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Using Cause and Effect Analysis to Improve the Quality of University Education: A Case Study

Abstract

Higher education forms the backbone of any country's economic performance and sustainable development, university institutions in Iraq tried to adopt university quality improvement systems at the forefront of these systems is the international standard (ISO9001) with its various versions, and quality assurance system in higher education according the standards of the of association of Arab Universities, and Iraqi standards, However, the picture was not completed due to the circumstances that faced the development movement for higher education in Iraq, Therefore, it has become necessary for research and studies to be directed towards activating methods of improving university quality, and searching for the most important tools that contribute to implementing this improvement successfully,, That improving the performance of university education in general depends on the level of performance of the comprehensive university educational process, and Good selection and use of tools to improve their quality, On this basis, the main objective of the research was (improving the performance of the comprehensive university educational process in Iraqi colleges using: cause-and-effect analysis technique), Whereas private colleges (the private sector) are more in need of such improvement, so a sample of private colleges in Basra is chosen as an area of study, For this reason, a sample of private colleges in Basra was chosen as a field of study, the research problem was summarized by bellow question: (to what extent can cause and effect analysis be used to determine the fundamental causes affecting the overall university educational process, and improve its performance in private colleges? Whereas the sample of the study is one college (Alknooz university college), So use the deductive approach which depend on (Analysis, discussion and logical reasoning) in its theoretical aspect), and the case study approach in the field study side, The literature of the university educational process was used to collect theoretical information, And developed a special checklist to collect field data related to the evaluation of the causes of the problem, the research reached a set of results, the most important of which is to identify the most fundamental reasons for the problem of improving the educational process in all private colleges in Basra.

Keywords: Cause-and-effect Analysis Technology, Educational Process, Improving the Quality of the Educational Process.

Introduction

Higher education is facing a new era as a result of changes in the way people view colleges and universities, in expectations about better performance described in teaching terms, and the increase in graduate numbers. One of the models of higher education that has

contributed to improving the performance of many companies and educational institutions is the use of the Total Quality Management (TQM) model. The total quality management model focuses initially on increasing customer satisfaction through an integrated framework that integrates the components of total quality

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management with improvement techniques, to reduce errors and losses in the educational process. This requires providing a comfortable environment for workers, increasing the pride of workers in their work, and enabling them to make changes wherever necessary (Ambjörn Naeve et al, 2004). Quality improvement techniques have become one of the important improvement tools that are commonly used in the educational process in the university institution, and among these techniques is the analysis (cause-effect or Fishbone model).

The cause and effect diagram or the detection of the root causes is an effective tool for identifying the main causes and the possibility of controlling and treating them according to the situation that prevents their recurrence. Effective use of this model requires accurate identification of the reasons behind the problem or situation under study. Moreover, since the problems in the university educational process are complex and overlapping, which makes the procedures for their diagnosis and treatment characterized by some difficulty, and in order to simplify the treatment of such problems in Iraqi university colleges, especially the private ones, and to provide simple solutions to the complex problems facing university administrations and improve the quality of their performance, (Using the cause and effect model to improve the quality of the university educational process) was chosen as a title for the research. Since the complexity in solving problems in the university educational process results from the overlapping of two main reasons for the emergence of the problem, namely (the normal or local reason, which can be identified in a component of the process, and the main reason or the one related to the entire process, which is difficult to locate because its effects ramify in all components of the educational process, or major parts of it), from which the difficulty appears in detecting the problem and the ways to address it. However, the (cause and effect) technique can be the best solution in detecting and addressing such problems. Despite the importance and ease of use of this technology at the level of developed countries, the problem in Iraqi colleges in general lies in the lack of serious interest in the methods of implementing the quality assurance system in Iraqi colleges. This results in a lack of knowledge of quality improvement tools and methods of implementation, including the technology under study. The problem was defined by a question (To what extent private colleges in Basra can use the cause and effect technique to improve the performance of the university educational process in its comprehensive capacity?). Al-Kunuz University College was chosen for the study as it is one of the private colleges in Basra which is known for its interest in improving the quality of its

educational process, and it has attempts, albeit modest, to implement the quality assurance system in the college. The researcher used two tools to collect information and data, the first is represented by (the available literature on the subject to crystallize the theoretical aspect of the research), and the second is (a checklist to collect data related to the field study). In order to organize the research towards achieving its specific goals, it was structured in an introduction and (five sections), the first one included a summary of some previous literature, the second included the research methodology, the third included the conceptual framework of the research, the fourth was devoted to the design of the field study, the fifth included the field study, and the sixth included a discussion of the results, conclusions and recommendations.

Previous Studies

The study, which was conducted by (Jason Martin et al), indicated that the logical explanation of the organizational situation reveals four levels of learning (expansion of learning, rule orientation, goal orientation, and creative learning), and these levels can be used as field performance measures for improvement purposes. These levels can be used as field performance measures for improvement purposes. On the other hand, the study, which was conducted by (CCSD, 2012), indicated that the process of planning for improvement in educational institutions consists of three main elements: (preparing the plan, analyzing data, setting goals and action plans, and monitoring the continuity of progress). The process of analysis towards improvement requires the availability of effective and efficient improvement tools that can lead the process towards continuous improvement, and the most important of these tools included in the Total Quality Management (TQM) model, which are the seven quality tools, including (cause and effect diagram). Furthermore, a study conducted by (Robert V. Hoggel, 1995) and showed that total quality, with improvement techniques, reduces errors and losses in the educational process. The study (www.dti.gov.uk/quality/toolsdti) also presented a set of improvement tools: (process map, field forces analysis, cause and effect diagram, brainstorming, checklist, Pareto analysis, statistical control methods, scattering scheme, matrix analysis, graphs). Another study was conducted by (Slameto, 2016). It showed the importance of using the cause and effect model in achieving an effective response to the basic needs of the educational institution, and identified three steps that illustrate the proper use of the model (model development, evaluation, and testing). In this context, (Alexis Aitken et al.) emphasized, in his book entitled

(Improving quality using process variables analysis), that using the cause and effect model helps to reveal the root causes of the problem, thus simplifying the identification of the main variables of the process when repetitions or other types of data are not available. Besides, (CCSD, 2012) indicated that determining the causes is not easy. The study itself indicated that the identification can be by answering the following questions: (Can the problem appear in the absence of a specific reason? If the answer is no, the cause is major, and if the answer is yes, then the cause is normal. Does the problem recur as a result of the same reason, if the cause is treated or re-solved? If the answer is no, then the cause is main, and if the answer is yes, then the cause is normal. Does treatment and resolution lead to the same results in similar problems? If the answer is no, then the cause is main, and if the answer is yes, then the cause is normal.

The following is extracted from the summary of some previous studies:

- The problems in the university educational process are complex and overlapping, and this makes the procedures for diagnosing and treating them characterized by some difficulty.
- The problem in the educational process carries with it two main causes: (the normal cause, which can be identified in one component of the educational process, and the main, or strategic cause, which is difficult to locate because it affects the whole educational process or important parts of it).
- Accurate detection of the causes and roots of problems in the university educational process leads to a fundamental improvement in it, and to the possibility of a fundamental transformation of the better situation.
- Therefore, effective and efficient improvement tools should be available, because they can lead the university educational process towards continuous improvement.
- The (cause-and-effect analysis technique) or the Ashikawa model is one of the important models of total quality management. It is concerned with the roots and causes of problems, by matching the general and detailed causes of the problem.

The Research Methodology

The main objective: Attempting to improve the quality of the comprehensive educational process in the Iraqi private colleges using the cause and effect technique.

The research problem: The Iraqi private colleges still need further improvement in their academic and institutional performance, or the performance of the university educational process, but improvement in this area needs techniques that can be applied and results are guaranteed. Moreover, international studies and practices in the field of improving the comprehensive university educational process have proven that the tools of quality and continuous improvement are the most appropriate and best used, because the educational process is complex, and involves many intertwined and interdependent elements which need to be analyzed and restructured simultaneously, in order to reveal the roots of the causes that affect the level of performance of the educational process (analysis), then crystallize the trend that forms the basis for treatment (restructuring). This cannot be known in a simple way and can be implemented only through (cause-and-effect analysis technique). The problem lies in the extent to which the administrations in private colleges are aware of the concept and methods of selecting and using quality techniques to improve the educational process, including the mechanism of cause-and-effect analysis. The problem was defined by the main question: (To what extent can the university administration detect the main and subsidiary causes affecting the educational process in order to improve the overall university process in the Iraqi private colleges?).

Objectives of the Study

- To reveal the extent of the Iraqi private colleges' interest in the requirements of improving the quality level of the educational process.
- To diagnose the root causes affecting the quality of the comprehensive educational process in the Iraqi private colleges.
- To determine the possibility of using the cause and effect analysis model technique to improve the performance level of the university educational process in the Iraqi private colleges.

Significance of the Study

- Raising the attention of the deanships of the Iraqi private colleges and their academic staff to the necessity of reviewing and evaluating the university educational process in the college with a view towards improvement and development.
- Providing theoretical information and practical methods for researchers and scholars on how to use cause and effect

analysis to improve the university educational process.

- The process of improving the university educational process can contribute to achieving economic returns for the sector and the country.

Motives of the Study

- Most of the Arabic studies use quality improvement techniques in industrial fields, and they are rarely used in service fields.
- The scarcity of Arabic studies specialized in the use of quality techniques in the field of the university educational process.
- There is still difficulty in the process of collecting data and information about the problems of the university educational process from the actual reality of Iraqi university colleges in general, and private ones in particular.

The Theoretical Framework of the Research: How to use the Cause and Effect Technique to Improve the University Educational Process

1. The University Educational Process (Presentation and Analysis)

The process is generally defined as (a series of steps designed to produce a product or deliver a service) (Wikipedia, 2000). It is called, at the level of the university institution, as (the comprehensive university educational process), and it is defined as (a series of sequential and interdependent steps, whose mission is to transform university inputs (students) into outputs that respond to the needs of society (graduates and research). The university educational process is determined by three basic forces (human power, educational power, and technological power). These forces interact with each other through the general framework of the university educational process.

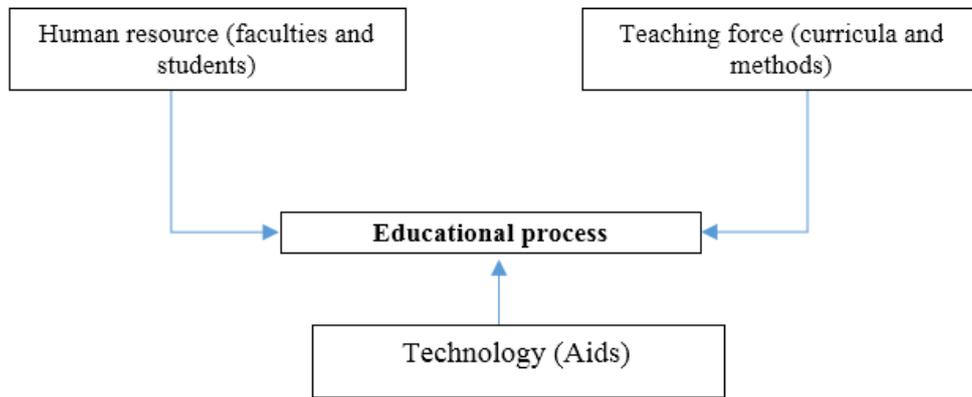


Figure 1.
Educational Process Chart

Source: Al-Saad and Manhal, 2010

Table 1.
Comprehensive university educational process

| Input | Transformational Process | Output |
|---|--|--------------------------------|
| 1 - Students 2 - Academic and administrative staff 3 - University environment and society 4 - Technology 5- Documentation 6 - Laws and legislation | Curricula, Methods, Laboratories, Technologies | New added skills and knowledge |

Therefore, the higher administrations in colleges of higher education in general, should diagnose and analyze the main elements of the educational process mentioned above, which are (inputs, processes, outputs, their sub-components and the relationship between them), and the final result that guides the process in its new form. This undoubtedly requires the use of appropriate techniques for analysis, the most important of which is the analysis technique (cause and effect), because it is suitable for studying and analyzing complex processes, including the study and analysis of the comprehensive university educational process, and it helps to reveal the dynamic relationship between its main and subsidiary elements, depending on cause relationships and

influence among them, as well as determining the levels of improvement of the educational process as a comprehensive one.

2. The Cause-effect Diagram: The Logic of the Relationship and the Method of Analysis

A diagram or (model) of cause and effect is defined as (a diagram that mainly diagnoses the causes of the problem and isolates them for the purpose of treatment) (Shibli, 2014). It is also described as (Root Cause Analysis), and it is defined from the point of view of business solutions. It is (the main cause or causes of the problem), and it is defined from the point of view of total quality management as the detection of (the most important reason for the emergence of the problem) (CCSD, 2012). Therefore, cause and effect analysis can be defined procedurally as: The technique that reveals the deeper cause or causes that lie behind the emergence of a negative or positive phenomenon from within any process, and if it is (dissolved), this leads to the elimination of the phenomenon completely or a substantial reduction in it.

It can be mentioned, following the above definition, that the cause and effect technique:

- Helps to identify the root cause or the reasons that lie behind the problem. These reasons can be positive or negative, so they should be studied and the results of both cases can be benefited from.
- Helps to reveal the level of the gap that can appear between the expectation (the possible case) and the actual situation.
- Uses the process or analysis and synthesis related to the relationship between possible causes and results.
- Gets rid of the roots of the causes by resolution (Dissolve): discovering the roots of

the causes and re-treatment of the problem by getting rid of the negative roots of the causes. Perhaps the core problem is to reveal the root causes of the problem, which may fall on the following levels (CCSD, 2012).

- The procedural level or the incident level (incident or procedural level): it includes (students, test, teaching, event).
- Programmatic level: It includes (institutional processes, administrative processes, materials, time, arrangement and organization, schedules).
- Organizational level: It includes (leadership, vision and mission, morale, planning budgets, policies, values and beliefs, organizational structure, distribution of administrative staff, technology, cooperation, and evaluation).
- External level: It includes (family, community, partners and other supporting agencies. The cause and effect analysis depends on revealing the interdependence between the forces on which the educational process is based: (the educational environment, teaching processes, and improving the educational process) (Phillips, 2010), as well as the five dimensions on which the cause and effect technology is based and the requirements for its analysis: (environment, people, materials, equipment, and methods), since this interdependence helps to conduct the processes of analysis and synthesis, and the outcome of their orientation towards the main goal of (technology), which is to improve the educational process. This can be represented in the figure (2) below.

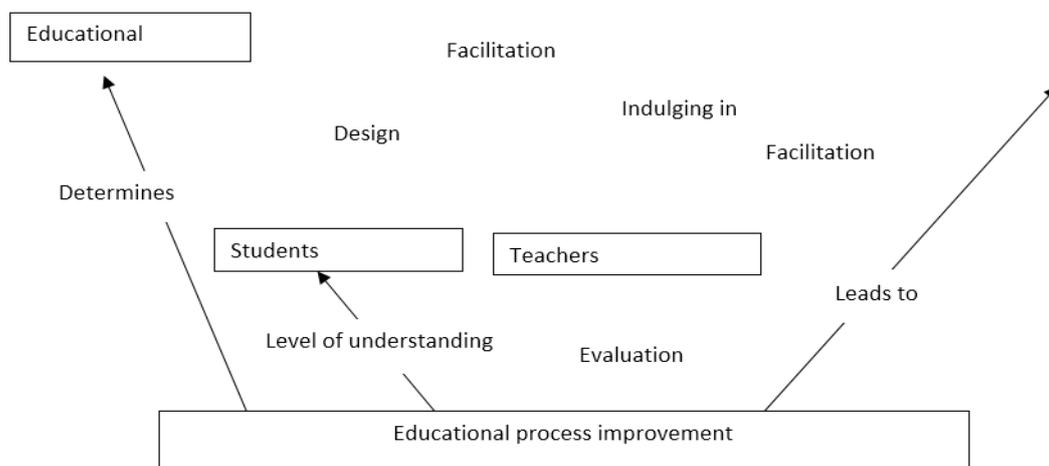


Figure 2.
Educational process improvement

Achieved by facilitating the teaching process that leads to improving the educational process, while the second is direct as it places determinants on improving the educational process. The environment may provide a positive atmosphere for interaction between (faculty members and students in a way to achieve harmony between these two fundamental forces of the educational process), and as a result lead to the improvement of the teaching process. On the other hand, evaluating the teachers' performance in relation to the level of students' understanding of the subjects, and working to improve it in the light of the feedback on the evaluation process, will be positively reflected on the level of improving the educational process in its comprehensive form. Despite the complexity and overlap in these forces and factors that are expected to contribute to improving the educational process, understanding the construction of cause and effect technology, and the mechanisms of its operation contributes a lot to solving problems and revealing the causes affecting these relationships and interactions.

The Mechanism of Using the Technique of Cause and Effect Analysis (Possibilities and Determinants)

It is clarified in the following points:

The first point: It requires, before starting to use the cause and effect technique for specific purposes, to note several indicators that can help the effective use of this technique:

Going to the end, then asking about the expected root causes.

- If everyone agrees on the cause, then this means that the cause is essential and requires searching for its roots.
- This cause should be logical and reasonable, and provide more clarity to the problem.
- If the cause is specific to the site and it is possible to influence and control it, it is a secondary cause, not a major one.
- If the cause or some of the root causes are eliminated, there is hope that the problem will decrease significantly or be completely eliminated in the future.
- The necessity of sufficient data and efforts to help reach the goals. Experience often plays an important role in such cases.

The second point: Root Cause Analysis: RCA refers to (a technique designed to solve problems and reveal the deeper roots and root causes contributing to the identification of the problem). RCA method helps departments in colleges to correctly identify real problems, rather than addressing the phenomena. The most challenging aspect of (root cause analysis) is the ability of employees and management to be open and honest in a collaborative and safe environment. This environment promotes real examination of potentially uncomfortable causes, including issues of educational environment, regulation, and education quality. This is the important step in reaching the roots of the problem that affects the educational achievement of students, and the educational achievement gap between the subgroups. The first step in this method is to determine the reflection of the roots of the cause on the performance based on multiple sources of data analysis. It is important that teams analyzing multiple data sources, and sequential series of data, validate the contribution to the phenomenon.

The method of analyzing successive series of data is one of the methodologies that can be used to identify the root cause of the problem, and at a minimum, planning teams should use at least three data sources to identify the sources of causes contributing to the phenomenon. It is possible to verify the actual existence of the root causes, and their actual contribution to the problem, using the following table:

Table 1.

Organizing the main and subsidiary causes of the problem

| Main causes (dimensions) | Sub-causes (roots) | Sources for identifying the causes | Evaluation questions |
|--------------------------|--------------------|------------------------------------|----------------------|
|--------------------------|--------------------|------------------------------------|----------------------|

The third point: The cause and effect technique analysis mechanism should focus on revealing the root cause or causes of the problem, and it begins with the initial determination of the extent to which the cause affects performance. Then it includes all the factors and suggests the reason or reasons related to the problem, and it is very important to check all the answers before final approval according to the cause and effect diagram shown below:

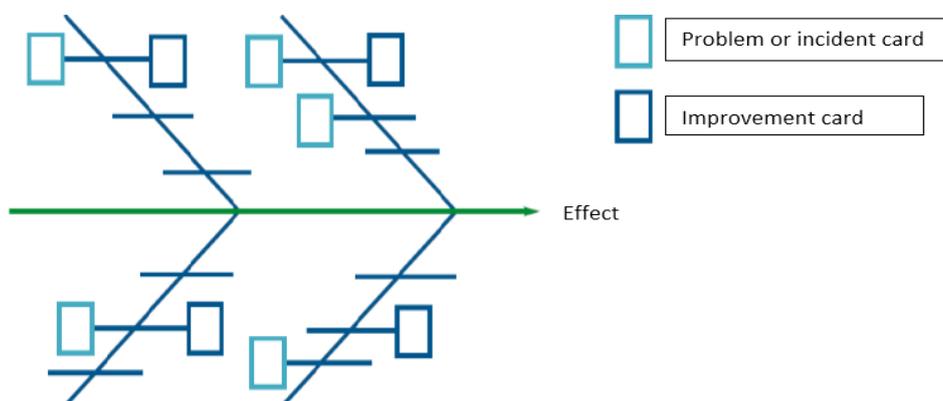


Figure 3.

Cause and Effect Analysis Technique

Source: - CCSD, 2012

The fourth point: Initial knowledge of the technique of cause and effect analysis: The technique of cause and effect is formed like the image of the fishbone skeleton with the addition of other cards. The effect side of the diagram represents the quantitative description of the problem, and the cause side of the diagram uses two different colored cards to write events and ideas. Moreover, incidences are collected and written on the left side of the diagram. Ideas for improvement are listed on the right side of the diagram. Ideas are then evaluated and selected for practical application.

Using the Cause and Effect Diagram Model to Improve the Quality of the Educational Process

In complex social systems such as (universities and colleges), it may be difficult to identify one specific and single reason to address its main problem or improve its level of performance, because the problem appears as a result of a variety of overlapping causes, each depends on the other (Slameto, 2016). And since the technique of cause and effect analysis reveals and identifies the various reasons that lie behind the emergence of any complex problem by organizing it in a systematic form that allows to clarify the logical relationship between these reasons that appear on the analysis technique diagram, directed towards achieving the main goal of the problem and in the subject of the research, the goal is (to improve comprehensive educational process). The use of the cause and effect analysis technique enables setting the outlines of the method that reveals the causes of the incident or the problem related to the subject of the study, which is the detection of problems in order to improve the university educational process. Therefore, the use of the cause and effect analysis technique focuses initially on the educational material that forms the basis for the process of intellectual transformation of the

student, which should be structured from the beginning to suit the students' levels of awareness, and then modified according to the changes required by the development in the university educational process. Moreover, since the student's level of awareness is determined in part by the characteristics of the university and societal environment with which he coexists, consideration should be given to the characteristics of the environment and the level of its effects on the student's level of awareness of learning materials and his integration into the educational process. This requires structuring the requirements of the educational process that takes into account the environmental determinants. Thus, it becomes necessary to examine the curricula and teaching methods to reveal what is appropriate for the balance between the requirements of the educational process and the environmental determinants, so as to provide better conditions for revealing the actual abilities of the student in learning. This requires harmonization between the capabilities of the teaching staff and the available learning materials, directed towards improving the learning capabilities of students, and this harmonization is supported by the availability of teaching techniques, a library rich in references and resources, laboratories, and an appropriate educational climate), so that the final result is positively reflected on the expected results of improving the university educational process. This complex problem requires a systematic way to use the cause and effect technique that is commensurate with the reality of the educational process in Iraqi universities or colleges.

The Design of the Field Study

The present research adopted in its field study the case study methodology by choosing one of the private colleges in Basrah Governorate, which is (Al-Kunooze University

College), which is constituted in terms of (size, recognition, attention to quality, requirements for improving the educational process, and the tendency of the administration towards development) the greatest common denominator among other private colleges in the governorate. The research organized its field study on the basis of achieving the answer to the main question of the problem: (To what extent can private colleges improve the quality of the educational process by revealing the main and secondary causes affecting it?) For the purposes

of data collection, an intentional sample was selected. It included a group of senior management and teachers in the college in question. A checklist was developed for the purposes of data collection, and special tables were organized for the purposes of analysis. The content of the checklist can be found within the analysis tables.

The Field Study

1. Presentation and Analysis of Data

Table 2

Presentation and analysis of data

| Main causes (dimensions) | Sub-causes (roots) | Sources of specifying causes | significance | normative importance | The Backlog Variance | Confidence | Impact factor |
|--|--|---|---|---|----------------------|----------------------------|---|
| First, people: all participants in the educational process | For all sub-causes: 1 - Leadership of the College: Deanship and heads of departments. 2 - The faculty. 3- The administrative body. 4 - Financial Authority and service. 5- The students. | Theory : Literature Field: Reconnaissance of Reality | % 12 % 13 % 16 % 12 % 12 % 11 | % 14 % 14 % 14 % 14 % 14 | % 69 | 85% for all sub-variables | ----- ----- % 40 % 36 ----- |
| Second: the undergraduate environment: all Influencing forces in educational process. | For all sub-causes: 1 - The local community. 2 - Corresponding colleges in Governorate 3- The university campus' rules and regulations. 5 - The founding body and investor. | Theory : Literature Field: Reconnaissance of Reality | % 12 Not significant % 10 % 14 % 12 % 13 | % 14 % 16 % 16 % 16 % 16 | % 82 | 85% for all sub-variables | ----- % 49 ----- % 19 |
| Third: materials of Teaching: All scientific topics which the student learns through stages of study | For all sub-causes 1 - Articles or topics. 2- Educational subjects for each subject. 3- Scientific Research projects 4 - Sources and abstracts. | Theory : Literature Field: Reconnaissance of Reality | % 20 % 19 % 9 % 21 % 21 | % 14 %20 . 5 %20 . 5 20 . 5% %20 . 5 | % 82 | % 85 for all sub-variables | ----- ----- ----- % 21 |
| Fourth: Methods: Modalities followed in teaching process | For all sub-causes 1 - Educational experiences for teachers. 2- The way the teacher uses it in classroom : - lecture Lecture and discussion. Lecture and discussion and explanatory aids. other. - Use of technology in modern education 5- Daily, Monthly and quarterly tests. | Theory : Literature Field: Reconnaissance of Reality | % 12 % 6 ----- ----- % 9 % 20 | % 14 5 1 9. 1 9. 5 1 9. 5 | % 8 7 | % 85 for all sub-variables | ----- ----- % 32 ----- % 15 % 50 |
| Fifth: Equipment: Tools used in educational process. | For all sub-causes 1 - Laboratories as per nature of the material. 2 - Computers. 3 - Teaching supplies 4 - Classrooms. 5 - Library. | Theory : Literature Field: Reconnaissance of Reality | % 12 %11 % 12 % 14 % 13 % 13 | % 14 19. 5 1 9. 5 1 9. 5 1 9. 5 1 9. 5 | % 79 | % 85 for all sub-variables | ----- ----- ----- ----- % 68 |

Table (2), that includes data presentation and analysis, clearly shows the following:

A. The main factors (causes) of the university educational problem under study, and were identified starting with (people, teaching materials, teaching methods, university environment, equipment). And all of them were tested by the method of exploratory factor analysis, as the analysis showed that the values of the variance explained for all of them ranged between (69% - 82%). In other words and in more detail, the variance is as follows: (people 69%, environment 82%, teaching materials 82%, methods 78%, equipment 79%), and that any of them alone explains a high percentage of change in the university educational process.

Thus, they were adopted as main causes for the university educational process problem, and the table clarified the actual reasons that lie behind the main reasons for the university educational process problem, but the viewpoint of (Sahat Saragih et al, 2005), which states that the sub-causes (the roots of the causes) for each main cause or factor must be characterized by (legitimacy, i.e. - significance - and confidence that are statistically acceptable), which required testing to verify its legitimacy according to the criteria (importance and reliability) referred to a while ago.

B. Sub-causes included in each factor or main cause for the university educational process:

- People (main cause): The importance of the percentage of the people participating in the educational process (college leadership: dean and department heads - teaching staff - administrative staff - financial and service authority - students) ranged between (11% - 16%) compared to the normative importance. 14%), indicating that they are close to or greater than the normative

importance, and these reasons are the actual sub-causes of the main reason for people.

- University environment (main cause): The importance of the elements of the university environment (local community, corresponding colleges, university campuses, legislation and instructions, investing body) ranged between (10% - 14%) compared to the standard importance (16%), noting the weakness of its affiliation or its importance to the university educational environment.
- Teaching materials (main reason): The importance values for the elements of teaching materials (study subjects or subjects, curricula for each subject, scientific research projects, sources and summaries) ranged between (19% - 21%) compared to the standard level (5.20%), noting that these reasons are the actual sub-causes of the main cause (teaching materials).
- Teaching methods (main cause): The importance values for the elements of teaching methods (the teaching experiences of the teachers, the method used by the teachers in the classroom, the use of modern educational technologies), and all teaching methods were weak except for the method of using modern techniques in teaching, which was of (20%) importance compared to the standard level (19.5 %), which represents the actual root and sub-cause of teaching methods.
- Equipment (aids): The importance of the equipment elements (laboratories, computers, teaching supplies, classrooms, and library) ranged between (11% - 13%) compared to the standard importance (19.5 %), indicating its weak affiliation or importance to the main cause of equipment.

Result:

The main and actual sub-causes of the problem of the university educational process in the college under study: The main or direct causes of the problem are: (people, teaching materials, teaching methods, university environment and equipment). On the other hand, the sub-causes or the root causes of the main causes are in general: (the dean and department heads, the teaching staff and the administrative staff, the financial body and service, students, local community, university campus, curricula for each subject, scientific research projects, resources, summaries and the method used by the teaching staff in the classroom, the use of modern educational technologies, laboratories, computers, teaching supplies, classrooms, library). The above results have been fixed on the actual diagrams of the cause and effect analysis technique, for the purposes of knowing the nature of the problems on the diagram, and simplifying the process of discussing the results.

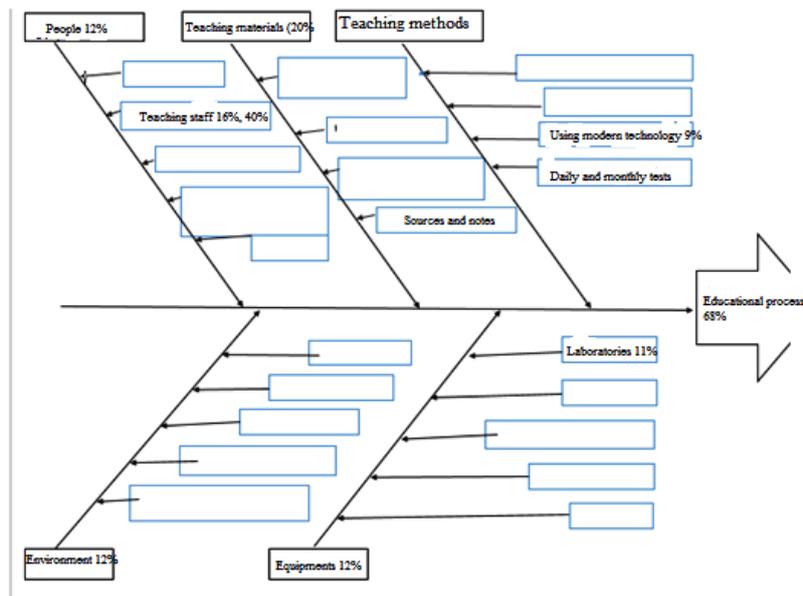


Diagram 1.
The main causes of the university educational process problem

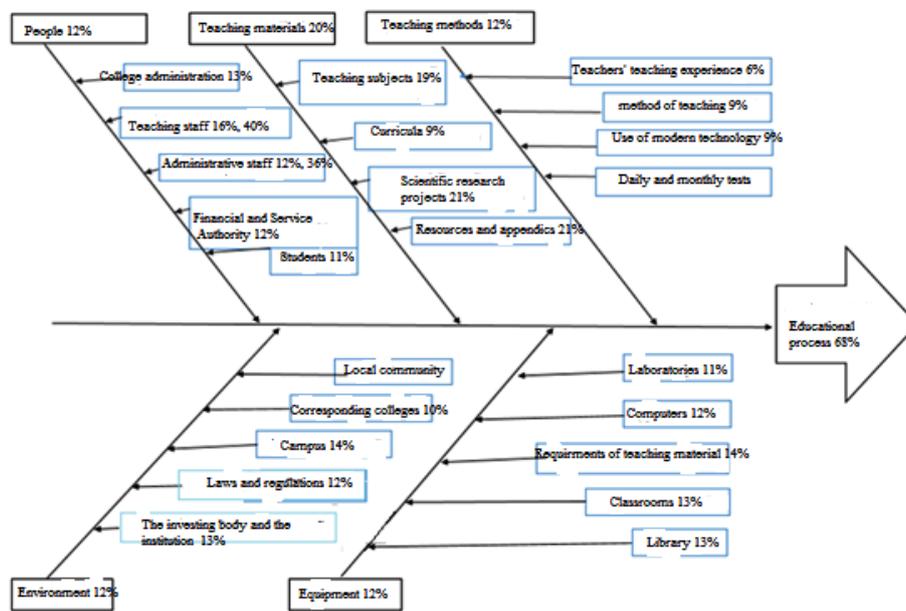


Diagram 2.
The main and sub-causes of the university educational process problem

Discussing the Results, Conclusions and Recommendations

Discussing the Results

The five reasons identified by the analysis scheme (people, environment, teaching materials, teaching methods, equipment or teaching tools) are the actual causes of the educational problem, but they differ in terms of importance and interest from one college to another (governmental or private). Some colleges may be formally interested in them,

while others may be interested in some of them, and we rarely notice a college in Iraq that takes care of all of them, but the ambition towards improving the university educational process requires presenting and discussing them all. In Al-Kunooze University College, the subject of the research, the five main reasons for the problem of the educational process explain the value of (80%) of the change in the educational process in the college, and therefore they can all be considered as fundamental reasons for the problem of the educational process in the

college. However, the level of actual interest in these causes varies from one cause to another. The results of the analysis showed that (the teaching materials or scientific topics that the student learns during the specific study stages) are the most influential reason for improving the quality level of the university educational process, because they are affected by sub-causes (roots of causes) which are multiple and important. These causes are (faculty staff, scientific research projects, sources and summaries, and tests of various kinds), because the narrow perspective of the university educational process, which is determined by internal foreseeable reasons, sees that teaching materials and the level of their delivery to the student through the faculty and other available educational means contribute to improving the educational process, and it is positively reflected on the reputation of the college and its evaluation, especially since the private sector colleges (private) are more concerned with short-term profitability than with the long-term causes for improving the comprehensive educational process.

Thus, it is clear that the strategic (long-term) perspective is focused on paying attention to the internal and external factors that contribute to improving the university educational process in the relatively long term, and may conflict with the interests of short-term profitability.

- This perspective did not receive much attention from the deanship and investors in the college under study, as the results of the analysis showed weak interest or (marginalization) of these factors represented by (the local community, the administrative leadership of the college, government laws and legislation, other teaching requirements). This does not receive the interest of the Deanship and investors in private universities (the private sector). It is also because all these factors are outside the control of the college on the one hand, and the effects of some of them are indirect on the other hand. Moreover, the college's lack of information reveals the important role that external factors can play in improving the overall educational performance of the college.

The indicators of the analysis revealed other influences of a general nature that posed difficulties in implementing the improvement of the university educational process, which are: (the interventions of the invested body in the scientific and administrative aspects despite its ignorance of these aspects, the loss of clear knowledge of a series of educational process priorities, the scarcity of efficient teaching staff and the difficulty of their availability for private colleges, especially after the recent directives of

the Ministry regarding the relationship with government colleges).

- The reasons for the relative improvement in the comprehensive educational process, whose index value reached (68%), are due to the direct effects of internal factors on the one hand, and to the investing body's support for the factors and forces that contribute to short-term profitability on the other hand.

2. Conclusions

- There is a relative difference in determining the main reasons that actually affect the university educational process in private colleges.
- Private colleges differ in the level of focus on any of these reasons according to the importance and multiplicity of the sub-causes (the roots of the causes) for each main reason.
- Private colleges are interested in the perspective of short-term profitability and focus on the factors that have a direct impact on profitability (that is, the internal visible causes only).
- Weak interest in the strategic perspective (comprehensive and long-term), which focuses on the internal and external causes affecting the educational process alike.
- Private colleges lack sufficient information about the external factors or causes affecting the educational process, for example (the local community, government laws and legislation).
- The negative effects of the interventions of the invested body in the scientific and administrative aspects on improving the performance of the comprehensive educational process.

3. Recommendations

The first recommendation: Giving the main causes and the roots of the causes mentioned in the above plan a priority when undertaking a procedure to improve the educational process in the private colleges in Basrah, the subject of the study. This can be achieved through the following mechanisms:

- Preparing a model scheme (cause and effect that fits with the actual requirements) to improve the university educational process in the college in which the study is intended to be conducted.
- Choosing a sample from the faculty's staff which is characterized by knowledge, experience, accuracy and honesty in transferring information from the surveyed sample.

- Conducting an intensive theoretical study to reveal the main and secondary causes that are expected to affect the educational process.
- Creating special and appropriate tables for data unloading and ease of analysis.

The second recommendation: There should be a focus on the sub-causes (the roots of the causes) that may show a favorable or strong influence on the main causes of the university educational process problem), through the following mechanisms:

- Ensure that these reasons are the most influential in the main causes of the problem of improving the educational process, and that neglecting them or not paying attention to them may weaken the attempt to improve.
- Attempting to reveal the reasons for the weak interest of the college or colleges under study in these factors, in order to enhance their positive impact in improving the university educational process.
- Organizing them according to a series of priorities of importance for the sake of economy and ease in the procedures of the improvement process.
- Gathering sufficient information about these causes in order to find the best ways to treat and improve.

The third recommendation: There is a strong need to shift from the narrow internal perspective in the perception of the university educational process, which focuses on the dominant internal causes only, to the strategic perspective that focuses on both internal and external causes. This can be achieved through the following mechanisms:

- Encouraging the deanship and decision makers at the university and college levels to use the strategic perspective in the field of analyzing the main educational processes.
- Using the environmental analysis of the university educational process to reveal the internal and external factors affecting it.
- Organizing the internal and external critical factors affecting the university educational process according to their precedence.
- Priorities are organized according to criteria (impact, importance, trust).

Fourth recommendation: Overcoming the obstructing factors and forces to improve the comprehensive university educational process.

- Establishing controls and instructions that limit the interventions of the investing body in the scientific and teaching aspects.
- Develop a strategic framework to organize a series of educational process priorities.
- Providing efficient teaching bodies by keeping the available ones in the college on the one hand, and introducing others to advanced development and training courses.

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