهداف التعليمية عندما يخططون المواد الدراسية أو الدروس . هذه الاهداف غالبا ما تكون عامة وغير واضحة بحيث لا تساعدهم كثيرا فى وضع خطة تعليمية سليمة ودقيقة . لهذا فان الاهداف التعليمية يجب أن تصاغ بصيغة سلوكية أو أنها يجب أن تصف السلوك المتوقع من المتعلم بعد انتهائ عملية التدريس .

أمثلة

١ - هدف بصيغة عامة وغير سلوكية : أن يعرف الطالب كيف يحسب المتوسط الحسابى .

٢ هدف بصيغة سلوكية : الطلبة يكتبون المتوسط الحسابي من ستين قيمة حسب المعادلة المذكورة في الكتاب الدراسي . المتوسط الحسابي يجب أن يكون مساويا لمجموع القيم على عدد القيم بدون استخدام آلة حاسبة أو الكتاب الدراسي .
أغراض استخدام الصيغة السلوكية للأهداف :-

- ١ - الاختيار السليم للمحتوى الدراسي في المثل المذكور الطدرس يجب أن يعطى الطلبة تعريفا لفهوم المتوسط الحسابي ، تعريف واضح بالمعادلة ومحتوياتها . فهم فرضية أو واقعية .
- ٢ - ترتيب الأفكار ترتيبا منطقيا تسلسليا في المثل المذكور . . . الأستاذ ربما يجب أن يبدأ بإعطاء التعريف بفهوم المتوسط الحسابي ثم يشرح المعادلة ثم يعطى مثلا في تطبيقها استخدام القيم الموفرة لديه .
- ٣ - تحديد الوقت المحتاج اليه لتدريس المادة . فالهدف عندما يصاغ بصيغة سلوكية يساعد كثيرا على تقدير الوقت المحتاج اليه لتقديم المادة التي سوف تساعد على تحقيق هذا الهدف . في المثل المذكور ربما يستطيع الأستاذ أن يضع ٣٠ دقيقة .
- ٤ - اختيار المواد المحتاجة لتدريس المادة فضلا الكتاب يجب أن يكون متوفرا ، القيم التي سوف تستخدم يلزم ان تكون معدة . . . الخ .
- ٥ - وضع معايير دقيقة لتقييم تحصيل الطالب بحسب صيغة الهدف المذكور أنظا .
الأستاذ يجب أن يعطى الطلبة امتحانا تحريريا يحتوي على أسئلة تطلب أن بحسب المتوسط الحسابي لقيم لا تقل على ستين قيمة مع تباين كيف وصل الى الحل وان لا يستخدم آلة حاسبة أو كتاب أثناء الامتحان .
- ٦ - وضع معايير دقيقة لتقييم عملية التدريس فأى نقص في تحقيقه الهدف سوف يعتبر مؤشرا على عدم نجاح عملية التدريس وبالتالي يجب ان يبحث السبب ويوصف العلاج اللازم .

من فضلك احب على الاسئلة التالية :

أولا : هل تود أن تطبق هذه الفكرة عندما تحضر للتدريس ؟

لا ☐

ثانيا : اذا كانت الاحابة بلا فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار

- (١) لا أعرف كيف اطبق هذه الفكرة .
- (٢) لا أرى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني لن أنجح في تطبيق هذه الفكرة .
- (٤) اعتقد اني لن استطيع الحصول على موارد المعلومات والكفايات اللازمة لتطبيق هذه الفكرة

(٥) اذا طبقت هذه الفكرة فلن احصل على الكفاية التي اريها .

(٦) اعتقد ان هذه الفكرة لن تقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل احابتك على الاسئلة التالية .

(١) الى اي مدى اثردم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثردم رغبةك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

نعم ☐

ثانيا : اذا كانت الاحابة بنعم فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) اعرف كيف اطبق هذه الفكرة .
- (٢) ارى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني سأنجح في تطبيق هذه الفكرة .
- (٤) اعتقد اني استطيع الحصول على موارد المعلومات والكفايات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة سأحصل على الكفاية التي اريها .

(٦) اعتقد ان الفكرة ستقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل اجابتك على الاسئلة التالية .

(١) الى اي مدى اثردم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثردم رغبةك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

٣ (الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٤ (الى اى مدى اثر اعتقادك بقدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٥ (الى اى مدى اثر توقعك الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٦ (الى اى مدى اثر اعتقادك بأن هذه
الفكرة متقبل فى القسم الذى تعمل
فيه (السبب رقم ٦) على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٣ (الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٤ (الى اى مدى اثر اعتقادك لعدم قدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٥ (الى اى مدى اثر توقعك لعدم الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

٦ (الى اى مدى اثر اعتقادك بأن هذه الفكرة
لن تقبل فى القسم الذى تعمل فيه (السبب
رقم ٦) على قرارك .

١	٢	٣	٤	٥
جدا قليل	قليل	متوسط	كثير	جدا كثير
التأثير	التأثير	التأثير	التأثير	التأثير

المكسرة الثانية :

المهمة التعليمية كفيتها وتحليلها الى مكوناتها :

وصف المهمة التعليمية المراد تدريسها عبارة عن شرح مكتوب يوضح الكيفية التي بها يجب ان تتعلم هذه المهمة . وتحليل المهمة التعليمية هي بيان مكونات هذه المهمة والتي عادة تشتمل على (١) قدرات حركية او فكرية (٢) قرارات (٣) قواعد (٤) مبادئ (٥) حقائق (٦) مفاهيم (٧) اتجاهات . يحفر المهام التعليمية تحتوى على كل هذه المكونات والمفرد قد يحتوى على بعضها فقط .

مثال : اذا كانت المهمة التعليمية مثلا ان تتعلم كيفية كتابة مقال فوصف هذه المهمة التعليمية يمكن ان يشتمل على الاشياء التالية :

- (١) شرح تفصيلي عن عناصر المقال : مقدمة ، محتويات ، خاتمة .
 - (٢) شرح تفصيلي عن عناصر كل من هذه العناصر ، اين تكون كل من هذه العناصر ولماذا .
 - (٣) شرح تفصيلي عن القواعد النحوية واللغوية .
 - (٤) شرح تفصيلي عن كيفية تنظيم الافكار .
- اما تحليل هذه المهمة التعليمية الى مكوناتها فانا نجد في المثال السابق المكونات التالية :
- مفاهيم : مقال . مقدمة . محتوى . خاتمة .
 - قواعد : المقدمة يجب ان تكون قبل المحتوى . . . والخاتمة يجب ان تكون في نهاية المقال .
 - مبادئ : اذا وضعت المقدمة بعد المحتوى فالقارئ سوف لا يستوعب الفكرة .

الاهداف من استخدام هذه الفكرة :

- (١) لزيادة احتمالية وجود المحتويات الضرورية لتحقيق الهدف من وراء هذه المهمة التعليمية
- (٢) لاستبعاد المحتويات التي ليست لها صلة في الموضوع .
- (٣) لبيان المعلومات التي يجب سبق تعلمها من أجل ان يتعلم المادة .
- (٤) لبيان الترتيب السليم لعرض الافكار التي يحتوى عليها الدرس .
- (٥) لمساعدة الطلبة في متابعة النقاط الرئيسية اثناء العرض .
- (٦) لاختيار الطريقة التدريسية السليمة لكل مكونات المهمة التعليمية المختلفة .
- (٧) لتسهيل مراجعة محتويات المادة وترتيبها عند الضرورة لذلك .
- (٨) لاعطاء الطلبة الذين صدرت عنهم بعض الاخطاء التصحيح اللازم .

من فضلك احب على الاسئلة التالية :

أولا : هل تود أن تطبق هذه الفكرة عندما تحضر للتدريس ؟

نعم ☐

ثانيا : اذا كانت الاحابة بنعم فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) اعرف كيف اطبق هذه الفكرة .
- (٢) ارى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني سأنجز في تطبيق هذه الفكرة .
- (٤) اعتقد اني استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة سأحصل على الكفاءة التي اريها .

(٦) أعتقد ان الفكرة ستقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل اجابتك على الاسئلة التالية .

- (١) الى اي مدى اثرت معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

- (٢) الى اي مدى اثرت فهمك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

لا ☐

ثانيا : اذا كانت الاحابة بلا فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) لا أعرف كيف اطبق هذه الفكرة .
- (٢) لا أرى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني لن أنجح في تطبيق هذه الفكرة .
- (٤) اعتقد اني لن استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة فلن احصل على الكفاءة التي اريها .

(٦) أعتقد ان هذه الفكرة لن تقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل اجابتك على الاسئلة التالية .

- (١) الى اي مدى اثرت عدم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

- (٢) الى اي مدى اثرت عدم فهمك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك لعدم قدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك لعدم الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه الفكرة
لن تعمل فى القسم الذى تعمل فيه (السبب
رقم ٦) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك بقدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه
الفكرة ستعمل فى القسم الذى تعمل
فيه (السبب رقم ٦) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

الفكرة الثالثة : التعلم التلصي :

كثيرا من الموضوعات التي تدرس في الجامعات لها تنظيم منطقي اي ان اي هدف تعليمي يتكون من مجموعة من الافكار ذات الصلة فيها بينها بحيث ان التعلم السابق لبعضها يعتمد اعتمادا كلي على الاخر . مثلا تعلم كيفية حساب المتوسط الحسابي لمجموعة من القيم يحتاج الى تعلم كيفية جمع وطرح وقسمة الاعداد .

هذا الشيء يدل على ان التعلم ذو طبيعة تراكمية حيث ان اكتساب بعض المهارات والافكار يبنى القاعدة لا مكانية تعلم مهارات وافكار أكثر تعقيدا . نتيجة لهذا فان النمو المعرفي للطلبة يتطور وينمو ومن ثم فان الطالب يستطيع ان يحل كثيرا من المشكلات الجديدة التي تواجهه .

من أجل ان يتحقق تعلم أكثر الأشياء بحسن ^{بالاستاذ} أنه اذا ان ينظم افكار وموضوعات الدروس بطريقة تأخذ بعين الاعتبار العلاقة بين هذه الافكار بحيث ان تعلم الفكرة الاولى يكون تطلبا لتعلم الفكرة الثانية التي تليها .

من فضلك احب على الاسطة التالية :

أولا : هل تود أن تطبق هذه الفكرة عندما تحضر للتدريس ؟

☐ نعم

ثانيا : اذا كانت الاجابة بنعم فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) اعرف كيف اطبق هذه الفكرة .
- (٢) ارى حاجة لاستخدام هذه الفكرة .
- (٣) ألتوضيح اني سألتج في تطبيق هذه الفكرة .
- (٤) اعتقد اني استطيت الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة سأحصل على الكفاءة التي اريها .

(٦) أعتقد ان الفكرة ستقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقياس الذي تراه يمثل اجابتك على الاسطة التالية .

(١) الى اي مدى اثر معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر رغبةك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

☐ لا

ثانيا : اذا كانت الاجابة بلا فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار

- (١) لا أعرف كيف اطبق هذه الفكرة .
- (٢) لا أرى حاجة لاستخدام هذه الفكرة .
- (٣) ألتوضيح اني لن أنجح في تطبيق هذه الفكرة .
- (٤) اعتقد اني لن استطيت الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة

(٥) اذا طبقت هذه الفكرة فلن احصل على الكفاءة التي اريها .

(٦) اعتقد ان هذه الفكرة لن تقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقياس الذي تراه يمثل اجابتك على الاسطة التالية .

(١) الى اي مدى اثر عدم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر عدم رغبةك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لعمّ لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى مدى اثر اعتقادك لعدم قدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك لعدم الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه الفكرة
لن تعمل فى القسم الذى تعمل فيه (السبب
رقم ٦) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك بقدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه
الفكرة ستعمل فى القسم الذى تعمل
فيه (السبب رقم ٦) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

المكوة الرامسة :

طريقة وضع خطة عمر الدرس :

خطة عمر الدرس هي عبارة عن مجموعة من الخطوات التي تهدف الى ان تحقق تعلم موضوعات الدرس . حراً طرق التعليم وضعدوا تسع خطوات رئيسية لخطة عمر الدرس :

(١) جلب اشتهاء الطلبة : هذه الخطوة تحقق عن طريق تقديم عمر المواقف المجهولة في مقدمة الدرس وذلك من اجل تحفيز الطلبة على ان يفهموا ما يدور حولهم . الاستاذ يستطيع تحقيق ذلك باستخدام طرح اسئلة التي لا تتطلب جواباً في الحال . او باحضار حفر المينات والمعدات او الرسومات معه الى القاعة الدراسية . فمثلاً اذا كان الموضوع في النحو كعلم قاعدة الفاعل في الجملة . فالاستاذ يستطيع ان طرح الاسئلة التالية بطريقة يشعر الطلبة انه لا يريد لها جواباً في الحال (ماذا تعني كلمة فاعل ؟ . لماذا نحتاج الى فاعل في عمر الجمل ؟ اي شكل يأخذه الفاعل بالجملة ؟ الخ) .

(٢) تعريف الطلبة بهدف الدرس . في هذه المرحلة الاستاذ يحب ان يخلق في اذهان الطلبة ما يتوقع ان يستطيعوا ان يفعلونه بعد اشتهاء الدرس . في المثال المذكور اعلاه الاستاذ يستطيع ان يقول للطلبة لفظياً أو كتابياً او كلاهما "بعد انتهى الدرس يجب ان تستطيعون ان تخرجوا الفاعل ضميراً كان او اسماً من النقال الذي سوف يقدم لكم صنيحين لماذا . بدون استعمال الكتاب او مساعدة خارجية ."

(٣) استدعاء المعلومات السابقة : في هذه المرحلة الاستاذ يحسن به ان يساعد الطالب على تذكر المعلومات ذات العلة بالموضوع التي سبق ان تعلمها . في المثال المذكور هنا الاستاذ ربما يستعمل طريقة الاسئلة كأن يسأل الطلبة عن تعريف الفعل ، الجملة . الخ .

(٤) عرض موضوع الدرس الجديد ووضع السبل بتحقيق تعلمها : فالاستاذ في هاتين المرحلتين التاليتين يجب ان يضع الطالب في موضع الاستكشاف وليس التلقين وهذا يتحقق بأن تكون وسيلة الاتصال بين المدرس والطالب اخذة طابع الاسئلة او الاحاديث الجزئية التي تتطلب تكميلاً من قبل الطالب . في المثال المذكور هنا الاستاذ يستطيع ان يسأل الطلبة بعد ان يعرف لهم الفاعل ان يستخرج الكلمة التي يعتبرونها تطابق هذا التعريف بدل ان يقوم هو بالتعريف والاستخراج .

(٧٠٦) الاختبار البدني وتصحيح الاخطاء : - في هاتين الرحلتين التلازميتين ايضا الاستاذ يقوم بعملية اختبار بدني وذلك بسؤال الطلبة ان يبينوا انهم يستطيعون عمل ما درس . الاستاذ في هذه المرحلة يريد ليس فقط ان يقتنعونه انهم قد تعلموا ولكن ليقتنعوا انفسهم ايضا . لهذا يجب على الاستاذ ان يصلح الاخطاء والنواقص في الاحابات التي كشف عنها هذا الاختبار البدني . في المثال المذكور الاستاذ يستطيع ان يسلط الطلبة ان يستخرجوا بطريقة لفظية او كتابية الفاعل الموجود في جمل معطاه ويمللون اختبارهم . فاذا كان هناك اى نقص في الاحابات فان على الاستاذ ان يقوم بتكلفتها .

(٨) دعم التذكر وتعميم ما تعلمه الطلبة : - اثنا عملية عرض الدرس الاستاذ يحب ان يحمل الجو التعليمي يساعد على ان يكون التذكر سهلا وذلك بذكر امثلة كثيرة ومختلفة بعد العرض الرئيسي للدرس . تكرار الامثلة يساعد على عملية التذكر واختلافها يساعد الطالب على ان يحسم ما تعلمه على حالات مختلفة . في المثال المذكور آتفا الاستاذ يستطيع ان يذكر امثلة اضافية عند ما يقوم بعملية تصحيح لعمفر الاخطاء الصادرة من الطلبة في مرحلة الاختبار البدني والتي تختلف على الامثلة المستعملة في مرحلة العرض الرئيسي .

(٩) تقييم انجاز الطلبة : - هذه المرحلة هي مرحلة الاختبار الرئيسية والذي يجب ان يوفر الشواهد المتقدمة على ان انجاز الطلبة في مرحلة الاختبار البدني ذات صبغة صادقة وثابتة . اى انها مصرة عن الهدف الموضوع للدرس وثابتة في مختلف الاحوال وان تحقيق هذا يتطلب وضع خطة تقييم مدروسة والتي تحتاج الى بناء اختبار صادق وثابت . في المثال المذكور الاستاذ ربما يبنى اختبار يشتمل على النواحي التالية :

- (١) مقال قصير خبرها باسطة تتطلب من الطلبة ان يستخرجوا الفاعل ، نوعه والتعليل لذلك .
- (٢) امثلة تتطلب ان يأتوا الطلبة بعمفر الجمل التي تتضمن فاعلا .
- (٣) مجموعة من الجمل التي تتضمن فاعلا والموضوع تحتها خطوط وسط الطلبة لاذ ان اخبرت هذه الكلمة او الضمير فاعلا .

من فضلك احب على الاسئلة التالية :

أولا : هل تود أن تطبق هذه الفكرة عند ما تحضر للتدريس ؟

نعم ☐

ثانيا : اذا كانت الاحابة بنعم فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) اعرف كيف اطبق هذه الفكرة .
- (٢) ارى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني سأنجز في تطبيق هذه الفكرة .
- (٤) اعتقد اني استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة سأحصل على الكفاءة التي اريها .

(٦) أعتقد ان الفكرة ستقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاييس الذي تراه يمثل اجابتك على الاسئلة التالية .

(١) الى اي مدى اثر معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر رؤيتك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

لا ☐

ثانيا : اذا كانت الاحابة بلا فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار

- (١) لا أعرف كيف اطبق هذه الفكرة .
- (٢) لا أرى حاجة لاستخدام هذه الفكرة .
- (٣) أتوقع اني لن أنجح في تطبيق هذه الفكرة .
- (٤) اعتقد اني لن استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة فلن احصل على الكفاءة التي اريها .

(٦) اعتقد ان هذه الفكرة لن تقبل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاييس الذي تراه يمثل اجابتك على الاسئلة التالية .

(١) الى اي مدى اثر عدم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر عدم رؤيتك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١ جدا قليل ٢ قليل ٣ متوسط ٤ كثير ٥ جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك بقدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه
الفكرة ستعمل فى القسم الذى تعمل
فيه (السبب رقم ٦) على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك لعدم قدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك لعدم الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه الفكرة
لن تعمل فى القسم الذى تعمل فيه (السبب
رقم ٦) على قرارك .

١ ٢ ٣ ٤
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

الفكرة الخامسة :

طريقة التعليم الفردية :

طريقة التعليم الفردية هي طريقة تسمح للطلبة ان يتعلموا يختبروا المواد والموضوعات الدراسية على حسب سرعتهم على التعلم . هدف هذه الطريقة هو ان ترفع مستوى التعلم وذلك بأخذ بعين الاعتبار الحروف الفردية بين الطلبة في قدرتهم وسرعتهم على التعلم وكذلك في خلفياتهم العقلية في موضوع الدرس . هذه الطريقة لها خمس خصائص رئيسية :-

- (١) المواد الدراسية مقسمة الى عدة وحدات دراسية كل وحدة تحتوي على الموضوعات الدراسية التشابهية . ثم ترتب هذه الوحدات على حسب علاقاتها المنطقية بعضها ببعض . فالوحدة الاولى يجب ان تكون مطلبها لتعلم الوحدة الثانية وهكذا فالطالب يجب ان يتعلم الوحدة الاولى قبل ان ينتقل الى دراسة الوحدة الثانية . فالاستاذ ربما يضع ٨٠ ٪ يجب تعلمه من الوحدة الاولى كحد ادنى يسمح للطالب بعده ان ينتقل الى دراسة الوحدة الثانية .
 - (٢) الكلمة المكتوبة هي الوسيلة الرئيسية في التدريس . لهذا المعلومات توفر للطلبة عن طريق مذكرات او كيب تنصف بالتفصيل والوضوح . افلام فيديو وافلام سينمائية قد تستعمل كشيء اضافي الى الكتب والمذكرات .
 - (٣) المحاضرات تعطى لحفز الطلبة على التعلم وليس لاعطاء معلومات رئيسية الى جانب انه يمكن استغلال وقتها لاجابة ما قد يرد من أسئلة من الطلبة .
 - (٤) التعليم بالطريقة الفردية يسمح للطلبة ان يسيرا في تعلمهم حسب السرعة التي يرغبونها .
 - (٥) الاختبارات والواجبات وكذلك ملزمة تصحيح الاخطاء تعطى عندما يكون الطالب ستمد لها .
- فالاختبارات والواجبات يمكن ان تعاد اكثر من مرة . عادة الاستاذ يعد نماذج مختلفة للاختام الواحد فاذا ركب الطالب في المحاولة الاولى يستطيع ان يأخذ الاختام مرة ثانية باستعمال نموذج اخر للاختام تصحيح الاخطاء في الاختامات والواجبات يعطى من قبل الاستاذ مباشرة بعد انقضاء الطالب فيها .

من فضلك احب على الاسطة التالية :

أولا : هل تود أن تطبق هذه الفكرة عندما تحضر للتدريس ؟

☐ نعم

ثانيا : اذا كانت الاحابة بنعم فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار .

- (١) اعرف كيف اطبق هذه الفكرة .
- (٢) ارى حاجة لاستخدام هذه الفكرة .
- (٣) أؤمن اني سأتمكن في تطبيق هذه الفكرة .
- (٤) اعتقد اني استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة .

(٥) اذا طبقت هذه الفكرة سأحصل على الكفاة التي اريها .

(٦) أعتقد ان الفكرة ستعمل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل اجابتك على الاسطة التالية .

(١) الى اي مدى اثر معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك

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جدا قليل التأثير قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر رؤيتك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

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جدا قليل التأثير قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

☐ لا

ثانيا : اذا كانت الاحابة بلا فمن فضلك ضع علامة (✓) امام رقم ما يلي من العبارات التي تعتبرها سببا في اتخاذ هذا القرار

- (١) لا أعرف كيف اطبق هذه الفكرة .
- (٢) لا أرى حاجة لاستخدام هذه الفكرة .
- (٣) أؤمن اني لن أتمكن في تطبيق هذه الفكرة .
- (٤) اعتقد اني لن استطيع الحصول على موارد المعلومات والكفاءات اللازمة لتطبيق هذه الفكرة

(٥) اذا طبقت هذه الفكرة فلن احصل على الكفاة التي اريها .

(٦) اعتقد ان هذه الفكرة لن تعمل في القسم الذي اعمل فيه .

ثالثا : من فضلك ضع دائرة حول الرقم من المقاس الذي تراه يمثل اجابتك على الاسطة التالية .

(١) الى اي مدى اثر عدم معرفتك بكيفية استخدام هذه الفكرة (السبب رقم ١) على قرارك .

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جدا قليل التأثير قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٢) الى اي مدى اثر عدم رؤيتك للحاجة لاستخدام هذه الفكرة (السبب رقم ٢) على قرارك .

١
٢
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٥
جدا قليل التأثير قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك بقدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه
الفكرة مستعمل فى القسم الذى تعمل
فيه (السبب رقم ٦) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٣) الى اى مدى اثر توقعك لنجاحك
فى تطبيق هذه الفكرة (السبب رقم ٣)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٤) الى اى مدى اثر اعتقادك لعدم قدرتك
على الحصول على المواد اللازمة لتطبيق
هذه الفكرة (السبب رقم ٤) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٥) الى اى مدى اثر توقعك لعدم الحصول
على الكفاية التى ترغبها (السبب رقم ٥)
على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

(٦) الى اى مدى اثر اعتقادك بأن هذه الفكرة
لن تعمل فى القسم الذى تعمل فيه (السبب
رقم ٦) على قرارك .

١ ٢ ٣ ٤ ٥
جدا قليل قليل متوسط كثير جدا كثير
التأثير التأثير التأثير التأثير التأثير

اكتب ما لديك من ملاحظات واقتراحات حول هذا الاستبيان في
هذه الصفحة :-

APPENDIX B

**ENGLISH AND ARABIC VERSIONS OF LETTER
INFORMING SUBJECTS ABOUT THE AIM OF
THE PILOT STUDY, AND OFFICIAL LETTERS**

English Version of the Letter
Informing Subjects about the
Aim of the Pilot Study

Dear Faculty Member:

The success of the present study is dependent upon your help and cooperation. In the present stage of this study the researcher is aiming to do a pilot test for an instrument that will be used to collect the data for this study. The purpose of this pilot test is to identify reading difficulties, omissions and ambiguities that require alteration needed in the instrument itself. Your comments on any of these elements are needed and appreciated. On the attached paper, please write your comments concerning any statements of any part of this questionnaire. Please use the number of the statement or the part as a reference.

Sincerely,

Researcher

بسم الله الرحمن الرحيم

المحترم

المكرم عضو هيئة التدريس

السلام عليكم ورحمة الله وبركاته وبعد،

لاشك ان مساعدتك وتعاونك عاملان لا يستغنى عنهما بنجاح هذه الدراسة في هذه المرحلة الحاضرة بهدف الباحث الى اجراء دراسة أولية على مــــــدق وشبات المقياس الذى سيتمعمل لجمع البيانات الا وهو الاستبيان . هذا يتطلب بطبيعة الحال كشف عن ماقد يحتوى هذا الاستبيان من صعوبة في القراءة أو غموض في الفهم قد يواجهه افراد العينة . أو ان الباحث قد اغفل شئ ترى ذكره ذات اهمية او تعديل ترى ان يعمل على اى جزء من هذا الاستبيان. آراءك وتوجيهاتك اخي عضو هيئة التدريس محتاجة مقدرة لدى ومن الباحث لهذا ستجد برفقة الاستبيان صفحات خاصة لكتابة آراءك ومقترحات في اى جزء من هذا الاستبيان . استعمل الارقام المعطاه في فقرات الاستبيان كمرجع لتعريف عن اى فقرة تتحدث

شاكرًا لك تعاونك ...

اخوك الباحث

صالح ابراهيم اللحيدان

مبتعث من قبل جامعة الامام محمد بن سعود الاسلاميــــة

October 28, 1983

Imam Mohamed Bin Saud University
Riyadh, Saudi Arabia

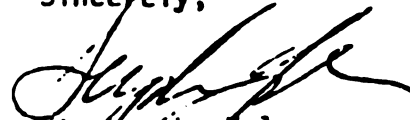
Dear Sir:

I am writing to you on behalf of Mr. Saleh I. Al-Lihiedan, who is at present a graduate student in the Department of Educational Psychology working on his Ph.D. under my direction.

Mr. Al-Lihiedan has proposed a study titled: "Factors Involved In the Adoption of Instructional Innovations In Saudi Arabian Universities". He plans to return to Saudi Arabia to do his research from approximately the first of December to the first of March. This agenda meets with my approval.

Because this topic requires Mr. Al-Lihiedan to travel to different parts of Saudi Arabia to gather information, I respectfully request that you provide him with the necessary transportation within the country.

Sincerely,



Stephen L. Telon
Professor
Educational Psychology

SY/ny

ادارة
البحوث والعلاقات الخارجية

المحترم

سماعة الطحون التعليمي بأمرها

السلام عليكم ورحمة الله وبركاته

اشارة الى الخطاب الوارد ضلك بتاريخ ٧ نوفمبر ١٩٨٣ م والمرتبط به توصية
من الاستاذ المشرف على البعث / صالح اللحيدان لقيامه برحلة علمية
الى السلطنة لجميع مادة البعث الذي يده للدكتوراه .
نفيدكم أنه لا مانع لدينا من قيامه برحلة علمية الى السلطنة على أن يعامل
بموجب المادة العاشرة من لائحة الامتحانات .

فناط ابلان به ذلك ، واكلال ما يلزم من قهلكم . ناكركم لكم جهودكم .

ولكم تحياتي ...

برك

مدير عام

ادارة البحوث والعلاقات الخارجية

د . محمد بن سعد السالم

صورة لكلية العلوم الاجتماعية

للبحوث

للحفظ

MICHIGAN STATE UNIVERSITY

COLLEGE OF ARTS AND LETTERS
DEPARTMENT OF LINGUISTICS AND
GERMANIC, SLAVIC, ASIAN AND
AFRICAN LANGUAGES
WELLS HALL

EAST LANSING • MICHIGAN • 48824

June 29, 1983

To whom it may concern:

I hereby certify that Mr. Saleh I. Al-Lihedan has translated into Arabic the English version of the questionnaire and cover-letter used as a tool in his research for his Ph.D. dissertation entitled Factors Involved in the Adoption of Instructional Innovation in Saudi Arabian Universities.

I hereby verify that the Arabic version accurately corresponds to the English version of the questionnaire and cover-letter. The Arabic version follows the standard writing style for the Arabic language.

I do wish him the best of luck in his research.

Abdul Ghaffar Eldamatty



Instructor of Arabic

Department of Linguistics and
Germanic, Slavic, Asian and
African Languages
Michigan State University
Wells Hall
East Lansing, MI 48824-1027

