

# Causes of Vulnerability in Implementing Scientific Research among Students in the Arabian Universities

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## Abstract

This study aimed to clarify the reasons of the weaknesses in the implementation of scientific researches among students in Arabian Universities, one of the causes was: the weak interest in the Arab world in general scientific research, low financial allocation for scientific research, concern of the faculty members of overburdened school system, lack of sufficient time for the implementation of research, the increase in the number of students, disinterest of the students in the culture of scientific research, inadequate research methods learned by students, the absence of encouragement climate to carry out scientific research, and the lack of well qualified faculty members with regard to the methodology of scientific research.

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The study provided a set of recommendations and proposals to overcome these problems and address the weaknesses in the implementation of scientific researches, which was most important: the development of research capacity of university instructors, the development of science curricula for teaching techniques of scientific research implementation, the rapid supervision actively by a university instructors on students during the research, ease the course burden for faculty members, activating the guidance by teachers to students, reduce the number of students who are supervised by one instructors, encourage joint research between students, dissemination of what may be suitable for publication of student research in scientific journals by the university, and provide financial rewards for students who provide researches of theoretical value, or applied value.

### **Introduction**

Human began to search since his existence for this simple land to be able to meet the various physical and moral needs and desires, but research in the past was not scientific and systematic and as clear as now, for the simplicity of the needs and desires the primitive man was looking for, however, scientific research was achieved as a result of the progress, complexity and rapid change happening in our current social, economic, political life and all fields of science, it was necessary to change, the search methods so as to ensure the achievement of the needs and desires of the human in this era. We therefore find that the search at the present time has come to rely on a clear and specific methodology to get the facts or to discover the phenomena.

The scientific research is an important part of the functions carried out by universities, and it is a necessary requirement for the development and progression of the faculty member, it has become necessities of the progress and development of organization of all kinds. The criterion to judge the progress of nations or delay is measured in terms of the progress of these nations and the extent of scientific research expenditure, and encouragement.

This research paper has addresses an important issue, lies in determining the causes of vulnerability suffered by students at Arabian universities directly when implementing a scientific research, as requirements for graduation, which helps them come out with graduation projects or researches below the required level.

### **Problem of the study and its elements**

Despite the efforts in recent years to give the scientific research the importance that it deserves in The Arabian universities, but it is still late in the hierarchy of priorities and that actually leads us to discuss the causes that lead to this vulnerability. Since most Arab

researches, in general, are primary researches, that are intended to expand the understanding of phenomena and diagnosis, and thus the development of knowledge around the researches; the concentration here is on how to develop academic researches, which universities mainly carry out, both at the level of faculty members or students, and in this context, the problem of the study is to determine the causes of the underlying weaknesses in the implementation of scientific researches among students in Arabian universities; researchers are trying to address this problem through two main axes, represent the two questions of the study, namely:

1. What are the primary weaknesses reasons in the implementation of scientific research among students in the Arabian universities?
2. What are the proposals that should be submitted to address the causes of those weaknesses?

### **Objectives of the study**

The study aims to determine the causes of weaknesses in the implementation of scientific research among students in Arabian universities, and through the review of the subject on one hand, and surveying the views of students and university instructors on the other hand, and this study aims to give the proposals to improve the quality of researches provided by the University students.

### **Importance of the study**

The importance of this study is trying to determine the causes of weakness in the Arabian students in implementing scientific researches, and thus to suggest anything that may contribute in the treatment of those reasons.

### **Methodology of the study**

The researchers used the qualitative method for this study, and depended on descriptive analytical, for the purpose of describing the phenomenon (the causes of vulnerability), as contained in many previous studies, which will be exposed to some of them. In order to achieve the objective of this study, we will identify the role of universities in scientific research, and stand at some numbers and statistics and comparisons with other countries, as well as determine the problems of scientific research in the Arab world as stated many previous studies.

### **The Concept of Scientific Research**

We can define the scientific research as an organized and objective way to collect data, records, and analysis to extract information to provide the required for using in decision-making process. Abdel-Hamid (2000: 8) defines it as: organized scientific activity that seeks to discern the truth and see the connections between facts and to draw

general principles and explanatory laws. Abediat, and et. al (1996: 46) defined it as: an organized attempt directed towards the solution of humanitarian problems in various fields. Dora, and et. al (1989) define it as: the mentality of trying to solve a particular problem, and the aims to search for the truth. But Hamdani, and et. al. (2006: 36), they saw the scientific research as intellectual activity aimed to increasing the human capacity to control the environment, and a way to get knowledge, as a result of an organized effort which intended to discover relationships between variables and phenomena according to the theories given. Sekaran (2006: 27) defines the scientific research as: organized sequential steps based on data collected on a specific problem, and subjected for testing and auditing in order to resolve this problem.

Therefore, scientific research can be defined as an attempt to achieve accurate critical solutions to the problems, and is described as an organized process to collect and record data and analysis to solve the problem. We can note many things from these definitions and others, that we can not have enough space to reflect in this paper, however, scientific research, whether the views and definitions agreed or disagreed, enjoys a range of specifications that any definition for the scientific research should focus on:

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- Organized scientific activity based on the intended observation.
  - Aims to finding a solution to the existing or expected problems, or recognizing a scientific fact, and requesting knowledge.
  - Done by specialized researchers in the cognitive and methodological knowledge.
  - Has specified characteristics and specifications (Barghouti and Abu Samra, 2007).

But for the purposes implementing the research carried out by students to complement the requirements of their university degrees in their fields, we would like to define the scientific research including four keys elements, these elements are (Al-Najjar et al., 2010):

1. Systematic Approach.
2. Objectivity.
3. Information.
4. Decision Making.

Therefore, we can define the scientific research based on such elements as: a structured and objective way in data collection, recording and analyzing to extract information and provide it to the researcher for use in the decision-making process.

### **Conditions and requirements of scientific research:**

The scientific research should have a set of conditions and requirements, whether research thesis at various scientific or academic levels, or research for a conference or for publication in a scientific journal, and most of the literature that relates to a scientific subject, those conditions and requirements include the following (Al-Ma'ani et al., 2012):

1. Forming the research title to be clear and comprehensive: the three basic features that should be in the title: Inclusiveness:
  - A- the research is to include, with all its general words and terminologies or specific specialized domains and strict subjects, that the researcher is working on, the institutional or geographical jurisdiction, and the time period covered by the research, if needed, for example: (the impact of special mathematics courses for high school students to increase success rates for schools maintained by the Direction and Education of Fourth Amman, year (2009/2010).
  - B- Clarity: You must have the research title clear in its terminology and words used in the use of codes, if the need arises.
  - C- Indicators: The research should have specific objectives indicators in the subject which requires examination and treatment and avoiding generalities.
2. Determine the research steps, objectives, and limitations required: the researcher should begin to identify clearly the research problem, and then put the assumptions associated with the problem, and then select the method of data collection and information required for consideration and analysis.
3. The availability of sufficient knowledge of the subject matter: the research and its subject must be commensurate with researcher abilities, it is necessary that he has sufficient knowledge of the area and the subject of the search.
4. Adequate time to the researcher: must specify the time for the completion and implementation of research, so that the research time will be appropriate with the limited objectivity and spatial.
5. Reliance on the original views and evidence: the need to consider scientific integrity in the quote, tapping and transferring of information is very important in writing the research.
6. Clarity of writing research style: writing in a clear style, readable, interesting, and in a manner to attract the reader, and to draw diagrams and information.
7. Objectivity and avoiding bias in access of the results: the researcher has avoided to personal feelings and selfishness, etc. when viewing the findings he reached.

8. There are other provisions and requirements: such as: coherence and objectivity between the parts of the research, the availability of resources and adequate information on the subject of research, the contribution of the research and its addition to the knowledge in the area of specialization, and accuracy of language and expression.

### **Scientific Researches Classifications:**

There are many interpretations in the categories of scientific researches, but basically there are two categories of scientific researches, namely: quantitative and qualitative researches and we will distinction between these two classifications (Al-Ma'ani et al., 2012), (Guendhilji, & al-Samarrai, 2009), (Abu Zeina, et al, 2006), (Zikmund, 2000):

1. Qualitative Researches: is a kind of scientific researches using numbers in the data analysis, and subject to the conditions of validity and reliability, their data is to be manipulated statistically, and their findings can be disseminate to the community of origin, which includes three types, namely: descriptive survey research, empirical research, and comparative research, and we will clarify these types as the following:
  - A. Descriptive survey research: a systematic method of compiling data on institutions, and it is the most common approach used in the quantitative scientific research, and the survey is its most important tool. The descriptive survey research (specifically the relational), is the most common type of researches used by students to prepare their graduate researches, and in this type of research, the formulation of hypotheses and the development of the consequences from the independent and dependent variables, and data collection and analysis with statistical methods is important.
  - B. Experimental Researches: is a deliberate change and control to the specified conditions for the reality or phenomenon which is the subject of study, and noticing the results of this change comes from the effects of the reality or phenomenon. The researcher usually adapts one or more of the independent variables in the research problem and hypotheses, in order to find out their impact on the dependent variables and then measure these effects.
  - C. Comparative Researches: is the comparison between two phenomena, and sometimes more, in order to identify similarities and differences between them, for the purpose of obtaining accurate information, typically the amount of information and comparable analysis.
2. Qualitative Research: Qualitative Research is a kind of scientific research, which

assumes the existence of facts and social phenomena constructed through the views of individuals and groups involved in the research, where the researcher does not seek a sample to be represented statistically, the intention is not to come up with results to be circulated, but in-depth understanding of the situation or phenomenon studied, the qualitative research includes many approaches and strategies, including:

### **Ethics of Scientific Research**

The scientific research is a an ethical addition process in addition for making a systematic process that leads to gaining more knowledge about the different phenomena, and to solve the problems facing us, so the scientific researcher has ethical standards that should be armed side by side with the specifications of the knowledge and the methodology.

The scientific research ethics require the respect of the rights of others and their opinions and dignity, whether they are researchers, fellows, or participants, and the principles of ethics of the scientific research in general adopts the values «affirmative action» and «avoid harm», and these two values should be the twin pillars of the considerations ethics during the research process; and there are some considerations concerning the ethical conduct of researcher should be referred to, which include the following (Sekaran, 2003):

- **Credibility:** the results must be copied honestly, and the researcher must be honest of what he copies, and does not complete any missing information or incomplete based on what he thinks happened, does not attempt deliberately to enter data on the outcome of the theories, or other persons.
- **Expertise:** the work that was done by the researcher must be appropriate to the level of his experience and training.
- **Safety:** the researcher should be careful not to expose himself to physical or moral danger, and take precautions during the preparations of the whole test.
- **Trust:** The researcher should try to build trust with those who work with him, in order to obtain the most cooperation of them, and the results will be more accurate, and does not exploit the trust of the people who study them.
- **Feedback:** If the researcher was able to give feedback to a target of his research, he should do.
- **Exploitation:** The researcher may not use the situations for the benefit of his research; and may not interpret what others are saying indirectly to serve his research.

- Anonymity: The researcher should protect the identity of the target at all times, and does not give names or tips that lead to the disclosure of their true identity.

### **Characteristics required in the researcher:**

There are two types of characteristics that must be embellished by the researcher, namely (Gharaybeh, et al., 2008):

1. Moral qualities: Concerning the physical characteristics relevant to researcher as a human being, these qualities must be met in the person of the researcher such as honesty which makes the researcher reflect the reality in the research under study.
2. Scientific qualities: Concerning the qualities of scientific properties related to those researchers as a scientist, these qualities can be divided into two types:
  - A. General scientific qualities: These qualities include the following:
    - (1). the ability of the researcher to form the research layout in a good way to be able to get the appropriate data, and determine the necessary tests, and choose the best way to collect the required data.
    - (2). The ability of the researcher to link the collected data.
    - (3). The ability to perform research objectively in order to avoid bias, ie, away from the customs, traditions and personal experience of the research process until he gets the results that can be used in achieving the objectives of the research.
    - (4). Search for the real causes behind the events and the phenomena, and not be sure that there should be a reasoning relationship between certain events just for occurrence at the same time.
    - (5). To be accurate in the collection of evidence and observations from multiple sources, to reach reliable, and sufficient decisions and judgments, and not to rush reaching decisions and jumping to results.
  - B. Special scientific qualities: scientific qualities related to those properties that must be available in the researcher and relevant to the subject matter to be under consideration, and these characteristics are:
    - Theoretical knowledge of the research subject, which is very important for the formation of research goals, identifying the variables related to the achievement of its objectives.
    - Knowledge of various research methods and how to distinguish between these methods in order to use the best way to solve the problem of the research.
    - The ability of the researcher to identify the optimized community and a sample

of the research for data collection in order to ensure consistent collection and data and information requested.

### **The role of universities in scientific research**

Scientific research is considered as a major part of the university functions, and is a core mission of a faculty member, and a prerequisite for students to get academic qualifications. The universities lead the subject of scientific researches problems in the life of communities, says Barghouti and Abu Samra (2007), in order to promote and push the subject forward, the scientific research is the one which gives the University its real meaning, and distinguishes it from the school; many of the western world universities gave special attention to scientific researches, allocating budgets, which drew the scientific competence, and considered the most important functions, on the grounds that scientific research leads to advanced technology.

The scientific research is considered as an important way that promote the university level, thereby promote the level of their faculty members, for the fact that scientific research helps to develop the capacity of university instructors, deepen the understanding of the subject which he is specialized in researching and teaching, add to that, the scientific research is one of the basic criteria to be relied when appointment or promotion of a university instructor is taking place; Raias (1992) has , as Barghouti and Abu Samra (2007) identified three benefits for the scientific research for any university, they are: the wealth of economy, qualitative development of the university, and linking the university with the community.

The matter is not less important when it comes to student of the university, which is the basic unit of the university system, as the students academic status, and the ability to use the scientific method of thinking and research is a priority for the universities seeking to possess.

### **Figures, statistics and comparisons**

The United States during the eighties of the twentieth century spent more than (40) billion dollars on scientific research, while the Arab countries combined spent (200) million dollars. during the period The scientific productivity amounted in the Arab world 10% of the expected, the productivity per one Arab researcher is estimated up to (0.2) research year, where it reaches up to (1.5) research in the developed countries. In terms of spending on research and development, the Arab region has arrived to about four dollars per capita, meanwhile, in Japan it was (195) dollars, and (230) dollars in Germany; for the Arab universities, approximately (1%) of its budget is allocated for scientific research, while the universities of the United States spent more than 40% as Ghanem

(2000) stated, and in 1999, in Israel the expenditures on researches amounted to 6.6% of GNP as Barghouti and Abu Samra (2007) stated, which is higher than the volume of U.S. spending on scientific research for the same year, reaching 5.3%. While the annual budget of the Weizmann Institute in Israel reached (1.2) billion dollars, when it did not exceed (800) million in all universities and academic institutes in the Arab countries, says Abdel-Aal (2003).

In Japan, the private sector spend on scientific research 80% of total spending on research and development, the United States 75%, Sweden 78%, South Korea 76%, Switzerland 74%, Germany 70%, Russia 71%, and China 60%, while the private sector in Arab countries spends accounts for only 1-2%, and the government sector accounts for 68%, and disposal universities is 30%.

So universities should allocate more space for research and development, mating with the industry, where the output of higher education is limited to graduates only, but should include scientific publishing, patents and build new knowledge. The time has come for there will be an incubator in each section, for the development of research projects students, and combined with the industry, in order to convert them to real human capital, and to commodity and service industries (Badran, 2010).

According to the figures of «UNESCO Institute for Statistics» in 2004, as Malhas (2007) stated, the amounts of expenditure on research and development in the Arab countries combined had not reach more than 1.7 billion dollars, or 0.3% of GNP of these countries, while expenditure on research and development in Latin America and the Caribbean was 21.3 billion (0.6% of gross national product), and in India 20 billion dollars (0.7% of GDP), In the South eastern of Asian industrial countries 48.2 billion dollars (1.7%) and EU countries 174.7 billion dollars (1.9%), and in North America 281 billion dollars (2.7%) and Japan 98.2 billion dollars (2.9%), and in Israel 6.1 billion dollars (4.7%).

Those interested in university education realized, through their experiences, observations, and the reality of scientific research and publications in universities, that scientific research in the Arab world was still very modest, both in theory and practice, and at the lower step of priorities for the universities, we find that the activities of scientific research carried out by the faculty member in the Arab universities are in the best case not more than 5% of the total workload career, in addition, scientific research, in the Arab universities directed often for the purposes of the academic promotion and setting up, the research rarely directed to address the issues of society and its problems and concerns, as shown by Zaeyton (1995: 122). According to Hill (1997: 53) that Arab univer-

sities are busy mainly in teaching large numbers over its human and material abilities, and this in turn has a very negative impact on the establishment of these universities to perform other functions in researches, innovation and creativity, as the number of valuable research at the global level issue of all Arab universities is very low.

From the data reported by many researchers, it can record observations and paradoxes of the following:

- In the years 2000 - 2005 about 305 millions scientific researches papers were published all over the world, the United States alone published about 34%, while the rate of what was published by all the Arab countries did not reach 1%.
- Even in 2008 none of Arab university was classified among the top 500 universities in the world, as classified by UNESCO, while there were eight Israeli universities among the top 500 universities. In this context, it was concluded by many scholars and experts that all universities and research centers in the Arab world were out of the best 500 universities in the world, and this was explained to the decline in allocations for education and scientific research, and to linking the recruitment and the promotion degree to the loyalty away from the standards of efficiency, in addition to the continued bleeding of Arab brains drain to outside, and control the expelling out space of the competencies and capabilities, as well as deterioration of the social status of teachers.
- The researcher productivity per year in the developed countries 1.5 research, while the Arab world's 0.2% research per researcher.
- The Arab scientists record in 1997 were (24) invention, at a rate of one invention every ten million people, while the Israeli scientists record in the same year (557) invention, an average of one invention for every seven thousand people.
- The total researches conducted by Harvard University alone equal the sum of researches conducted by researchers in the Arab countries combined.
- There are about 99% of Masters and PhDs thesis in Japan based on the real problems faced by industrial and commercial enterprises, and those letters work to tackle these problems.
- These figures and inconsistently indicate the interest of developed countries in scientific research, at the same time, showing the weaknesses in scientific research in the Arab world, in general, the apathy that accompanied the implementation of the research, and the weakness of the interest of universities to develop their capacity to carry out scientific research.

## **Facts of scientific research in the Arab World**

For the purpose of identifying the problems facing the scientific research in the Arab world, the study will review relevant studies, which dealt with this subject, and tried to make recommendations or proposals to address those problems, and will be reviewed as far as possible from those studies for the purpose of determining the extent of its contribution to the characterization of these problems.

The study by Adas (1983) pointed out, that scientific research in the Arab universities suffers from several problems summarized by: the scientific research do not get the required priority and importance it deserves, as well as the lack of integration between researches in the Arab universities.

A study by: Morsi (1984) entitled «The problems of faculty members in the Arab Universities, and their effects on the migration of rare qualifications»; viewed the most prominent problems faced by the faculty member in the Arab Universities, which lead to productivity less than his co-workers at foreign universities, and that these accumulated problems make the Arab skills to migrate to other communities. The researcher defined the fundamental problems faced by the faculty member relating to scientific research, and limited to: insufficient magazines and scientific journals, and insufficient funds allocated for scientific research, bureaucracy and administrative red tape. As a result of these and other problems, many of the Arab academy competencies migrate abroad, which leads to a shortage of faculty members in some Arab universities, which is the same reason that prevents many of scholarships abroad to return to their countries and their universities when they acquire high educational qualifications.

A study by: Abdel-Aziz (1986) tried to view the problems of education, which limit the effectiveness of a faculty member in Arab universities, especially regarding the areas of teaching and scientific research. The study identified these problems: The huge study load for the faculty member, the large numbers of students in the different courses, the lack of scientific periodicals, isolation between the Arab researcher and other researchers, whether in his own country or in other Arab countries.

A study by: Durra, and Baira (1989), at a seminar about updating the university administration in the Arab world, which was held at the University of Yarmouk, pointed out the reality of scientific research in the Arab world does not encouraged to optimism and a promising future, the researchers pointed out to the need to provide financial support for scientific research programs, in addition to the need for proper planning of these programs.

A study by: Salman (1993) titled: «The crisis of scientific research in the Arab countries, and the depth of the crisis experienced by the Arab scientific research», that this crisis is in the absence of a clearly defined strategy for scientific research in the Arab countries, and this led in turn to the emergence of a campaign of problems as: deficit budgets, the use of individual research, and the deficit surrounding the Arab scientific institutions to play a role for the advancement of Arab scientific reality.

A study by: Bakhit et. al. (1997) which was special study of conditions of scientific research in Jordanian universities, the problems facing the scientific research in these universities, which is the lack of funding, and the absence of a research plan for the Jordanian universities combined.

A study by: Abdel-Dayem (1998) entitled: «Higher Education and the Challenges of Today and the Future», which was presented at the World Conference on Higher Education in the twenty first century organized by UNESCO in Paris (5-9 October 1989), a set of proposals and recommendations to improve the quality of scientific researches in the Arab world was proposed, including: achievement of appropriateness between its higher education institutions and the community expects of them, quality assurance and quality of inputs and outputs are practical system of higher education and the development of funding and diversification of its sources, and joint action both within the state, regions or the whole world to overcome the obstacles facing scientific research.

A study by: Majidal (1999) has sought to identify the academic problems faced by members of the faculty at the University of Damascus, and classified these problems in several areas including scientific research, which included mainly non-availability of information to faculty members for the implementation of their scientific researches.

A study by: Al-Safadi (2000), which is related to the role of universities in serving the local community, agitated that the role of universities is not only to teach, but need to include the role of interest in scientific research, by providing the appropriate environment for the implementation of scientific researches, and the need to provide the supplies necessary for implementation, such as the: budgets, equipment, periodicals, references, and reduce the burden of a faculty member, and to provide appropriate incentives for innovators in the field of scientific research.

A study by: Ghanem (2000) tried to identify the contribution of Arab countries in support of scientific research, the contribution of Arab scholars in the treatment of problems related to the Arab industrial development; the study identified the difficulties

faced by Arab countries in the field of scientific research, and the most important of them were: the weakness of support for scientific research activities, and the weakness of graduate studies in Arab universities, in addition to the absence of clear scientific policy in Arab countries.

A study by: Kasaby (2005) pointed out the problems of investment and marketing of scientific research in Arab universities, which was identified by the researcher, including the following: shortages in the budgets of scientific research, the inconsistency between scientific research and the problems that the society suffer, and lack of planning in the universities, and arbitrary and individuality in the implementation of researches.

A study by: Barghouti and Abu Samra (2007) entitled: «The problems of scientific research in the Arab world,» showed that those problems lies in two essential issues: sponsored policy, and the researcher himself. The researchers see that the other problems related to the monitoring of budgets and ease the teaching burdens and provide scientific periodicals, and other problems are secondary to these issues.

A study by: Yakoot (2008) showed that the reasons for lack of Arab universities in scientific research summarized as follows: insufficient financial allocations, the absence of the private sector to contribute, the absence of a strategy for marketing meaningful researches, lack of cooperation and coordination between universities and economic institutions, the scarcity of researchers, the low rate of scientific productivity, and societal perception of scientific research.

A study by: Abu-Orabi (2009), reviewed in a lecture at Abdel Hamid Shoman forum, the problems and constraints of scientific research in the Arab world, which is set in: the absence of clear policies and future plans for scientific research that identifies the objectives and priorities, the lack of research capacity, the absence of a clear and serious database for the human potential research and material resources within the research institutions or within a single country, the lack of real cooperation between different research institutions, lack of time necessary for scientific research, and the concern of researchers for their various administrative problems of learning, and the absence of fund suppliers, the adoption of researchers heavily on government funding from within their institutions, the unavailable of approved list of fund entities for all researchers to know and to use in a timely manner, the society does not benefit of the scientific research, the lack of dialogue and views coordinator for fruitful and true cooperation between the civil institutions of society and the various research institutions, the lack of appreciation of the need of the

community, and there was no link between scientific research and the problems of the society. Abu-Orabi pointed out to the migration of brains and qualified Arab; according to a report of the United Nations Human Development 2002, found that more than a million expert and specialist Arab works in Western countries, in addition to that 20% of the holders of level above the BS located in Europe, and more than two-thirds of migrants do not have programs to return to the homeland. Also, showed that the scientific research in universities is the result of faculty members who make up more than 80% of workers in the field of scientific research in most Arab countries.

A study by: A group of Jordanians academics which was introduced to a workshop entitled «Scientific Research in Institutions of Higher Education»; and was dealt by Malhas (2010) as the obstacles of the scientific research in Jordan as follows: low number of researchers in full-time despite the existence of their own system in the universities, and not giving the opportunity for the fresh graduates of PhD holders for training in scientific research, involve them directly in the process of teaching, individualism of the implementation of research, and the scarcity of creating integrated research teams, the high ratio of students to faculty members compared with the international ratio, the preoccupation of large number of faculty members in overtime work, limited number of graduate students who are trained on scientific research to take advantage of these researches being as active workforce in scientific research projects that are supervised by their teachers, and the scarcity of opportunities for research assistants and technicians for training in developed countries to deal with the specialized equipment and maintenance in research laboratory. This study Indicated that the requirements for promoting scientific research in Jordan and the Arab world in general requires a reconsideration of methods of teaching in different educational stages, particularly the main stages, which should get rid of the teaching methods of education and unleashing of thought, reflection and creativity, creating a culture of scientific research, also requires a suitable climate for research in every Arab country, and among the Arab countries combined, through a «constructing efficient administration, effective, and suitable infrastructure and trained human staffs, the allocation of sufficient budgets to launch the research capacity, scientific, and finding the rules of rich information, telecommunications, and adequate legislation to create suitable research environment».

A study by: Dradkh (2010), entitled: "Obstacles to scientific research with faculty members in Jordanian universities", was aimed to investigate obstacles to scientific research in Jordanian universities as seen by faculty, study sample consisted of (475) fac-

ulty member, selected randomly simple component of the study population (2628) member of the faculty. In light of the findings of the study, the researcher recommended several recommendations, including:

1. Reduce teaching load for a faculty member, in order to be able to reconcile between teaching and research. And emphasis on collective research, because of their many advantages alongside individual research.
2. Encourage the private sector to contribute to the support and funding of scientific research and increase investment in it because of the great cycle in profit institutions that depend on it.

### **Results of the Studies:**

Based on the previous studies, and upon the present study objects, the researchers addressed to identify the problems facing the scientific research in the Arab world, those studies have focused on the most important of these underlying problems that lead to the weak of scientific researches in Arab universities, in general, are summarized as follows:

1. Low budgets allocated to scientific research.
2. The absence of environment which is conducive for the implementation of scientific research.
3. The brain and scientific qualifications migration outside.
4. Absence of a sponsor and incubator policy for research and researchers.
5. Weaknesses and deficiencies in researchers themselves to understand their role in scientific research.
6. Weakness and lack of correlation of database for serious research potential; human and material.
7. Lack of coordination and real cooperation between the various researches institutions.
8. Inability to recruit scientific research in solving problems.
9. The community neglects the importance of research, and lack of respect for researchers.
10. Lack of research culture encourages the implementation of research.
11. The lack of link between scientific research and the problems of society.
12. The absence of clear strategies and policies and future plans for scientific research.
13. Lack of sufficient time required to implement the scientific research.

### **Recommendations of the study**

In light of this viewing of the problems and difficulties experienced by scientific research in the Arab world, in general, and the impact on the university environment, in particular, and the resulting output is in the quality of research by students, in which mostly are considered «shameful» researches; and do not promote to the extent of the minimum required in scientific research, and by identifying the most important reasons leading to this weakness, in order to try to minimize the effects of those reasons, and advancement of scientific research in general, and the students in particular, it requires trying to correct and provide an environment enhanced by the availability of scientific research value, whether basic research (theory), or applied research, and when they are preparing students they should be able to carry out scientific research, which will have a positive impact on creating an environment that values creativity and success of the students, thus, graduating students and experienced researchers, in this context, and to improve the quality of research submitted, and to avoid the causes of vulnerability, researchers are aiming to provide specialized recommendations and proposals, as the following:

1. Developing the research capacity for university teachers; as the instructor is the basis of education and training students on how to implement research, and if the instructor is not qualified, or unskilled, this is inevitably reflected on the student who has the instructor as his example and guidance, because someone who has nothing can not give it.
2. Developing curricula for teaching methods of scientific research, and developing ways to teach this curriculum, with emphasis on the practical side, away from memorization and conservation, which does not work in teaching students how to design and conduct research.
3. Close supervision by a university professor during the period of the research, to make sure that the student doing his job by himself does not provide a research obtained from the sale of an office of researches, or via the Internet.
4. The research problem that the student is trying to manage should form the reality, and the problem to be discuss between the student and the teacher, to make sure that the student's has the ability to understand the problem, as a thorough understanding of the problem is the foundation of success in the rest of the stages of research design.
5. Reducing the burden of school faculty members, and activating the guidance by teachers for students.
6. Reducing the number of students who are supervised by one instructor, so they

can follow-up the student work, and provide advice and guidance.

7. To promote joint research among the students.
8. Publishing of what may be suitable for publication of students' research in scientific journals issued by the university, what would be a significant impact in motivating students to conduct a valuable research.
9. Providing financial rewards to students who provide researches of theoretical value, or practical value.

In addition to these specialized recommendations, there is a set of recommendations and proposals for improving the quality of the research process, alleviating the problems faced by researches in the Arab world, and these proposals are:

1. Providing the essential requirements for the development of scientific research, including: creating a general climate, the development of university management, curriculum development, good preparation for the researchers, provide funding and material support, and building a solid base of information.
2. Establishing an institutional framework to oversee scientific research at the state level, and making a general strategy for scientific research as a guide and advisor to universities.
3. Providing material and moral support to the researchers, and the allocation of rewards to the owners of excellence researches.
4. Establishing specialized research centers in the universities.
5. Activating the cooperation agreements between the various universities, sharing knowledge, and provide joint researches by faculty members or even students.

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## أسباب الضعف في تنفيذ البحوث لدى طلبة الجامعات العربية.

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### الملخص

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هدفت الدراسة إلى تعرّف أسباب الضعف في تنفيذ البحوث العلمية لدى طلبة الجامعات العربية، وكان من بين أسباب الضعف تلك: ضعف اهتمام العالم العربي عموماً بالبحث العلمي، وتدني المخصصات المالية للبحث العلمي، وانشغال أعضاء الهيئة التدريسية بالأعباء الدراسية، وعدم توافر الوقت الكافي لتنفيذ البحوث، وزيادة عدد الطلبة الذين يشرف عليهم العضو الواحد، وعدم كفاية الأساليب البحثية التي يتعلمها الطلبة، وضعف اهتمام الطلبة بثقافة البحث العلمي، وعدم وجود مناخ تشجيعي لتنفيذ البحوث العلمية، وعدم التأهيل الجيد لأعضاء هيئة التدريس فيما يتعلق بمنهجية البحث العلمي. وقدمت الدراسة مجموعة من التوصيات والمقترحات للتغلب على المشكلات ومعالجة الضعف في تنفيذ البحوث العلمية، والتي كان من أهمها: تطوير القدرات البحثية لأساتذة الجامعات، وتطوير المناهج التعليمية الخاصة بتدريس أساليب البحث العلمي، والإشراف الحثيث من قبل الأستاذ الجامعي على الطلبة خلال فترة إجراء البحث، وتخفيف العبء الدراسي لأعضاء هيئة التدريس، وتفعيل الإرشاد والتوجيه من قبل الأساتذة للطلبة، وتخفيض عدد الطلبة الذين يشرف عليهم الأستاذ الواحد، وتشجيع البحوث المشتركة بين الطلبة، ونشر ما يمكن أن يكون صالحاً للنشر من أبحاث الطلبة في الدوريات العلمية التي تصدرها الجامعة، وتقديم مكافآت مالية للطلبة الذين يقدمون بحوثاً تعتبر ذات قيمة نظرية، أو قيمة تطبيقية.