

EVALUATION QUALITY COSTS OF ADMINISTRATION AND ECONOMICS COLLEGE AT ANBAR UNIVERSITY AND THE IMPACT OF DISPLACEMENT OF THESE COSTS (ANALYTICAL STUDY FROM 2013 TO 2017)

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ABSTRACT

The study aims to evaluate quality costs of Administration and Economics College at Anbar University and show the impact of displacement of these costs from 2013 to 2017 .

Analytical style was used and adopted inductive and deductive approach in analyzing and extracting results , the study has showed reduce in prevention costs in 2014 by (8,7%) of previous year , which led to increase the internal failure costs to be (89,9%) of quality costs total , the main reason of increase the failure cost is to increase the number of failed students to (138) student of 2014 , in 2016 the prevention cost became (1,6%) of previous year , but the internal failure cost has also increased , the main reason is to increase failed student cost to (3589063) dinar is higher cost of study period , this increase is connected with increasing the costs of extinction, specifically the destruction of buildings, the study also showed that the records of quality costs did not obtain which is considered a basis in preparing reports of quality cost , in addition that the quality team lacks accountant of quality costs , which made a weak in detailed documentation of quality costs , accordingly the management will not be able to put future plans in a good way and weak control of quality performance as well as will not be awareness in an importance of quality costs .

The study recommended the necessity of increase awareness in an importance of quality costs , keep records , prepare quality reports to follow and control the quality costs for the future period , show changes , join an accountant with team or quality management to be able to collect , clear and enter costs data of quality in order to make a good analysis operation of data by participation with quality team , in addition to his role in helping management in planning , control , evaluation and taking decisions and analysis the reasons of an internal failure in deep and detail way to reduce this cost over time , reaching to the requested quality goals by the management .

FIRST CHAPTER : RESEARCH GENERAL FRAMEWORK

1-1 Introduction

All institutions whether it was industrial or government service or private seek in all field and sectors to obtain a distinguish position locally, internationally or both. Most of these institutions in an advanced states focused on a comprehensive quality management concepts to achieve that

excellence in business and services , these institutions exerted efforts to reach to low cost of its products and services with working diligently of continuous improvement of their operations to ensure high quality products meets the needs and needs of customers while trying to maintain or expand their market share to increase their profits , and with the intensification competition in the business market the importance of adopting these concepts increased , which proved successful in developed countries. In the developing countries , some of these institutions are trying apply comprehensive quality management concepts , the adoption of these new concepts needs quality costs as reports and quality data whether it was financial or non financial , the most important sectors in the society is an educational institutions that gathered all other sectors of scientific and professional efficiency human staff , through it can develop societies economically , culturally and politically, the educational institutions shall adopt the quality ideas and concepts in its institutions to increase the quality of its outputs that will be presented to the community in all its public or private facilities. So , the researcher has the need to enrich this process to adopt quality concepts through studying and analyzing their own cost in detail . Here , the quality costs in Administration and Economics College \ Anbar university was studied and analyzed to put first steps to increase the studies in this vital educational sector and adopt these concepts and methods of quality .

2-1 Research Problem

The research problem is not recognize the importance of quality costs reports in the Higher Education and Scientific Research Institution of Iraq , it is clearly through these institutions do not adopt financial reports and data independently , therefore it leads to inability to adopt these quality management concepts in a good and right way as well as show the impact of displacement operation of original college site because this operation that has occurred in that college on the quality costs .

3-1 **Research Goals** : the research goals are as follows :

- 1- Show the main concepts of quality costs theoretically .
- 2- Show the production system in high education institutions .
- 3- Evaluate quality costs in Economic and Management College \ Anbar University of study and research period .
- 4- Show the impact of displacement from its original site on the quality costs during that period .

4-1 Research Importance

The research importance focus on identify the terms and concepts of quality costs in all main details of importance , elements and quality costs measuring indicators and preparing quality costs report at Administration and Economics College \ Anbar University of study and research period . In addition to analysis the quality cost of that period to be the basis of work in future adjustable and update by the persons who are responsible for preparing quality costs reports in the college and show the impact of displacement on the original site of the college and what is the impacts of quality costs elements for that period.

5-1 **Research Hypothesis** : the research hypothesis is as follows :

- 1- Can a quality cost report be prepared at Administration and Economics College to assess the course of these costs over the time period of study and research ?
- 2- There are no impacts of the displacement from the original college site on the course and trends of these costs over the time period of study and research .

6-1 **Research Approach**

Analytical style was used to show the research data and information and adopted inductive and deductive approach in analyzing and extracting results . An initial sources of data and information style followed such as financial and non financial data (quantity) of Administration and Economics College \ Anbar University of the study period . Secondary sources style also used such as books , references , studies , scientific researches and supported hypotheses of study .

7-1 **Research Society**

The research society in Administration and Economics College \ Anbar University is one of Higher Education and Scientific Research Sector Institutions that consists of three departments , Business Management department , Accounting department and Economy department .

8-1 **Research Borders**

The research borders include financial and non financial data from 2013 to 2017 , the financial data was obtained from records and financial lists of financial unit in addition to the data that are related to prepare students and rates of success in each year from the unite of planning , following up , scientific departments in the college and registration section .

SECOND CHAPTER : THEORETICAL SIDE

2-1 Introduction: The importance of total quality management in the education sector has increased in all countries of the world , this importance possessed to what the sector is able to prepare human resources with scientific and professional competence capable of working in other sectors , the transfer of scientific knowledge and professionalism to those institutions to be able to provide products and services with high quality, with adoption modern scientific m of production to reach the lowest possible cost in the production of goods and services, in addition to use the process of continuous improvement on its operations to obtain market share is able to make profits for those institutions to ensureremain in the competition arena locally and globally, to achieve the point of excellence in the business management of those institutions and the application of quality in all its vocabulary, these important vocabulary or axes are the costs of quality, the importance of quality costs in achieving the overall quality was a duty for these institutions to increase attention to quality reportsand in this theoretical aspect the researcher will take the most important axes of the quality cost before starting with the practical aspect.

2-2 Concept and Nature of Quality Costs: before identification the quality costs ,It is necessary to know what quality is to reach the costs of this quality, there are many quality concepts we will take some of these concepts (Crosby , et,al,1997:345) has talked about it in brief as (an operation

of matching the product to the specifications of the former product) , ISO identified as it is " a group of characterizations and features that have an impact of ability and efficiency of products and services to meet needs and particular demands " (ABDULWAHHAB , 1999:15) , applying of quality concept connected with costs which called quality costs , so it must be indentified the concepts and nature of these costs , many writers and researchers talked about quality costs concepts such as , (Kaplan , 2002 , 16) considered it as "The cost group spent on the product or service to reach the quality or quality required," (Horngren , et,al,2006:661) also touched on the concept of quality costs " Costs resulting from the production of products or services not of the required quality " at auditing in each definitions we found that each of them focus on prevention costs that are considered one of quality insurance paragraphs , is an operation of bad quality of sizing internal and external failure , the second has focused on failure costs resulting from productions products or services that has not required quality , so it will not satisfy clients and bear the burden of dissatisfaction is limited by the low demand for such products or access to services, which will lead to revenue has been reduced and this may lead to a loss point, or failure in the objectives set by senior management at those institutions.

The researcher sees that ability of indentify the quality costs " the costs spent by the institutions to ensure achieve quality and reduce , sizing the failure cost and internal or external failure through reaching a pint to satisfy clients of those products or services presented by it and taking into account the competition level locally or globally " .

2-2 Importance of Quality Costs: the quality costs is one of application circles to the total quality management at the institutions whether it was industrial , commercial or service , it is the costs spent for obtaining products or services are free of defects and it can determine the advantages of measuring the quality costs from the point of view of management in the organization are as follows:

- 1- The quality costs are used as a measuring tool to carry out programs of quality control .
- 2- It is a tool to determine weakness points and expected problems in the products or services and the ability of making a continuation improvement operation.
- 3- The ability of using quality costs in planning operation to the high quality products or services by using available information and data in company records of the past period .
- 4- Quality costs help in the control process, by demonstrating what has been implemented in advance plans to achieve required quality through the control can identify any defect or problems in the products or services, thus the possibility of making the process operation in a timely manner without incurring additional losses and the process of continuous improvement for operations to achieve the perfect point.
- 5- Quality costs help of the past period in making future prediction operation in addition to the ability of preparing estimated balances of quality control.

3-2 Types of Quality Costs: the use and application of total quality management system requires financial expenses for obtaining goals to apply that system , this expenditure should be calculated for all steps of applying quality management system these costs represents the costs of purchase materials or develop methods and programs of quality , costs of inputs inspection operations , improve operations or evaluate and inspect outputs . There are many divisions of quality costs ,

some writers and researchers considered them two groups as quality assurance costs and failure assurance and others divided it to three groups related to prevention cost, evaluation cost and cost of defect production or bad products . In 1971 , ASQC divided the quality costs to four main groups , each group includes number of quality costs vocabulary and paragraphs details . (ZAYED and HAJAJ 2009: 994-998) talked about quality costs in two ways :

First : first way : it can consider the quality costs consist of two parts as follows :

- 1- **Conformity Costs** : are costs related to quality assurance through inspection , control and evaluation products and services to ensure no production defected units which means to ensure production is of quality and according to the required specifications in advance by the management of the institution.
- 2- **Non- Conformance Costs**: are costs related to failure in production products whether it was goods or services and include an internal and external failure costs .

Second : the quality costs consist of four groups or parts as follows :

- 1- **Prevention Costs** : are quality costs of each planning and maintenance systems operation , these costs include salaries, wages and all costs related to the development and design of products and services, and design production processes, equipment and tools, quality control tools and methods, information system designs, and any means or a tool that has a role in preventing bad or defective products or services, as well as all costs related to training and education to the quality team and officials of quality control procedures, in addition to costs that contribute to addressing the causes of the occurrence bad products or services, costs for quality inspection and process improvement costs.
- 2- **Appraisal Costs** : These are costs for the measurement and evaluation of products, services, supplies, materials and materials to determine the extent to which they meet their specific criteria and characteristics, and include all costs of testing materials , equipment and supplies involved in the production process, as well as the costs of testing products , goods or services. It also includes all maintenance costs for equipment, vehicles, liquids and measuring instruments used in the process of testing and inspecting , all these costs are possible during or after the production process till the products are ready for delivery to customers which means before they reach users.
- 3- **Internal Failure Costs**: The cost of this group is borne by the cost of quality when the products whether goods or services are not conforming to specifications (defective) due to the inefficiency and effectiveness of materials entering the productivity, supplies, equipment, machinery, equipment and equipment processto meet the specifications and characteristics required for their products before reach to customers, in the case of matching products to specifications and characteristics, the cost of internal failure will not show in the absence of non-conforming products and the completion of the zero-damage program (ZD), these costs include the cost of damage to products, materials, equipment and other supplies, the cost of reprocessing of bad or degraded products, costs of analysis and identification causes of failure, cost of testing reprocessed products and bear lost time costs due to bad and defect products.
- 4- **External Failure Costs**: These costs are incurred when the ownership of the products is transferred to customers, which are not conforming to specifications or of bad quality, in the sense

that they do not meet customer satisfaction due to bad quality, when the production conforms to the specifications and these costs will not appear. This type of cost includes the costs incurred of the complaint filed by customers, which represents dissatisfaction of the products whether goods or services, this group includes inspection, testing and handling costs, cost of returning the products ,cost of maintenance and repair the bad products cost and costs of all warranties and undertakings provided to customers.

The researcher considers that the costs of the first and second group, the cost of prevention (prevention) and the cost of evaluation, there is an impact relationship between them , the costs of prevention affect the costs of evaluation. Whenever the prevention cost increase , the evaluation cost will reduce . In addition to the existing relationship between cost of conformity (costs of quality assurance) and third and fourth group costs, means the cost of internal and external failure, whenever the quality assurance costs increase , the internal and external failure will reduce . All the institutions are striving at a steady pace to the point of perfection, as it is noted that most institutions over time increase the cost of quality assurance to reduce the cost of failure, whether internally or externally.

Figure (1) Quality Costs

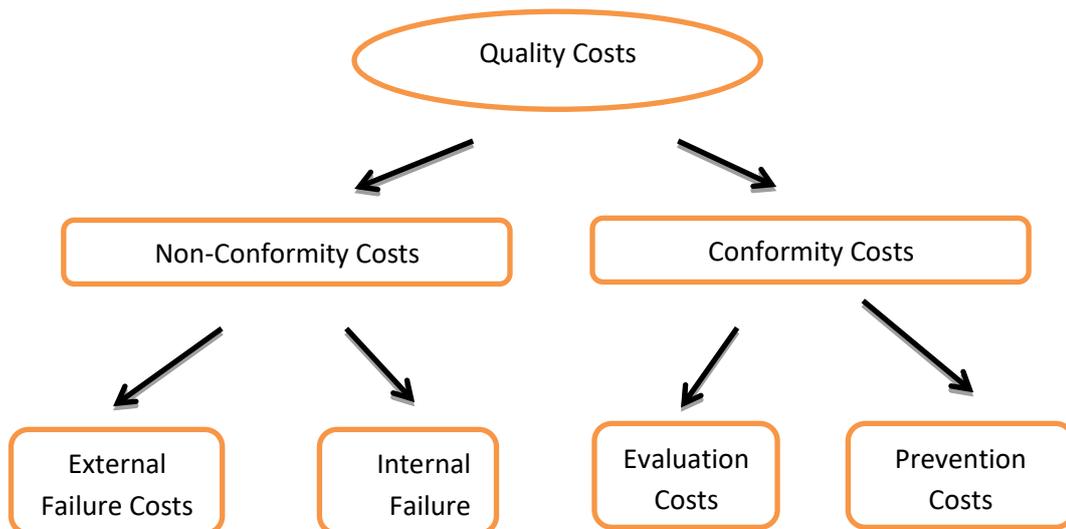


Figure (10) show divide quality costs in two or four groups, both represent the quality cost of and there is a correlation relationship between the quality cost details.

4-2 Report on Quality Costs : the total quality management in the institutions in general requires discover its costs in detail to help the quality team or quality management in carrying out its functions in planning , control , evaluation and taking future decisions of quality and it considers from the core of administrative accounting work . Feignbaum refers that it shall include the quality reports to all related costs quality paragraphs for showing those costs in the report clearly and briefly and express on the quality costs of the institution by summarizing , measuring, analyzing those costs and put it in table to help the management in making testing and inspecting in a different periods to know the direction of those costs and modification any deviations may arise

before or during operations and there is a set of indicators helps in the process of disclosing those costs. Such as :

1- **Work Index** : This index is based on the relationship between quality costs and direct labor hours in the institutions by dividing the total quality costs on the number of direct working hours.

$$\text{Labor Index} = \frac{\text{Total Quality Cost}}{\text{Direct Labor hours}} * 100$$

Direct Labor hours

2- **Cost Index**: this index is based on the relationship between quality costs and total production costs by dividing the total quality costs on the total production costs .

$$\text{Cost Index} = \frac{\text{Total Quality Cost}}{\text{Total Production Cost}} * 100$$

Total Production Cost

3- **Sales Index** : this index is based on the relationship between quality costs and total sales by dividing the total quality costs on the total sales .

$$\text{Cost Index} = \frac{\text{Total Quality Cost}}{\text{Total sales}} * 100$$

Total sales

These indexes are one of tolls and means that served the management in controlling and following up the above indexes to determine the emergency changes of quality costs in the next time periods , the former indexes have an importance as it is the basis in the performance following up operation , the comparison between former and current indexes is made to show the changes impact in the quality costs (12-10:2013 SALIM) , there are many methods or samples to calculate the quality costs in a account , we take some of it as follows : (AL-FAISAL and GHADEER 2010, 240-241) :

1- **First Sample** : Prevention and Failure sample : is based on accounting the quality costs as it represent three main axes (prevention , calendar and failure costs) according to the following equation :

$$\text{COQ} = \text{PC} + \text{AC} + \text{FC}.$$

So , COQ means total quality costs

PC means Prevention Costs

AC means evaluation Costs

FC means Failure Costs

2- **Second Sample** : sample of operation value : is based on accounting the quality costs of two main axes , conformity and non conformity costs , according to the following equation :

$$\text{TQC} = \text{PCOC} + \text{PCON}$$

So, TQC means total quality costs

PCOC means conformity costs

PCON means non conformity costs

From this equation can derivate four-axis equation as follows:

$$TQC=PC+AC+FC+FCI$$

So, PC means Prevention Costs

AC means Evaluation Costs

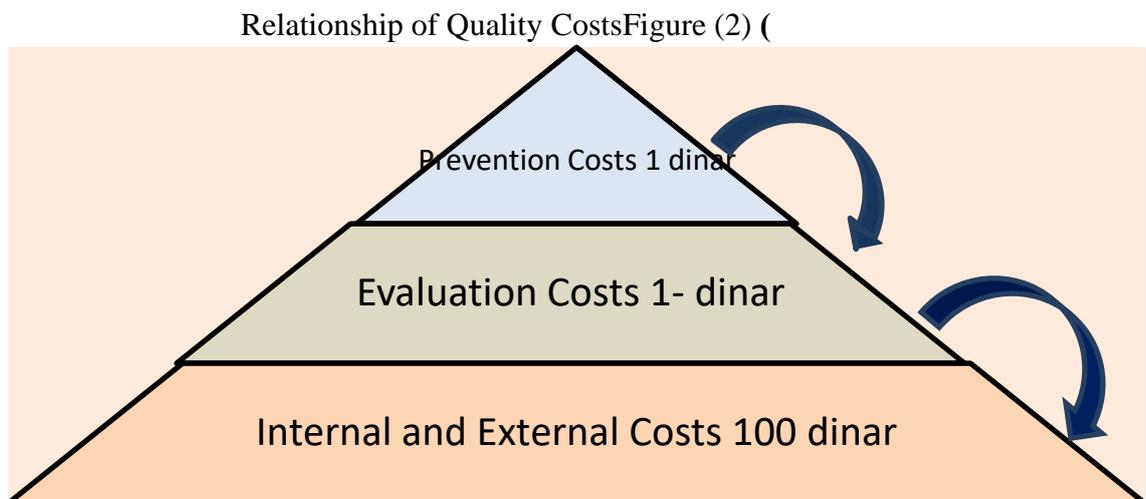
FCE means External Failure Costs

FCI means Internal Failure Costs

5-2 The Relationship Between the types of quality costs : the relationship is made through the impact of prevention costs in each of evaluation and failure costs whether it was an internal or external according to the figure (2) below (AYSHONI , 2005:45):

This relationship is based on any dinar spends on the prevention costs will save (10) dinar of evaluation costs in the future , this impact regarded an internal or external failure costs and this dinar spent on the prevention costs will save us 100 dinar of failure costs .

The researcher believes that the institutions should focus on the prevention costs, and study them in detail and analyze the effects of prevention costson both evaluation and failure costs, because understanding this relationship well will create success for the institution in the future with the passage of time to reach the specifications and quality characteristics required with the lowest costs.



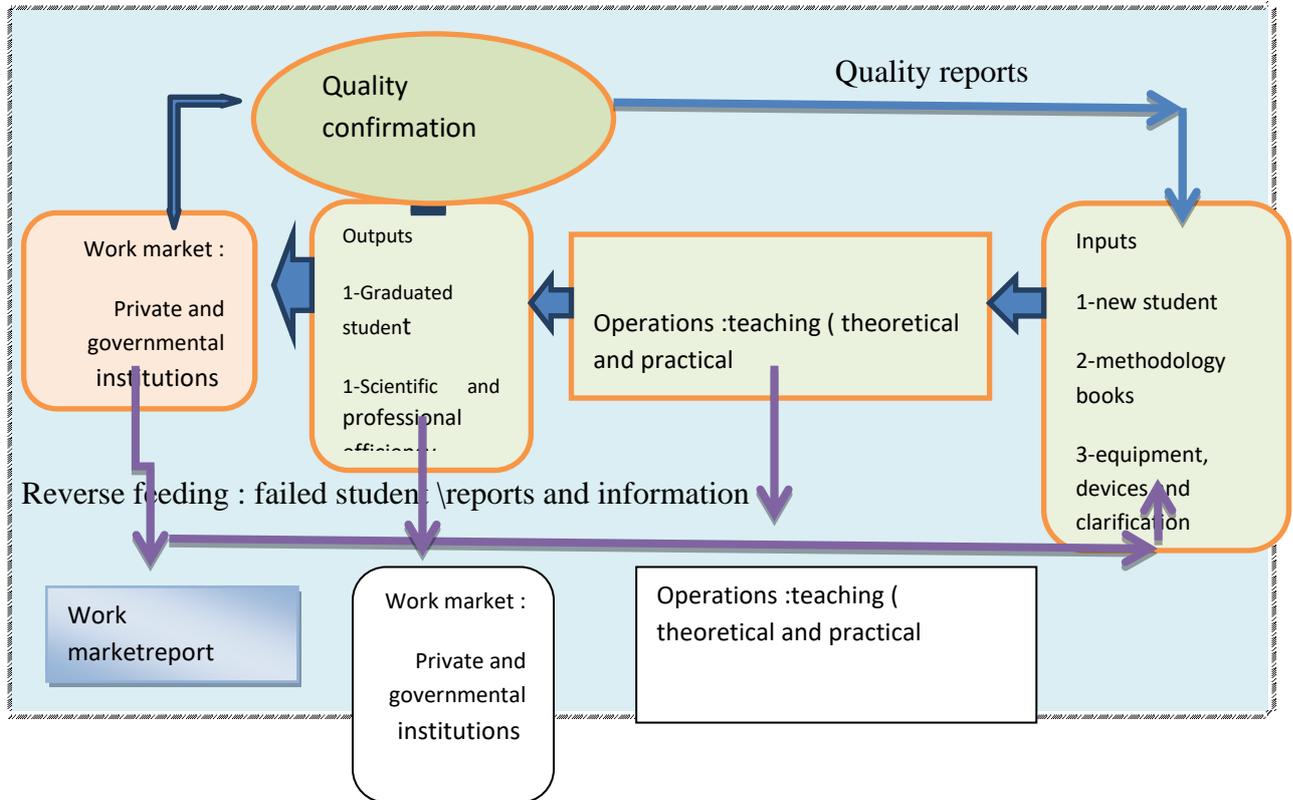
Source : AYSHONI 2005 :45

THIRD CHAPTER : SCIENTIFIC SIDE

It should distinguish between production costs in the institutions of Higher education and quality costs as quality reports which include financial and non financial data and information , the figure (3) show the system of production educational service in the higher education institutions and quality reports :

Figure (3) production system in the educational institutions

شكل رقم (3) نظام الانتاج في المؤسسات التعليمية



Source : researcher preparation (production and reports system of quality in the higher education institutions) to distinguish between production and reports costs of quality .

Source : researcher preparation (production and reports system of quality in the higher education institutions) to distinguish between production and reports costs of quality .

Production system in the higher education institutions : the production system in the higher education institutions consists of main system of (inputs , operation , outputs , reverse feeding and quality reports) , to distinguish between the paragraphs of production system of these institutions , it will talk about in detail to be a basis in accounting an educational services production costs in the higher education institutions.

- 1- **Inputs** : this paragraph includes the following vocabulary :
 - Student : (as it is the main subject of an educational services production costs) .
 - Methodology books used in an educational operation .
 - Devices , equipment and clarification means used in an educational operation .
 - Buildings and study halls linked with the educational operation .
- 2- **Operations** : it includes teaching staff who are making an educational service production operation by delivering theoretical and practical lessons or making training operation in the labs or

nature field land , in addition to functional staff supported an educational service as employees in different sections and higher education institutions.

3- **Outputs** : the outputs represent the graduated student and what he has of scientific ideas and knowledge that he obtained by entering this education intuition as well as the efficiency and scientific and professional ability acquired .

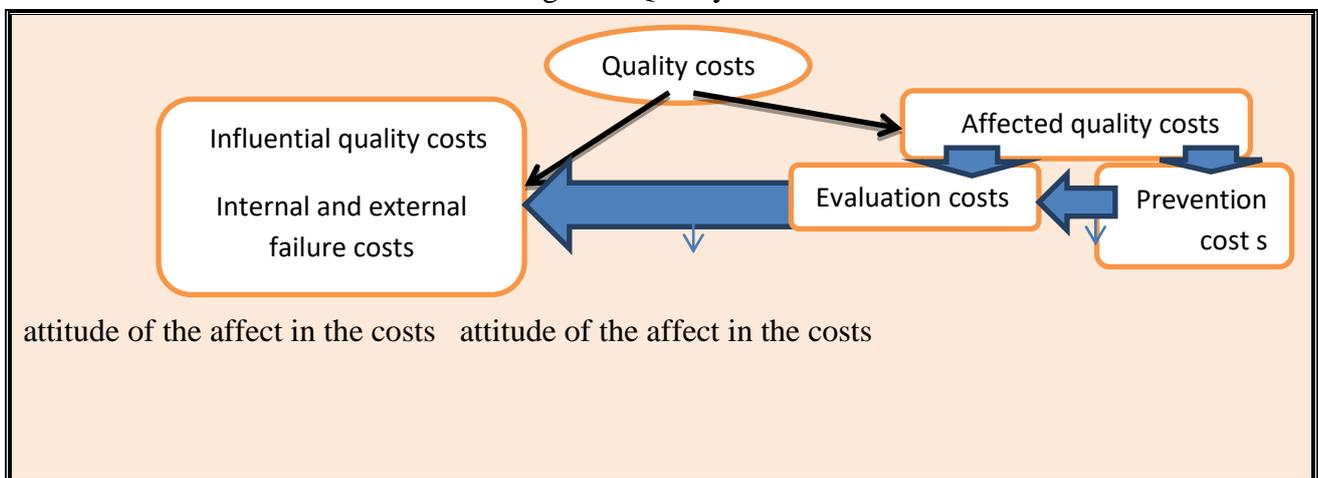
4- **Work Market** : it includes work market in all institutions and private and general sector departments and the impact of the individual in the society of ideas that he has .

5- **Reverse Feeding** : is a data and information of the system inputs for auditing and review to show the outputs results and making necessary processing such as financial and non financial information .

6- **Quality Reports** : include financial and non financial information and data prepared in detail and clear way, the financial information and data represent the quality costs which include prevention , evaluation and internal and external failure costs .

the researcher considers that it is possible to represent the costs of quality in Figure (4), this form is prepared from the point of view that any change in c onformity costs (quality assurance costs) will lead to change in the cost of nonconformity as the internal and external failure , whether increasing or decreasing, there is a correlation between existing costs and affected costs, in addition that there is a relationship between the paragraphs of the first axis, that is to say, the cost of prevention paragraph is one of the first axis paragraphs as the cost of quality guaranteewill affect the cost of evaluation, as well as any change in the paragraphs of the first axis in general will lead to a greater change in the cost of the second axis as non-conformity cost, so when studying and analyzing the cost of quality should follow the impact of change any paragraph of the quality assurance costs between them and on the non-conformity costs within the subsequent periods to conduct any processing and correction for operations to achieve the goals and plans set by the management of the institutions to ensure that the products meet the specifications and the characteristics required to achieve customer satisfaction on the products of that institution whether those products are commodity or service and figure (4) has been prepared to show the affected and influential costs.

Figure 4 Quality Costs



Source : researcher preparation

Through the data in the figure (3) of production system to the higher education institutions and figure (1) of quality costs paragraphs axes , the report is prepared in line with college data as in figure (1) .

Figure (1) quality costs report

Quality cost type	Quality cost value
First: conformity costs	
Prevention costs	
Quality section or department costs	Xxx
Quality training programs	Xxx
Conferences and seminars	Xxx
Quality supervision activities	Xxx
Curriculum development	Xxx
Scientific references	Xxx
Additional lectures	Xxx
Quality design and engineering	Xxx
Total prevention costs	
Evaluation costs	
Inputs testing and inspecting	Xxx
Operation inspection	Xxx
Outputs test and inspections	Xxx
Maintenance testing and inspecting equipment	Xxx
Evaluation operation supervision	Xxx
Total evaluation costs	
Quality assurance costs (conformity) = (2+1)	Xxx
Second : Non Conformity Costs	
Internal failure costs	
Failed student costs	Xxx
Inspection costs failed student outputs (exams)	Xxx
Costs of analysis reason of failure	Xxx
Total internal failure costs	
External failure costs	
Quality work market costs	Xxx
Total external failure costs	
Total non conformity costs	
Total quality costs	Xxx

Source: researcher preparation : to clarify the details of quality reports in an educational institutions of higher education.

After clarifying the basic concepts and paragraphs of the system of educational services production in higher education and scientific research institutions , it was made a model for the cost of quality costs in those educational institutions, the researcher studied and analyzed the quality costs in the College of Administration and Economics at Anbar University .

For the purpose of evaluating and analyzing the quality reports in the College for the period from 2013 to 2017, the classification, summarization quality costs in preparation for their measurement have been compiled and put in figure (2) according to the data and information

obtained from the records of the Quality Assurance section , Registration section , the Planning , Follow-up Unit and the Financial Unit at the College are important in providing data and information to prepare the Quality Cost Report, as shown in figure 2 below:

Figure (2) show quality costs in College of Administration and Economics from 2013 to 2017

Quality cost type	2013	2014	2015	2016	2017
First : conformity costs					
Prevention costs					
Quality section or department costs	235000	0	0	1600000	1600000
Quality training programs	0	0	0	0	0
Conferences and seminars	1500000	0	250000	250000	750000
Quality supervision activities	2510665	2510665	2616000	2724000	2817000
Curriculum development	0	0	0	0	0
Scientific references	20000000	0	0	3000000	0
Additional lectures	0	0	0	0	0
Quality design and engineering	0	0	0	0	0
Total prevention costs	24245665	2510665	2866000	7574000	3727000
Evaluation costs					
Inputs testing and inspecting	0	0	0	0	0
Operation inspection	0	0	0	0	0
Outputs test and inspections (exams) first attempt	13453335	10450250	14630000	16366000	18783050
Maintenance testing and inspecting equipment	0	0	0	0	0
Evaluation operation carry out (exams committees)	14466660	12761765	16213300	16000000	16510000
Total evaluation costs	27919995	23212015	30843300	32366000	35293050
Quality assurance costs (conformity) = (prevention costs + evaluation costs)	52165660	25722680	33709300	39940000	39020050
Second : non conformity costs					
Internal failure costs					
Inspection costs failed student outputs (exams) second attempt	6451034	3625112	5744300	6112022	6925240
Failed student costs	192348540	224545596	84849688	147151583	125942646
Costs of analysis reason of failure	0	0	0	0	0
Total internal failure costs	198799574	228170708	90593988	153263605	132867886
External failure costs					
Quality work market	0	0	0	0	0

researches costs					
Total external failure costs	0	0	0	0	0
Total non conformity costs	198799574	228170708	90593988	153263605	132867886
Total quality costs	250965234	253893388	124303288	193203605	171887936

Source : researcher peroration

First : Prevention and Costs : include the following paragraphs :

- 1- **Quality Costs of Section or Division** : The costs of the Quality Division for fixed assets (furniture), it is calculated of 2013 by the depletion of fixed assets for furniture(10%) per annual , which is the approved rate according to the accounting system, as the furniture purchased in previous years ($2350000 * 10 \% = 2350000$ dinar) . In 2014 and 2015, the cost of the renovation section was (0) dinar, as the assets of the division were destroyed as a result of military operations on the University site, in 2016 the cost of processing the quality department with office furniture amounted (1,600,000) dinar, in 2017 the quality section was reduced by the depreciation rate of the fixed assets of the furniture item according to the accounting system ($1600000 * 10\% = 160000$) dinar.
- 2- **Quality Training Programs Costs**: this paragraph did not include any costs of the college .
- 3- **Conferences And Seminars Costs** : it hold for increasing knowledge and scientific efficiency and raising education scientific outputs quality level of the college or university as a whole , it shows by the report of the quality cost for the period of study and research that in 2013 the costs were (1500000) dinar, in 2014 the costs were (0) dinars, in 2015 and 2016 the cost of seminars were (250000) dinar per year for the establishment of one seminar at Baghdad ,the alternative location of the University of Anbar after the displacement of the province, followed by the year 2017 as the costs have risen to 750000 dinar.
- 4- **Quality Division's Activities Costs**: These include allocations to the working individuals in the Quality Division . The allocation granted to the quality division officer only, in addition to count the number of hours determined by law and reduced to a quorum teaching at the administrative units at a rate of (4) hours per week. As for the employees,the monthly wages received as quality costs from the activities of the Quality Division, in 2013 and 2014 amounted (2510665) dinar per year, consisting of a paragraph allocation of Quality Division position, teaching staff who are working in the Quality Department, in 2015 reached (2616000) dinar, in 2016 and 2017 amounted (2724000) dinar and the change in the nominal salary by premium or promotion has the effect of increasing the quality cost for supervision activities and quality assurance.
- 5- **Curriculum Development Costs**: It includes the costs spent on committees and individuals specialized in the study and development curriculum, but did not include any significant costs for the years of study and research.
- 6- **References and Scientific Sources Costs**: It includes the cost of all books, master's thesis, Ph.D. theses , scientific and academic journalsand CD-ROMs (other than textbooks) that increase scientific and professional knowledge and competence , in 2013 amounted (20000000) dinar, in 2014 and 2015 stopped altogether , in 2016 was (3 million) dinar and stopped in 2017.

- 7- **Additional Lectures Costs And Fees:** These are the lectures that are taught outside the weekly schedule, the purpose is increase knowledge and efficiency and work to raise the scientific level to improve the outputs, as it did not include any significant costs for the period of study and research.
- 8- **Quality Design and Engineering:** it includes all costs related to the development of the same quality methods, as well as all procedures related to the development of curricula and methods of modern and innovative work to raise the level of science, and also include the transfer quality experiences in developed countries for which adjustments can be made to be appropriate and feasible in Iraq, as this paragraph does not include any significant costs for the time period of study and research.

Second : Evaluation Costs : this paragraph included the following :

- 1- **Inputs Testing And Inspecting Costs:** the costs of testing and inspecting materials in the productive system of an educational services institutions of higher education, include the process of examination and testing the new student and failed student in the test of outputs for re-entering the system for final examination, as well as for the examination and evaluation the curriculum before and after entering the production system, in addition to the costs of testing and inspecting new and old equipment of that system , also the cost of examining and evaluating the validity of fixed assets belonging to classrooms, laboratories and workshops at all stages of the system and through the analysis of the quality cost shows that there are no expenses related to the above operations in the period from 2013 to 2017.
- 2- **Testing and Inspecting Operations Costs:** These include the costs of a valid statement and the efficiency of faculty members, which is the basis in the production of educational service by indoctrination, training and searching for information to increase knowledge and scientific and professional competence in the student in addition to the costs of testing and inspecting all equipment, clarifications and auxiliary assets of the operations unit and through the analysis process for the cost of the period did not adopt any costs related to this paragraph.
- 3- **Outputs Testing And Inspecting Costs:** Which is the wages of the teaching staff supervisions on the performance of the student in the final examinations for the first attempt . This is the point of testing and inspecting the educational service quality, includes either the success of the first attempt or to enter the second attempt exam, by analyzing the costs of this paragraph which are very important in the examination of the educational service quality shows that the costs and fees for supervising in the first attempt during 2013 are (13453335) dinar, as the amount was calculated through the approval of salaries paid to the supervisory staff and examination committees for a period(14) days, by dividing the total amount of received wages on the days of the month multiplied by the number of examination days, in 2014 the cost of supervision fees (10450250) dinars, in 2015 , 2016 and 2017 the costs of supervision fees were (14630000) , (16366000) and (18783050) dinar respectively, noting that the cost of supervising fees had experienced a clear decline in 2014 which was a period of instability and regularity in the educational process because of the military operations in the province, which led to a small number of supervision staff in that year .
- 4- **Maintenance Testing and Inspecting Equipment Costs:** This paragraph covers all laboratory maintenance costs for the performance of the operation in addition to the maintenance of

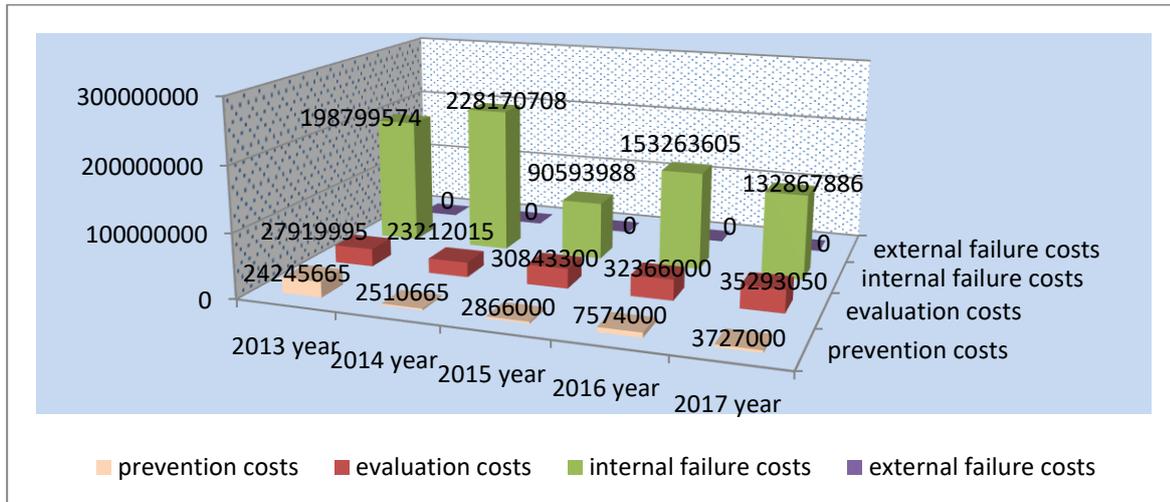
computers for the examination committees, printers, facsimile machines and telecommunications and shows that no costs have been recorded for this period of study from 2013 to 2017.

- 5- **Costs of Carry out an Inspection and Evaluation Operation (Exams Committees):** The costs of the examination committees include from the beginning of the preparation process for examinations until the results are issued, which are calculated by determining the number of members of the examination committees and the amount of monthly income which received divided into days of month in working days of examination committees , in 2013 amounted (14466660) dinar, in 2014 saw a decline from the previous year and reached to (12761765) dinar, in 2015 rose to (16213300) dinar, it decreased in 2016 to (213300) dinar for the year 2015, and then saw a rise in 2017 to (1651,100) dinar.

Third : Internal Failure Costs: include the following paragraphs :

- 1- **Outputs Inspection Costs (Failed Student):** The cost of failed student in the second attempt examinations was calculated the cost of failure by determining the number of exam days multiplied by one day's fee of teaching board staff who are supervised on the examinations (supervisors and examination committee members). As it noted by the Quality Costs Report , it has seen a decline in 2014 from the previous year to (3625112) dinar, this decline is return to the reasons mention previously and that are related to the impact of displacement which led to a reduction in the number of observers because of their displacement to different areas of Iraq and in 2015 and beyond these costs have risen gradually to reach in 2017 to (6925240)dinar.
- 2- **Failed Student Cost (Failed Student):** This cost is calculated by finding the student's cost (the cost of producing the educational service per unit)through figure 4 , all costs spent during the academic year are calculated , the academic year 2013/2014 represents 2013 and the academic year 2014-2015 represents 2015 in the table and so for subsequent academic years.
- 3- **Cost Of Analysis Reason of Academic Failure of Student :** This paragraph did not include any significant costs, which is not a positive state , if any efforts are made by the College to analyze the causes of student failure in the academic year.
- 4- **External Failure Costs:** This paragraph is the cost of research and studies conducted by the educational institution or college to know the efficiency of outputs in the labor market, which represents here educational institutions, whether government , civil institutions or influence the outputs in the community in general, by showing the extent of the impact of knowledge or professional or scientific competence that the outputs carry to community members and community benefit from this knowledge.

Figure (5) show Quality costs from 2013 to 2017



Source : researcher preparation

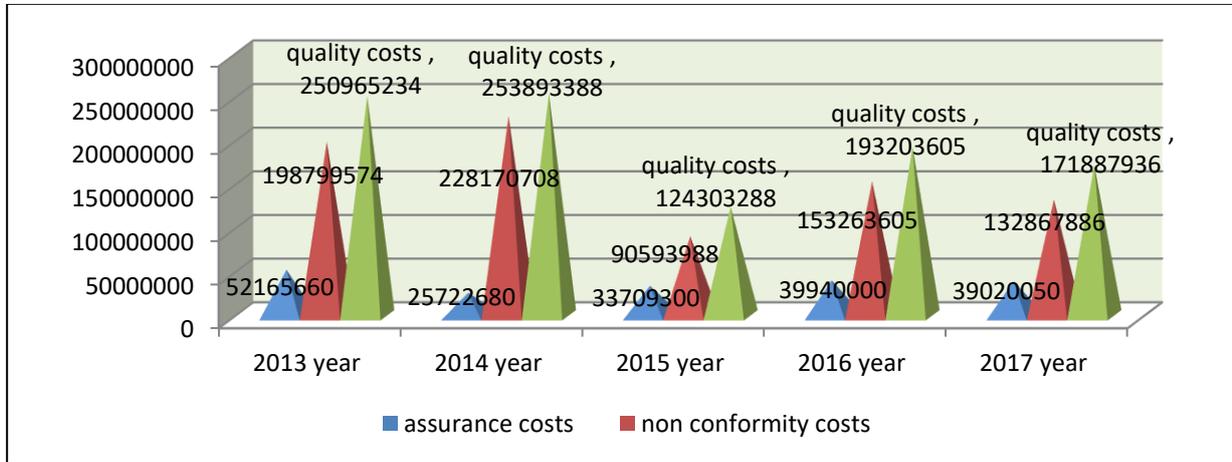
The figure (5) notices that the internal failure costs were represented bigger value in the quality costs of time period of study and research , in 2014 the internal failure costs formed amount of (228160708) dinar , this amount increases as a result of increasing the number of failed students in this year till it reach to (138) students , the most important reason in increasing the internal failure costs is the cost of failed student , the impact of displacement was clear in increasing the number of failed students in 2014 due to transfer most students to different regions in Iraq which led to make instability state and irregular in the study in addition to the economic and psychological consequences of the student.

It is known that the institutions in general work to increase the conformity costs (quality assurance) for reducing non conformity costs , it can conclude that the impact of displacement was clear in reducing the quality assurance costs because of the teaching and functional staff was not regular in attendance to the college , the expenses of conformity costs reduced , so it notices that there is a big reduce in prevention costs in general on 2013 , the total prevention costs in 2014 amounted (2510665)dinar , it is necessary to pay attention that the most paragraphs of prevention did not receive any interest by the college as establishing training pangrams of quality staff , the college did not interest in developing curriculum and quality design and engineering , a big reduce in the scientific references occurred in 2013 of (20000000) dinar , during four years 2014 , 2015 , 2016 , 2017 did not include any cost of scientific references only in 2016 was (3000000) dinar and this amount is much lower than 2013 .

In 2014 witnessed reduce in an evaluation costs which considered conformity costs (quality assurance) and it affected on increase non conformity costs to be (23212015) dinar in this year . For the same above reason the displacement was an impact of an evaluation costs in this year and there is gradually increase in subsequent years . At auditing and analyzing, it shows that the total non conformity costs in 2014 was (25722680) dinar is a lower value of the previous and subsequent years of the time period of study and research .

About external failure costs had (0) of all years , regarding studies and market researches expenses of government and private institutions and society .

Figure (6) show total conformity and non conformity costs



Source : research preparation

It notices for the figure (6) above that the non conformity costs were bigger than the quality assurance costs and this means the lack of interest in quality assurance costs led to increase non conformity costs that represent external and internal failure costs . While the external failure cost was (0) dinar of study period ,the non conformity costs represents an internal failure cost only , the quality assurance team shall analysis the reasons of an internal failure and put appropriate processing to reduce an internal failure cost , by our analysis in this research shows that the main reason of increasing an internal failure cost is a cost of failed student in the examinations , it shall work to reduce this amount during put appropriate processing of failing reasons in the examinations by increasing focus on the prevention costs .

Figure (3) show percentage rates of quality report of the college

Quality costs	Years				
	2013	2014	2015	2016	2017
Rate of prevention costs to total quality costs	%9,7	1%	2,3%	3,9%	2,2 %
Rate of evaluation costs to total quality costs	11,1%	9,1%	24,8%	16,8%	20,5 %
Total rate of quality assurance cost to total quality costs	20,8%	10,1%	27,1%	20,7%	22,7 %
Rate of an internal failure costs to total quality costs	79,2%	89,9%	72,9%	79,3%	77,3 %
Rate of external failure costs to total quality costs	0%	0%	0%	0%	0%
Total rate of non conformity costs to total quality costs	79,2%	89,9%	72,9	79,3	77,3
Total quality costs	% 100	% 100	% 100	% 100	% 100

Source : researcher preparation

It is noted through figure (3) of the percentage of quality costs in the College of Administration and Economics \ Anbar University for the period of study , through this figure , the quality cost and its main axes were fixed in percentage terms to determine what each represents of total quality costs, as well as giving freedom to the researcher or responsible for quality costs to judge the change in these costs and to help them to make the right decisions by noting the change in the ratio of each axis.

When analyzing the data of the quality costs percentages in figure (3) from the beginning of the period of study and research in 2013, it is noted that the prevention cost is 7.9% and total quality assurance costs (8.20%), while failure costs 2.79% of total quality cost , here the year 2013 is as the basis for comparison between the years after the study, in 2014 the prevention cost decreased to 1% and the total quality assurance cost to (1.10)%, which led to increase failure costs to (9.89)%, the year of displacement from the location of the college, that the displacement affected the prevention costs, which led to decline from (7.9%) to (1)% in 2014 and its impact was evident in increasing failure costs and specifically the internal failure.

In 2015, it is noticed increase in the prevention cost to 3.2% higher than the previous year and the total quality assurance cost is higher to (1.27%), resulting in a decrease in failure costs to (9.72%) in line with the increase in conformity costs (quality assurance cost) leads to a decrease in the failure cost , it is necessary to focus on the fact that the evaluation costs have increased and this is a variance of the norm, which requires from the quality and management team to investigate why the evaluation costs should not be reduced by increasing the quality cost through making deep analysis to understand the causes of this problem.

In 2016, there is an increase in prevention costs and reduce in the evaluation costs for 2015, but failure costs have increased , it is contrary to the rule that the increase in the quality assurance costs leads to reduce the failure costs, requiring more management of detailed analysis of the reasons for this imbalance .

In 2017, it is noted a reduce in the prevention cost to (2.2%) from the previous year with an increase in the evaluation cost for the previous year , but there was a decrease in the failure costs to (77,3%).

The above analysis shows that there is no planning or management of quality costs properly by the college which requires quality management or quality team relies on detailed analysis of the reasons for the failure to achieve the correct management of quality costs.

Figure (4) show total educational services production costs in Economic and management College for (2013\2017)

Quality costs	Years				
	2013	2014	2015	2016	2017
Inputs					
Costs of new curriculums	14000000	0	0	3000000	3000000
Operations					

Costs and fees of teaching staff	1038223440	1050410400	1105324200	1227910944	1254290544
Costs and fees of functional staff	219030480	227040408	230465040	255723744	265387440
Costs and fees of supported services	9600000	4200000	3200000	6300000	6800000
extinction expenses of devices , equipment and clarification means	4800000	3200000	600000	2000000	2000000
extinction furniture expenses	14000000	9333332	1200000	2320000	2320000
extinction buildings expenses	95000000	63333332	0	82000000	82000000
Commodity expenses	14500000	2400000	3800000	3500000	3700000
Service expenses	18500000	2000000	2400000	7200000	7600000
Outputs					
Costs of production educational services (students)	1427653920	1361917472	1346989240	1589954688	1627097984
Number of participated students in examinations first attempt	668	837	889	443	801
Cost of each student	2137206	1627142	1515173	3589063	2031333

Source : researcher preparation

Figure 4 shows the cost of production educational services at the Administration and Economics College at Anbar University, the inputs include new curriculums, new student or the failed student who is returned to the productive system again , other inputs such as devices , equipment and clarification means which are reflected in the system during the operation of the system for its operations, it shall be in the form of depreciation expenses and borne by the production process at the rate of exhaustion according to the percentages specified in the applicable accounting system or the useful life is calculated by experts or specialists in determining the useful life or re-estimating the age of assets in subsequent periods of use, the operational processes are concentrated in the cost of salaries , salaries of teaching and functional staff , supporting services works fees and extinction expenses , in addition to all other commodity and service expenses such as stationery ,hospitality materials, cleaning and maintenance expenses if the expenses are revenue andif the maintenance costswas capital , it shall bear the cost of the existing and the useful life is recalculated and its extinction rate adjusted for each year to cover the cost of production educational services which are the cost of production one graduated student which is the outputs of the system, these outputs are introduced to the labor marketincludes governmental and non-governmental institutions, as well as its impact on society for its scientific and professional ideas and knowledge , the preparation of this figure will help in calculating the cost of

failed student , It represents one of the cost of quality reports within the paragraphs of internal failure costs, noting that 2014 and 2015 did not include any costs related to curriculums , 2014 represents the period of displacement from the university site to another location in Ramadi , it was instability period of an educational operation of the college , in 2015 represented the extinction expenses to be included new assets purchased and received at the site of Baghdad after leaving the previous assets at the site of the original college, so we find that the rates of extinction have changed according to value of the new assets, in 2016 and 2017 represent the period of return to the original location of the college, the extinction expenses of assets have been charged after adding the cost of capital expenses to the assets as maintenance and rehabilitation costs of the buildings after it imposed to damage due to military operations occurred in the province and original site of the college and the extinction expenses are calculated and we find its amount has changed .

Figure (7) show the cost of an educational service production of one student



Source : research preparation

Figure 7 shows a decrease in the cost of an educational service production in 2014 for 2013 and the reason for this return to calculate the extinction of (8) months of 2014 due to the college transferred to another location outside of its buildings , the costs of the new buildings that have been occupied have not been paid at any cost, that is, the transfer was made in May 2014, in 2015 there was another reduce in the cost of educational services production due to transfer another locationis Agriculture College in Baghdad as an alternative location during the displacement period, and this year, the new assets acquired were calculated that represent inputs to the system to complete the production process, the calculation of any extinction of the old buildings for this year stopped because it did not enter within the production system of the college, in 2016 there was a significant rise in the cost of an educational service production , this rise is due to return to the site of the college to the old buildings and after revaluation the old buildings and add all the capital expenditures that

Used for maintenance and rehabilitation, as well as capital expensesof the maintenance and rehabilitation of other existing devices and equipment at the college's site, noting that there was a decline in the number of students in 2016 from the previous years, reaching (443) students as an another reason for increasing cost of producing the service this year.

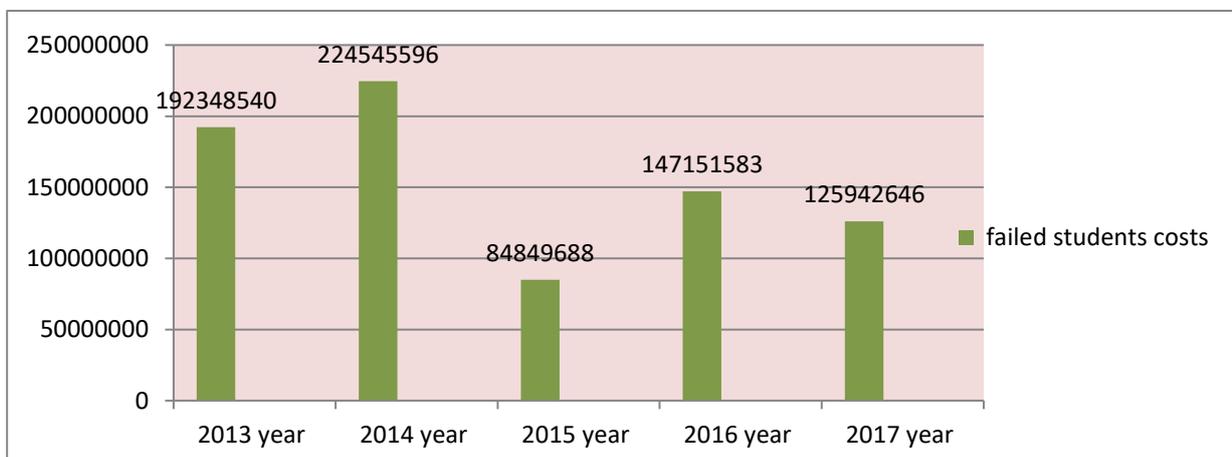
Figure (5) show total cost of failed students in the examinations from 2013 to 2017

Statement	Years				
	2013	2014	2015	2016	2017
Number of failed students in the examinations (failed students)	90	138	56	41	62
Cost of one student	2137206	1627142	1515173	3589063	2031333
Total costs of failed students in the examinations	192348540	224545596	84849688	147151583	125942646

Source : researcher preparation

Figure (5) was prepared by obtaining the number of students who failed (failed) in the final exams after performance the second attempt or third attempt through the figures (7) and the cost of one student from the figure (4), the researcher was prepared it after obtaining data for each year of the Planning and Follow-up Unit , the audit of the departments to verify accuracy of data conducted and the total number of students enrolled in the examinations was obtained in addition to the number of successful students in the first and the second attempt and in some years of the third attempt also. Thus it can bring the total cost of the failed students in examinations at the first and second (or third) attempts for the purpose of determining internal failure costs in the quality report for the time period of study and research.

Figure (8) show total cost of failed students in the examinations from 2013 to 2017



Source : research preparation

Figure (8) shows an increase in the total cost of failed students in 2014 due to increase in the number of students failed this year despite the decrease in the cost of service production in this year for 2013, as the number of students who failed in the exams for the first and second attempts in addition to the third attempt in that year was (138) students, the main reason for increasing in the number of failed students is also due to the effects of the displacement process and the general instability of the student and the educational institution overall, the impact was evident through the

increase in the number and the quality team should focus on analyzing such reasons while attempting to develop appropriate processors.

Figure (6) show quality cost rate to total production costs

Statement	Years				
	2013	2014	2015	2016	2017
Total quality costs	250965234	253893388	124303288	193203605	171887936
Total production costs	1427653920	1361917472	1346989240	1589954688	1627097984
quality cost rate to total production costs	%17,5	%18,6	%9,2	%12,2	%10,6

Source : research preparation

Figure (6) above shows that 2014 was the highest percentage of total quality costs for the period of study and research ,as mentioned earlier was due to the high cost of internal failure, and of 2015 form less total quality costs due to a significant reduction in the costs of extinction, specifically the depreciation of buildings.

Figure (7) show number of students in the departments of college

Statement	2013		2014		2015		2016		2017	
	Males	Females								
Economy Department										
Students participated in the final exam	175	23	199	34	280	31	138	18	261	35
Students passed in the final exam	114	14	133	26	228	30	90	12	215	35
Students failed , deferred , left and moved	61	9	66	8	52	1	48	6	46	0
Business Management Department										
Students participated in the final exam	210	18	253	27	235	33	103	11	199	36
Students passed in the final exam	130	18	127	20	178	22	74	9	133	35
Students failed , deferred , left and moved	80	0	126	7	57	11	29	2	66	1
Accounting Department										
Students participated in the final exam	208	34	277	47	267	43	143	30	222	48
Students passed in the final exam	162	31	200	43	244	40	113	28	197	35
Students failed , deferred , left and moved	46	3	77	4	23	3	30	2	25	13
Total on the college level of males and females										
Students participated	593	75	729	108	782	107	384	59	682	119

in the final exam										
Students passed in the final exam	406	63	460	89	650	92	277	49	545	105
Students failed , deferred , left and moved	187	12	269	19	132	15	107	10	137	14
Total of students on the college level from 2013 to 2017										
Statement	2013		2014		2015		2016		2017	
Students participated in the final exam	668		837		889		443		801	
Students passed in the final exam	469		549		742		326		650	
Students failed , deferred , left and moved	199		288		147		117		151	
Students passed in the second attempt	109		150		91		76		89	
Failed students	90		138		56		41		62	

Source : researcher preparation

The above figure is prepared by collecting data from the planning and follow-up sections and the registration section and checking them with the departments of the college of preparing the students who participated in the exams and passed in the first and second attempts on the departments level , the data of the college collected to be a basis for identifying the number of students and the possibility of determining the internal failure cost and the cost of an educational service production for the period of study and research.

FOURTH CHAPTER : RESULTS AND RECOMMENDATIONS

4-1 Results :

- 1- There is an impact of displacement in reducing the prevention costs in 2014 , the rate reduced by (7.8)% for 2013 in addition to reduced in the evaluation cost by (2%), an increase in the internal failure costs occurred by (10.7%) compared to the previous year and the failure cost amounted (9.89)% of the total quality cost.
- 2- The evaluation cost in 2015 increased by (15.7)% over the previous year, due to the increase in the presence of two performance sites of the final test is in Baghdad and Kirkuk, which are abnormal conditions due to displacement, the same reasons of 2016 except 2017 represented a relatively good stability.
- 3- It is noted the effect of increasing the prevention cost on reducing the failure cost in 2015 and 2017. Except 2016, It is noted, despite increase the prevention cost over the previous year, the cost of internal failure increased by (4.6%) and the reason for this increase is the high cost of failed student in 2016 reached (3589063) dinar with difference of (2073890) dinar for the previous year. When analyzing , it was found that the main reason for the high cost of the failed student is the increase in expenses of extinction, especially the destruction of buildings and capital expenditures of buildings affected by the military operations that took place at the university site in

addition that the difference in the expenses of the destruction of buildings in 2016 for the previous year reached (82000000) dinar.

- 4- The increase in the total quality cost in 2014 for the rest years of study reached (253893388) dinar , the main reason is the increase in the number of students who failed in that year, reaching (138) students, despite the low cost of an educational service production in this year for (2013, 2016 and 2017) and 2015 form less total quality cost due to a very large reduction in depreciation expenses, namely the depreciation of buildings.
- 5- The study showed that the value of external failure (0%), which means that the failure cost is due to internal failure only.
- 6- There is no quality records to document and prove the financial and non - financial events related thereto, and to be a tool for service and assist the quality team in preparing quality reports, including quality cost reports.
- 7- There is no an accountant with the quality team led to a weak process of documentation and proof data related to the cost of quality.
- 8- There is no aware of the importance of quality costs, as it is not possible to reach the goals of the overall quality without awareness at all levels of the college of all administrative and academic levels and service workers level.
- 9- The main reason for the high quality cost is due to the cost of internal failure and specifically the cost of the failed student.

2-4 **Recommendations:** the recommendations included:

- 1 –It is necessary to pay attention to quality cost reports in the College of Administration and Economics through opening records of quality to be able to summarize, collect and enter data for preparing quality reports to achieve the possibility of measurement and analysis data.
- 2 –It is necessary to increased awareness of all members of the educational institution of the importance of quality costs, and what is the procedure and the work required of them to reach to achieve the objectives of the overall quality with all the meanings of the vocabulary and details, either by lecturing or training programs and focus on raising the efficiency and effectiveness of quality staff.
- 3 The quality cost should be monitored during the operational processes and made an annual comparisons between the quality cost reaching to the quality required and planned in advance to achieve the possibility of conducting treatments in a timely manner.
- 4 It is necessary to know the experiences of developed countries in the field of quality, by sending courses or recourse to experts from those countries to build a quality system in line with the work of our educational institutions.
- 5 Since the main reason for the high quality cost is due to the high internal failure cost, specifically the cost of academic failure, which it requires follow-up and analysis the reasons for failure to develop the necessary treatments to reduce this cost.
- 6 It is necessary to exist an administrative accountant of competence and practical experience to be a partner with the team quality in the process of documentation, proof and analysis quality data, and is responsible for preparing quality reports and providing all consultations , observations and

possible treatments for management, whether during the process of planning, assessment or control in order to reach sound decisions.

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