

**THE IMPACT OF COST-SHARING ON QUALITY OF EDUCATION IN EGYPT
PUBLIC UNIVERSITIES**

By

Engi Mohammed Mostafa Gamal Eldin

Thesis

Submitted to

KDI School of Public Policy and Management

In partial fulfillment of the requirements

for the degree of

MASTER OF DEVELOPMENT POLICY

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Professor Paik Sung-Joon

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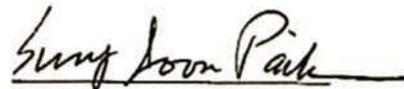
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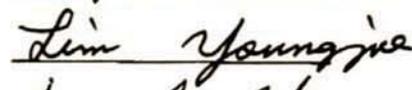
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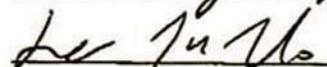
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ABSTRACT

THE IMPACT OF COST-SHARING ON QUALITY OF EDUCATION IN EGYPT PUBLIC UNIVERSITIES

By

Engi Mohammed Mostafa Gamal Eldin

No country worldwide was able to expand higher education access and improve quality and equity alongside without diversifying the sources of higher education finance beyond the government. Egypt's government undertook forward steps to reform higher education financing by encouraging the diversification of income sources; however, there has been no attempt to study the implications of introducing the cost sharing policies in Public universities in Egypt.

The main significance of this research study was in measuring the impact of cost sharing policy on the quality of education in FLIP of one of the public universities in Egypt. The underlying assumption is that 'tuition fees' as a form of user charge would contribute to increasing education quality, which will consequently shrink the transition period between work and graduation. This research conducted a control - treatment design to measure the impact of cost sharing policy on quality as *fitness of purpose* using Cross Sectional Data due to the absence of baseline surveys. The research used the ordered logit model that applies to dichotomous dependent variables, allowing for more than two ordered response categories for the purpose of predicting the transition period between work and school to be low, based on the independent variable: language of instruction and others.

Moreover, the current research measured as well the significant differences in the distributions of quality indicators between FLIP and TAP based on the perceptions of graduates and faculty members. The research used both Mann-Whitney U test and Kruskal Wallis H- test

to identify if there were differences in the quality variables such as: the transition period between work and school, academic programmes in discipline, textbooks used in instruction, new and high-quality labs, faculty methods of explaining the syllabi, interaction with faculty within lecture halls, interaction with faculty outside lecture halls, teaching assistants' ways of explaining, practical experience of teaching assistants, interaction with teaching assistants within lecture halls, the interest in the empirical practice of the theory, field visits to foreign universities in the discipline area, practical training in industry operating in the same area of discipline and counseling and academic support.

The study concluded that introducing the cost sharing policy in the form of FLIP in “FEPS” has no significant effect on quality as *fitness of purpose*. The model results showed that the language of instruction cannot explain the dependent variable even after controlling for the GPA and the quality indicators: Field visits to foreign universities in the discipline area, counselling & academic support and Practical training in industry operating in the discipline area. This was explained by evidence; firstly that the quality acquired does not value the money paid in the programmes as a tuition-fee, and secondly that showed spill-over effect in the school. This ensures that the government disregarded designing a system of accountability and transparency in order to monitor and evaluate the application of the cost sharing policy in Egypt’s Public Universities.

Hence, the current research finally calls for making further studies on the effect of various forms of cost sharing policies on education quality in the public universities in Egypt in order to prove the underlying assumption or generalize the findings. Moreover, the success of cost sharing policy depends mainly on its ability to value creation, accompanied by attainable vision and objectives. The accompanying policy measures require impact-analysis studies,

consistent policy making and implementation. The government should pay attention to develop a Monitoring & Evaluation System in order to measure the direct and indirect effects of the cost sharing policy on the quality of education; especially that it has recently spread in different academic sectors like engineering. The jeopardy remains that although the private and public investments on higher education in Egypt are somehow increasing, yet the government does not reap those benefits whether private or public, because it ignores the urgency for a transparent and accountable system.

KEYWORDS: Cost Sharing, Higher Education Finance, Quality of education, FLIP.

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DEDICATION

This thesis is dedicated to my nieces Jana and Mariam, as well as my nephew Youssef whose love brightens my whole life.

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CHAPTER 1

INTRODUCTION

1.1 Statement of Problem

Governments worldwide face severe challenges due to the increasing demand on higher education access and budget constraints. Yet expanding higher education enrollments combined with the increasing demands for quality education from parents, students and stakeholders in Egypt's higher education system is legendary; as still funding to public higher education institutions has not increased and is considered the substantial trigger for low quality of education in Egypt. For instance, the public expenditures on education as the percentage of GDP in Egypt is about 3.8%, which is below the average of Middle East and North Africa countries; on the contrary it is 6.3% in Tunisia, 5.8% in Palestine, and 5.4% in Morocco.¹

Higher education funding mechanisms are crucial due to its impact on shaping the higher education outcomes in areas of quality, effectiveness and the system responsiveness. Moreover, the World Bank confirmed that all education investments must be attached to manpower.

In truth, some critics have described Egypt's public universities as "assembly lines that produce thousands of unskilled graduates every year".² The World Bank as well affirmed that the outcomes of investments on education in the Arab Region, especially Egypt are unfruitful. Meanwhile, the poll conducted in Egypt on business owners in June 2009, measuring their perspectives about graduates' competencies with labor market needs, revealed that only 44.4% of

¹ Population Council and FORD Foundation, *Higher Education in Egypt: Does free education achieve equitable opportunities*, edit. Asmaa Badawy (Egypt: Population Council, 2012), 53-81.

² Declan Butler, "Egypt's youth 'key to revival.'" *Nature*, February 2011: 147-149, <http://www.nature.com/news/2011/110208/full/470147a.html>

the employers stated that they can easily find skilled graduates to fulfill their vacancies.³ Meerman argued that “if low [income] countries rely chiefly on central government resources, most of them will be unable to provide a minimum effective standard of human development for their population as a whole”.⁴ This untenable situation in Egypt’s public universities elicits the need for diversification of revenue sources for achieving the desired quality in human capital, which is considered a fundamental pillar for the country’s economic growth in the transition period.

Education policies in Egypt are free guaranteed at all levels, by Articles 18 and 20 of the Egyptian constitution⁵, so public universities do not charge tuition fees, but students pay nominal registration and admission fees.⁶ However, in the early 1990s Mubarak’s regime introduced Law 101, a reform that authorizes and regulates the establishment of the private universities, as well as encouraging public universities to diversify their income sources beyond the limited tuition fee payments allowed. The main purpose of reforming higher education sector under Mubarak’s regime is supposedly to align the outputs of the higher education system with the innovation and labor market needs faced by Egypt in the context of its ongoing modernization efforts, rather than only expanding quantitatively. Consequently, Mubarak’s regime set the sustainable funding strategy for reforming higher education as follows: increasing public investments, diversifying institutional revenues through greater cost sharing, expanding the private sector⁷, reducing the

³ Gamal Eldin, Engi, *Analytical Report to View Disaggregated Indicators Measuring the Views of Business Owners on Labor Market Requirements and Consistency of Higher Education in Egypt* (Egypt, The Egyptian Cabinet Information and Decision Support Center, 2011).

⁴ George Psacharopoulos and Maureen Woodhall, *Education for Development – An Analysis of Investment Choices* (New York: Oxford University Press, 1985), 146-147.

⁵ Gholamreza Arabsheibani, “Educational choice and achievement: The case of secondary schools in the Arab Republic of Egypt,” *Higher Education* 17, no. 6 (1988): 637 – 646, doi: 10.1007/BF00143779.

⁶ World Bank and OECD, *Review of National policies for Education – Higher Education in Egypt* (Paris: OECD Publishing, 2010), 267-268.

⁷ The private sector is profitable in Egypt and education in such a sector is not that efficient compared to public universities except for the American University in Cairo.

repetition rates, strengthening enrolment growth in the TVET sector, in addition to widening the use of new delivery technologies in teaching and learning⁸.

Even though cost-sharing practices have been introduced within Egypt's public universities, the State budget remains the main financier of the service alongside with decreasing its share over time since the academic year 2000/2001. In sum, Public Expenditures on university education in 2008 amounts about EGP 9516.7 million; however, students and their families' direct payments only accounted for about EGP 2215.1 million.⁹

The current patterns of subsidy for education in various countries achieve neither quality nor equity, as studies proved that the present education subsidies are in favor of affluent households rather than poor households, which consequently clarifies that the present patterns of education financing are inequitable¹⁰. Admittedly, this is the case in Egypt. The present subsidy patterns are in favor of affluent parents as only 6.1% of the poor households in Egypt get enrolled to higher education compared to about 44.9% for the 5th Quintile,¹¹ affluent households. Moreover, the poll conducted on business owners in June 2009, revealed that employers who lack efficient staff stated that "...the lack of experience and efficiency of [Egypt's graduates] comes at the forefront of the difficulties [the employers] face ..."¹² In truth, the current patterns of public subsidies are not capable of supplying the economy with the required needs due to the fragile system and inefficiency of higher education outputs. And as the European Training Foundation report highlighted that the major obstacles that block the education reforms in Egypt

⁸ World Bank and OECD, *Review of National policies for Education – Higher Education in Egypt* (Paris: OECD Publishing, 2010).

⁹ World Bank and OECD, *Review of National policies for Education – Higher Education in Egypt* (Paris: OECD Publishing, 2010), 268-270.

¹⁰ George Psacharopoulos and Maureen Woodhall, *Education for Development – An Analysis of Investment Choices* (New York: Oxford University Press, 1985), 140-144.

¹¹ Population Council and FORD Foundation, *Higher Education in Egypt: Does free education achieve equitable opportunities*, edit. Asmaa Badawy (Egypt: Population Council, 2012), 53-81.

¹² Engi Gamal Eldin, "Assessing Egypt's higher education service quality from a stakeholder's relative concept," *International Researchers* 1, No. 3 (2012): 77-94, <http://www.iresearcher.org/77-94%20Engi.pdf>

is the lack of financial resources allocated to human resources and misallocation of those resources alongside¹³.

Nevertheless, very few countries worldwide are capable of expanding the higher education access and maintaining their high quality while considering equity aspects without the significant contributions from beneficiaries. It is important to note that it is quite impossible for a country to expand the access to higher education meanwhile attaining quality without the private shares from various stakeholders, except the Scandinavian countries and Switzerland, which have very high rigid taxation systems. Several countries introduced universal tuition fees including Australia in 1989, China in 1997, United Kingdom in 1998, the Czech Republic in 1998, and Austria in 2001. Moreover, some other countries tend to double their tuition fees - including Canada during the 1990s, by making students and parents bear those costs.¹⁴

In sum, the initiation of cost sharing in Public universities in Egypt is "...considered an echo for the stakeholders rising demands for high quality and efficiency in education outputs meeting the rapidly challenging development changes in the market optimized for local and international labor market needs".¹⁵ Public universities in Egypt adopted three kinds of schemes for revenue diversification which are: Open University, Foreign Language Instructed Programmes "FLIP", and dual track policy. FLIP allows students to study most of their academic programmes in English or French as a language of instruction in return of fees (tuition and textbook fees) being paid in advance of the academic year, which supposedly "...provide quality education, cross subsidization, and [produce] graduates [with] highly skilled [qualifications] for

¹³ Egyptian National Competitiveness Council and Egypt TVET Reform, 2011, "Building a competitiveness framework for Education and Training in Egypt." Working Paper not Edited, European Training Foundation.

¹⁴ Bruce Johnstone, "The Economics and Politics of Cost Sharing in Higher Education: Comparative Perspectives," *Economics of Education Review* 23, No. 4 (2004): 403-410.

¹⁵ World Bank and OECD, *Review of National policies for Education – Higher Education in Egypt* (Paris: OECD Publishing, 2010).

the job market, yet the issue of equity will be still a concern since no support for qualified needy students.”¹⁶

Accordingly, the main rationales of the government to adopt FLIP is for income generation and as an echo for stakeholders’ demands to better the quality of graduates, which will consequently lead to higher employment rates in the labor market. However, this policy has not been studied in terms of its impact on quality whether effective or not. The desired transition stage of development requires the pressing need for studying the current cost sharing policies’ practices in Egypt’s public universities, and their effect on quality in order to address the key success and failures factors in terms of *finance, accessibility and quality issues* for remedying such policies for the development of higher education sector to reap the benefits of investments in higher education effectively in Egypt.

1.2 Purpose of the Study

This study advances the question of how cost sharing policies in Egypt’s Public universities can be a mean for bettering students’ learning environment; to discover optimal solutions for balancing quality and equity in financing higher education in light of the decreasing trend in the real public expenditures devoted to the sector. The study will help policy makers in Egypt adopt such reallocations mechanisms of public spending, and recall for the urgency of other additional sources of funds for the sake of intensifying investment in human capital and knowledge production so that Egypt’s government can stimulate the straddles to cut the free subsidies to higher education for expanding the quality of Egypt’s graduates as well to be

¹⁶ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 83.

consistent with the labor market orientations and Egypt's strides for socio-economic development in its transition stage.

1.3 Research Questions and Hypotheses

– Research Questions

The problem to be investigated in this research is the impact of the policy of cost sharing on quality in Public universities in Egypt, underlying the assumptions that user-charges 'tuition fees' is a purpose for education quality.

The main research question guiding this research is: What is the impact of the much higher tuition fees at the University of Cairo Foreign Language Instructed Programs 'FLIP' on increasing the quality of education?

The following sub-questions were formulated based on the main research question:

1. What is the effect of cost sharing policy in Egypt public universities, Faculty of Economics and Political Science 'FEPS' on quality of education as designed in terms of reducing the transition period of graduates to join the labor market 'quality as a fitness of purpose'?

The current research study anticipates measuring the impact of cost sharing policy on quality of education; as tuition fees is considered a substantial item of cost sharing policy which covers the instructional costs. In truth, this ongoing increase in expenditures per student reflected in public universities in terms of FLIP is supposedly to affect the institutions' and faculty's capacity which consequently would lead to higher employment rates reflected in reducing the transition period between graduation and joining the labor market.

To answer this research question, the study designed a survey on FEPS graduates, which would consequently enable the researcher to construct a multiple regression model to measure

the impact of cost sharing policy on quality as *fitness of purpose*. However, there is a limitation of using Panel Data to conduct an impact-evaluation study¹⁷ of current policy due to the absence of baseline surveys for FLIP and Traditional Arabic Programme “TAP”; hence the current research study will accommodate this limitation by using Cross Sectional Data as an alternative. In the absence of the survey instrument and at least a preliminary model that links policy instruments with outcomes it is difficult to gauge the feasibility and value added of the policy. However, a control-treatment design is the most effective way of assessing the impact of a policy change.

Furthermore, the current research will run the Mann-Whitney U test to highlight the significant differences in teaching quality indicators between FLIP and TAP in terms of the variables qualifying them to join the labor market. The variables chosen to be tested, based on scanning the literature, are as follows: academic programmes, textbooks used in instruction, new and high-quality labs, and faculty methods for explaining the syllabi, interaction with faculty members within and outside lecture halls, empirical practice of the theory, practical training in industry and eventually counseling and academic support.

Moreover, Kruskal–Wallis one-way analysis of variance will be used as well to compare the differences in the teaching quality indicators provided to TAP, ELIP and FrLIP individually between more than two independent groups; in order to compare the perceptions of faculty member's language of instructions within FEPS.

2. How has the cost sharing policy affected Public universities in Egypt?

¹⁷ Campbell, D.T. and Stanley, J.C, *Experimental and quasi-experimental designs for research*. (Chicago: Rand McNally, 1963)

To answer this research question, the study built a qualitative research on faculty, to gauge the differences that occurred in the school in general and particularly the various divisions since the introduction of FLIP in terms of infrastructure and facilities; academic courses and its development; textbooks and its contents; strengthening the ties with the productive industry and service in the labor market; and with regard as well applying the quality standards. Moreover, this part will test the following hypothesis:

- There are statistically significant differences in the transition period between graduation and joining the labor market between the FLIP and TAP.
- There are statistically significant differences in the variables, such as academic programmes, textbooks used in instruction, new and high-quality labs, empirical practice of the theory, and practical training in industry, qualifying graduates to the labor market among the FLIP and TAP.
- There are statistically significant differences in textbooks availability/ curriculum is clear in textbooks offered/ curriculum subjects covered in textbooks/ textbooks used in instruction qualify the graduates for labor market among the FLIP and TAP.
- There are statistically significant differences among FLIP and TAP in the following variables undertaken by faculty members while teaching the curriculum: identify the overall goal of the academic course they are teaching, define the course requirements before the semester begins, inform students with course plan, distribute the syllabi logically throughout the academic calendar, review the course plan constantly and refine it if needed. Moreover, modifying the course during the semester due to the unforeseen circumstances in the short term, Gathering the scientific sources on the lectures' topic from multiple references, having regular office hours, available during

their office hours, strengthening the ties with the productive firms and services in the labor market, using modern technologies in teaching, using computers in submitting assignment and research papers, using e-communication tools to follow up students assignments, and finally training students to use internet for the purpose of academic course.

- There are statistically significant differences among FLIP and TAP in the use of libraries/ labs in doing their assignments.
- There are statistically significant differences in the curriculum subjects between ELIP, FrLIP and TAP from faculty members' perspectives.
- There are statistically significant differences between the various faculty member's language of instruction in the faculty study's capability to qualify each TAP, ELIP and FrLIP to join the labor market.

3. What needs to be done to further use the cost sharing policy to improve education quality? This research question will be answered in the last chapter including conclusions and policy recommendations.

1.4 Significance of the Study

Egypt's government recently is besieged with limited budget constraints and they cannot keep up with the rapid changes in the higher education unit costs in light of expanding access and quality. Hence, there is a pressing need for diversifying the revenue sources other than the governmental funding in order to enhance the quality of education. Cost-sharing practices are emerging in Egypt; therefore, their application in public universities is still underdeveloped and has not been monitored or evaluated in terms of teaching and learning excellence. However there is only one single dissertation by Sabry, at the Department of Educational Leadership and Policy

at the State University of New York at Buffalo, which assessed the quality of education in FLIP from the students' perspectives as well as their satisfaction of the programmes compared with TAP, in addition to equity issues in terms of accessibility to FLIP in FEPS and Faculty of Commerce 'FC'. Sabry's dissertation revealed that FLIP did not solve the problems of higher education nationwide and that the students enrolled in such programmes are not satisfied¹⁸. Therefore, Sabry asked for future research to study more cost sharing programmes, rather than FLIP, across the country to assess its financial effect on quality rather than students' perceptions of satisfaction to emphasis on more angels of measuring quality. Moreover, Sabry recalls the need for further research to discover the tuition barriers for enrollment in FLIP and the lack of financial assistance schemes for needy students.

Nevertheless, this study will be only concerned to address the seeming impact of FLIP as a form of cost sharing policies on institution's capacity expansion in terms of quality by advancing the question of what is the impact of cost-sharing policy on the quality of education and how the cost sharing policies in Egypt are effectively working in terms of teaching, learning excellence and accessibility from the faculty members and graduates' perspectives.

1.5 Definition of Terms

For the purpose of this study, "cost sharing" is defined as the transfer or shift in the payment of higher education costs from public shares paid by taxpayers to private shares borne by students, families or philanthropies. This research study will focus on the foreign language instructed programs "FLIP" introduced in Egypt's public universities as a means of cost sharing. FLIP, as aforementioned, is applied in Humanities and social foundation faculties in most of the

¹⁸ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 191 - 195.

public universities like the faculties: Faculty of Economics and Political Science, Faculty of Commerce and Faculty of Law. The students receive almost the same curriculum as those in traditional programme; however tuition is very high, and textbooks are mandatory. Moreover, teaching methods are mostly traditional with few innovations. Students in FLIP pay the same fees for admission and registration like their counterparts in TAP. And now students and their parents burden the costs of both instruction and foreign textbooks, despite their counterparts in TAP are free according to the constitution. The students eligible to join FLIP are those who excel in language skills and have the highest grades among the already admitted students in foreign language under a constraint that they are capable of paying their tuition and textbook fees. However, the language skills' conditions were relaxed later, and the main rationale was charging higher tuition, as applying for FLIP currently does not require the proficiency of foreign languages.

Quality of teaching is defined for the purpose of this research as the strategies, plans, methods and policies undertaken by faculty members and staff in order to ensure the best learning of the students that meet labor market orientations are according to OECD definition.

1.6 Acronyms

FLIP: Foreign Language Instructed Programme

FEPS: Faculty of Economics and Political Science

FC: Faculty of Commerce

TAP: Traditional Arabic Programme

ELIP: Programme Instructed in English

FrLIP: Programme Instructed in French

1.7 Limitations

The limitations relevant to the study can be described as follows: The study is more concerned with studying the impact of cost sharing policy on quality of education; however due to the *absence of baseline surveys* for such programmes, the researcher, in this case, is constrained to measure the impact of cost sharing policy on quality as *a fitness of purpose* using Cross Sectional Data not Panel Data. Moreover, the current research study is interested in gauging the comparability and differences in the distributions of quality indicators between FLIP and TAP from graduates and faculty perceptions throughout the end line surveys structured.

1.8 Outline of the Remainder of the Study

This study consists of seven chapters. The first chapter is an introduction to the context of the study. It includes a brief introduction of the problem, a statement of the problem and key research questions, as well as the methodology map of this study. The next chapter presents related literature on: first, cost sharing and financing higher education and second, measuring quality in higher education and then the theoretical framework. While chapter three is concerned with providing a brief of Egypt's higher education system in terms of accessibility, quality and funding, in addition to the policy of cost sharing in Egypt. The methodology used to approach the problems of the study is presented in chapter four. Additionally, chapter five is concerned with presenting the data results and major findings. Chapter six is more concerned with analyzing the survey results. Finally, chapter seven includes summary of the study's findings, drawing conclusions from the research and proposing implications for policy makers and suggesting further policy studies.

CHAPTER 2

LITERATURE REVIEW

This research is based on the theory of cost sharing as articulated and extended by Johnstone studies since 1986. Cost-sharing policies worldwide stemmed from the urge of developing sustainable influx of nongovernmental revenues for higher education. The diverging trajectories of the higher education costs and revenues has urged the introduction of tuition fee policy in higher education institutions and encouragement of applying some degree of cost sharing policies.

It is apparent from the cost sharing literature that: "The rationales for cost-sharing and the forms it takes are still contested ground, technically and strategically as well as politically and ideologically."¹⁹ Since there is void in the literature which advances the question of how cost sharing improves the quality, this creates the impetus to perform this research study. Hence, this chapter first depicts a survey of the literature related to cost sharing in higher education and the variables that contribute to cultivating a better learning environment. Scanning the literature review revealed that there is only one empirical research conducted to assess cost sharing policy reflected in FLIP from students' perspectives, in order to investigate whether those programmes provided their intended objectives or not. However, Sabry's research recall for more future research to profoundly evaluate the financial effect of FLIP from different quality measures rather than student's satisfaction approach.

2.1 Financing Higher Education

¹⁹ D. Bruce, Johnstone and Pamela Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: The Johns Hopkins University Press, 2010), 56.

The notion “cost sharing” emerged on ground due to the challenges facing higher education financing in the last 30 years due to the massification of higher education since 1960's; specifically that in most of the countries higher education's rigidity appear to be released in terms of efficiency, accountability and responsiveness.

The concept of cost sharing but not the term itself was introduced to the first time by Haris, as he predicted that by 1970 the private financial contributions to higher education will be exceeding the public contributions in the United States.²⁰ Harris claimed that it is inequitable that high-income households are those who reap the benefits of taxpayers' contributions in public spending on higher education, as he argued that:

It would be a mistake not to ‘squeeze’ to some extent those families with incomes in the upper third...otherwise the low-income groups through the payment of state and local taxes would be paying a substantial part of the bill of the high-income groups.²¹

Later, this concept reemerged in 1973 in a Carnegie Commission report using the term “Sharing the cost burden”, which raised several focal inquiries in higher education finance, including “Who pays [the costs of education]? Who benefits [from the education]? Who should pay [the costs of education]?”²² The report concluded the steps taken forward to equity in higher education access and as well suggested the need for some shift in the share of the direct costs borne by the family to taxpayers in the short run. Consequently, this will increase the number of students getting enrolled to higher education which will create an opportunity for low income

²⁰ Maureen Woodhall, “Funding Higher Education: The contribution of economic thinking to debate and policy development,” (Education Working paper Series 8, The World Bank, Washington, D.C., 2007), http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/Funding_HigherEd_wps8.pdf.

²¹ Seymour Harris, *Higher Education: Resources and Finance*. (New York: Mac-Graw Hill Book Company, Inc., 1962),109.

²² Maureen Woodhall, “Funding Higher Education: The contribution of economic thinking to debate and policy development,” (Education Working paper Series 8, The World Bank, Washington, D.C., 2007), http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/Funding_HigherEd_wps8.pdf.

families to depend more on public aid, less than their parental support. This will have an impact on the long run, as family incomes will keep rising and as college attendance become more widespread at all income levels, and finally later, there will be greater reliance again on the personnel resources and somewhat less reliance on the government sources.²³²⁴

The domain of higher education was limited until 1960's, only 15% of the age cohort enrolls in higher education institutions, whilst thereafter the expansion of higher education moved toward a universal access above 30%. The world simulated the American higher education system since the middle of 20th century; however, the demand for higher education increased in the 21st century which has put considerable pressures on mass education²⁵. Martin Trow's theory postulated that along with over enrollments in higher education during the massification period, the relationship between higher education institutions and society gets closer; accordingly, stakeholders will be more involved in higher education institutions management, this requires subsequently from the institutions to change staggeringly and continuously the purpose of their mission, academic standards, and teaching and learning modes for the purpose of maintaining quality.²⁶

The massification of higher education in the 21st century is profoundly subject to advancing challenges which are: funding mechanism, introduction of new sectors to higher education, emergence of new modes of learning, variability and complexity of higher education

²³ Carnegie Commission on Higher Education, "Higher Education: Who Pays? Who Benefits? Who Should Pay?," *The Carnegie Foundation for the Advancement of Teaching* (New York: McGraw-Hill, 1973), 103-104.

²⁴ Maureen Woodhall, "Funding Higher Education: The contribution of economic thinking to debate and policy development," *Education Working paper Series 8* (The World Bank, Washington, D.C., 2007), http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/Funding_HigherEd_wps8.pdf.

²⁵ Philip G. Altbach, "The realities of mass higher education in a globalized world," in *Higher Education in a Global Society* (Massachusetts: Edward Elgar Publishing, Inc. and Glos: Edward Elgar Publishing Limited, 2010), 25 - 41.

²⁶ Josephine Misaro, Fred O. Jonyo, and David Kinyanjui Kariuki "A review of the impact of massification on the quality of higher education in Kenya," *Research Journal in Organizational Psychology & Educational Studies* 2(4), (2013): 139 – 149.
<http://rjopes.emergingresource.org/articles/A%20REVIEW%20OF%20THE%20IMPACT.pdf>.

institutions, managerlization of higher education institutions, the attributes of academic profession, and diversity of students' environment.²⁷

After the World War II, higher education was defined as a “public good” which means it is the government role to provide such a service; whilst it was defined as a “private good” since the collapse of the conservative thinking, whereas the private returns from higher education is higher than the public returns. This consequently has a dramatic effect on higher education policies in the world economy mirrored in over-crowding universities, besides low quality of study along with the seeming trends of governments to cut and limit their public spending devoted to higher education. Nevertheless, in some countries governments were committed to increase their funding to meet over-enrollments like, Britain; and in other countries governments did not increase the funding to attach it with the enrollment growth taking place.²⁸

Higher education turned to be considerably costly in the 21st century, as the costs of teaching are significantly increasing even if there is no increase in enrollments because of the growth in knowledge and communications technologies. This has derived the unit cost per student to increase. Moreover, the expansion of higher education sector has led the traditional higher education institutions to grow and new types of higher education institutions to emerge, besides more diverse education and training programmes are needed than before. This has derived not only the advent of private sector in order to meet the demand for post-secondary education, especially in most of the formerly communist or transitional countries and the post-communist world as well as East Africa, but also private higher education institutions expanded

²⁷ Philip G. Altbach, “The realities of mass higher education in a globalized world,” in *Higher Education in a Global Society* (Massachusetts: Edward Elgar Publishing, Inc. and Glos: Edward Elgar Publishing Limited, 2010), 25 – 27.

²⁸ Philip G. Altbach, “The realities of mass higher education in a globalized world,” in *Higher Education in a Global Society* (Massachusetts: Edward Elgar Publishing, Inc. and Glos: Edward Elgar Publishing Limited, 2010), 25 - 41.

rapidly as it is more responsiveness in terms of finance, access, diversity and nature of academic programmes. Higher education seems to become more vocational in focus since then. The rapid changes in new technologies has caused distance higher education to emerge profoundly the past two decades; however there is void in the literature to measure the effectiveness and quality of such programmes.²⁹

It is apparent that mass education along with the rising demand of higher education in the 21st century has led to the advent of new higher education institutions as aforementioned and introduction of new modes of delivering the instructions. Traditional universities currently have no other solution except to involve with industry and other institutions to be more responsiveness, which consequently has damaged the traditional patterns of governance and it makes it more difficult for universities to be managed. This subsequently affected the traditional administration in universities; faculty members has no more adequate time to carry on the complex tasks which requires administrative specialists in law, budgets, accountancy, and others. Moreover, academic professions lost their power and autonomy as a part of mass education³⁰.

The literature on financing higher education affirmed that the responses to the current financial austerity require solutions on both the cost and the revenue sides. Solutions on the cost side can first, include increasing the class sizes with highly qualified full time faculty, increasing teaching loads, deferring maintenance and dropping low priority programs that there is no demand for it from the employers. Second, one simple solution could be imposing enrollment ceilings in the public higher education institutions; however this would have a noticeable impact

²⁹ Philip G. Altbach, "The realities of mass higher education in a globalized world," in *Higher Education in a Global Society* (Massachusetts: Edward Elgar Publishing, Inc. and Glos: Edward Elgar Publishing Limited, 2010), 25 – 41.

³⁰ Philip G. Altbach, "The realities of mass higher education in a globalized world," in *Higher Education in a Global Society* (Massachusetts: Edward Elgar Publishing, Inc. and Glos: Edward Elgar Publishing Limited, 2010), 25 – 41.

on accessibility.³¹ Meanwhile, this will increase the number of well-qualified graduates from high schools to various higher education institutions. Third, government should give the public higher education institutions greater managerial autonomy and flexibility which will substantially enable the institutions to use their available funds effectively, in addition to maximizing their outputs of teaching and research; meanwhile it will create incentives for maximizing the revenue from non-government sources. For instance, there has been a considerable shift in governmental laws and regulations dealing with the public universities in the last decades especially in the Netherlands and United Kingdom, and admittedly very recently to China and Japan. Those countries adopted the New Public Management Approach, as universities rather than the ministry or the state budget office is given the authority to undertake the following: 1) establishing wage and salary policies, 2) reallocating expenditures from one category to another in response to the university's priorities, 3) carrying forward unspent funds from one fiscal year to another, 4) contracting out with competitive agencies. Those cost side solutions enabled such countries to lower the average per-student costs of instruction.³²

However, Johnstone confirmed that the cost side solutions solely cannot be sufficient because the diverging trajectories of higher education costs and available revenues are too wide and cannot only be solved by the further cuts in expenditures alone. In sum, revenue supplementation can be a substitute to cost cutting and consequently will cause financial viability. Revenue supplementation side can have various forms which could be: 1) faculty and institutional entrepreneurship which require the existence of new public management

³¹ Bruce Johnstone and Pamela Marcucci, "Worldwide Trends in Higher Education Finance: Cost-Sharing, Student Loans, and the Support of Academic Research" *UNESCO's higher Education Commissioned Paper Series* (Paris, France: UNESCO, 2007), 4-17.

³² D. Bruce, Johnstone, "Worldwide Trends in Financing Higher Education" in *Financing Access and Equity in Higher Education, Global Perspectives on Higher Education*, 17 (2009).

approaches; 2) renting university facilities to entities; 3) marketing research discoveries; or 4) fund raising by appealing to alumni, industry and other donors.³³

Though, the literature on financing higher education confirmed that the most sustainable form is private financing in public higher education institutions in the form of tuition fees and student loans. This approach has the beneficial effect of both improving the quality of teaching and the relevance of curriculum, and consequently those fees can be designed to increase regularly on rates exceeding the inflation rates. However, there are opponents that believe the government should resume making higher education free of charge because of positive externalities and market failure. Johnstone demonstrates that the opposition of cost sharing stemmed from three kinds of sources³⁴:

I. Ideological Opposition:

Resistance to cost sharing in this ideology is derived from the fact that the public is the primary beneficiary of higher education and hence it should be free; however this does not hold true for economists.³⁵ Johnstone and Marcucci stated that those who benefit most from free higher education in low income countries, especially in Africa, are more likely to be the middle and high income level households, therefore they will be opposing tuition fees policy, in addition to avoiding the implementation of some degree of cost sharing policy due to the political pressures.

II. Technical Opposition:

³³ Bruce Johnstone and Pamela Marcucci, "Worldwide Trends in Higher Education Finance: Cost-Sharing, Student Loans, and the Support of Academic Research" *UNESCO's higher Education Commissioned Paper Series* (Paris, France: UNESCO, 2007).

³⁴ D. Bruce, Johnstone and Pamela Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: The Johns Hopkins University Press, 2010), 44 - 73.

³⁵ Howard R. Bowen, *Investment in Learning: The individual and social value of American higher education* (San Francisco: Jossey-Bass, 1977)

Colclough and Manor 1991 stated that cost sharing cannot work in the developing countries, unless it supplements the government revenues and permits needy students to access higher education through means-based grants. However, this was not the case wholly in Egypt; the adoption of cost sharing comes from the urgent need for other than non-governmental sources of income rather than taxpayers contributions; the government froze the student grants in its policy and recalled for private donations and endowments for student fellowship, but it did not work as expected. And as Johnstone referred that if Egypt is to go further for cost sharing, this requires from the government to open the door for student loan programmes; however it is hard to be applied currently and it should be studied.

Developed countries does not have only means-based grants policy instruments for the success of cost sharing policy, but there are other instruments that are parallelized such as: rigid taxation system that capture households and individuals' sources of income and their eligibility; advanced tools to track individuals' movements; availability of integrated systems for different kinds of taxes whether income, pension and insurance in order to guarantee student loans repayments; and eventually the attainability of private capital markets as a supplement to the tax payer revenues. Unfortunately, those successful policy instruments are not yet valid in Egypt; however the governments' efforts to modify the taxation system, are still inefficient bred due to the decades of socialist inefficiency.

The opponents of cost sharing policy declared that the absence of such systems will make the need-based systems and student loans programmes not to work effectively and to be costly. Proponents of cost sharing policy in the developing countries cannot deny

that revealing those who are eligible to the financial needs is quite difficult; however, there are such penalties set in case of deception. Opponents of the cost sharing policy claim that the households who are religiously debt-averse are more likely to avoid cost sharing policies.³⁶

III. Political Opposition:

Resistance to cost sharing can be derived as well from political ideology, as the scarce taxpayers' lumps are allocated upon the political pressures rather than distributed efficiently to the economic sectors' needs and social benefits.

The opponents of cost sharing policy who are against the tuition fees claim that politicians will find a way to dominate corruptly such fees if enacted rather than higher education development in terms of access and quality.

The opponents of cost sharing policy who are in favor of levying some tuition fees argue that the government can raise public revenues by imposing progressive taxes and higher education can be on the top of priorities to additional public revenues. Moreover it is more efficient to ensure access and equity throughout cost-effective means-testing.³⁷

Those three kinds of opposition that stemmed could be found in truth in Egypt, as the constitution in Egypt guarantees free and equal access to education. Besides, charging tuition fees is “politically unattainable”³⁸; however, since 1982, the government has taken structural reforms upon itself to increase the efficiency of the government spending, which included as well the education sector; the government did not reap the benefits of investments in education

³⁶ D. Bruce, Johstone and Pamela Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: The Johns Hopkins University Press, 2010), 58 - 60.

³⁷ D. Bruce, Johstone and Pamela Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: The Johns Hopkins University Press, 2010), 61 - 63.

³⁸ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 72.

according to the World Bank report as mentioned earlier. Moreover, Zeytoun highlighted that Egypt's higher education system is in an alarming jeopardy, as there is a tremendous decrease in enrollments in basic sciences sectors from 44% in 1972-1973 to 22.7% in 1999-2000, and this is due to the financial austerity.³⁹ And this could explain the urgent need for other-than governmental sources for financing higher education in Egypt; however, the current practices of cost sharing policies is still underdeveloped in most of the public universities. This admittedly, shows the importance of studying the current research study to highlight the further steps to be done for improving the quality as a value for money, besides the recall for more research to study the ways for means-based grants to be introduced in Egypt's higher education system throughout cost sharing.

2.2 The Perspective and Policy of Cost Sharing

The term "cost sharing" was introduced for the first time by Johnstone in 1986 defining it as:

A transfer in the cost burden of higher education from exclusive or near exclusive reliance on government, or tax payers, to some financial reliance upon parents and/or students, either in the form of tuition fees or of 'user charges' to cover the costs of formerly governmentally or institutionally-provided room and board.⁴⁰

Cost sharing is *rationalized by efficiency, and equity*; as higher education institutions will tend to be more *responsive to the various stakeholders' demands by expanding quality*⁴¹. Nevertheless, cost sharing literatures revealed that there are other rationales for introducing

³⁹ Zeytoun, M., "The status of higher education in Egypt," In M. Bashshur, Y. Courbage, & B.Labaki (Eds). *L'enseignement supérieur dans le monde arabe: une question de niveau? Edition bilingue français-anglais*. Institut français du Proche-Orient (2006), Beyrouth: Liban.

⁴⁰ Bruce Johnstone, "The Economics and Politics of Cost Sharing in Higher Education: Comparative Perspectives," *Economics of Education Review* 23, No. 4 (2004): 403-410.

⁴¹ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 44-46.

tuition fees in public higher education institutions which is *diversifying the revenue sources* to meet the rapid challenging development claims; limit the government interventions in courses provided; and eventually to *shift the burden of costs to those who effectively benefit from the service*.⁴² However, expanding cost sharing models do not give the government the guarantee to cut its funding, the government will remain to finance throughout state supported financial aids to merit students. Johnstone claimed that as higher education provides nations with public benefits translated in terms of positive externalities and hence this requires the sheer need for the government support. For instance, the instruction costs for tuition fees worldwide do not surpass 40% of the public higher education institutions costs.⁴³

The higher education costs include both the instruction and student maintenance costs. The cost sharing forms are currently prevailing in both developed and developing countries, regardless of the country's agenda from the economic and political perspectives, as it has one or more of the following features as presented by Johnstone:⁴⁴

- i. Public higher education institutions currently initiate tuition fees, except for those merits or needy based supported by the government.
- ii. Higher education intuitions increased tuition fees tremendously for those institutions previously imposed tuition fees.
- iii. Governments worldwide are more likely encouraging the enrollment into fee-dependent private higher education institutions.

⁴² Bruce Johnstone, "Challenges of Financial Austerity: Imperatives and Limitations of Revenue Diversification in Higher Education" *The Welsh Journal of Education* 11, No. 1 (2002): 18-36.

⁴³ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 44-46.

⁴⁴ Bruce Johnstone, "The Economics and Politics of Cost Sharing in Higher Education: Comparative Perspectives," *Economics of Education Review* 23, No. 4 (2004): 403-410.

- iv. There is an obvious cutback in financial aid like students' grants and scholarships worldwide.
- v. There is an increase in recovery costs' charges on loans and living costs' subsidies to students.

Accordingly, the cost sharing literature highlighted the reasons that derive countries to impose tuition fees in public higher education institutions which are the rising demand for additional resources to *broaden quality and access to higher education*, along with the escalating costs of higher education unit and limited government budgets to supply higher education institutions with required revenue supplements, especially the inability of cost-side solutions to resolve the diverging trajectories of costs and revenues.⁴⁵

2.3 Measuring Quality in Higher Education

The quality of higher education is in jeopardy under the continuing diverging trajectories between costs and revenues since the massification of higher education. The expansion recently taking place in the higher education sector recalls the countries to note the importance of quality. There are numerous efforts taken to define quality in higher education; however, researchers who advance the question of how to define quality in higher education, realized that the concept quality in higher education has no single and concrete definition.

The conception of quality in higher education is a "stakeholder-relative concept"⁴⁶ tailored according to various stakeholders' perspectives, as Green declared that:⁴⁷

⁴⁵ D. Bruce, Johstone and Pamela Marcucci, *Financing Higher Education Worldwide: Who Pays? Who Should Pay?* (Baltimore: The Johns Hopkins University Press, 2010), 43-45.

⁴⁶ Lee Harvey and Diana Green, "Defining quality, Assessment and Evaluation in Higher Education," *Education Resources Information Center* 18, No. 1 (1993): 9-34.

⁴⁷ Lee Harvey and Diana Green, "Defining quality, Assessment and Evaluation in Higher Education," *Education Resources Information Center* 18, No. 1 (1993): 9-34.

The best that can be achieved is to define as clearly as possible the criteria that each stakeholder uses when judging quality, and for these competing views to be taken into account when assessments of quality are undertaken.

In that context, there was a trend to reject the common single definition of quality in higher education in order to admittedly accommodate the various stakeholders' perspectives, as each stakeholder has his own potentials depending on how they ponder higher education and quality.⁴⁸ Harvey and Green highlighted the conception of higher education quality into five measures:⁴⁹

- I. Quality as exceptional or excellence: It does have three classifications. The traditional concept which is quality as distinctive; quality as excellence by excelling to high standards; and eventually quality as overtaking a set of required minimum standards. This definition includes measures to assess the quality of student life, the learning modes provided, and students' access to faculty, as well as the sufficiency of finances.
- II. Quality as perfection/consistency which is related to zero defects, this definition does not apply to higher education as it assumes there are no flaws because outcomes are produced consistently where at each stage faults are inspected. This definition does not encourage the concept of differences and variability in higher education, whilst the role of higher education is not to deliver identical outputs.
- III. Quality as fitness for stated purpose means that institutions are given the autonomy to define their purpose in mission, and quality is confirmed by meeting clients' specifications. This definition encourages the essence of variability, as each institution has its own mission statement.

⁴⁸ John Cullen, John Joyce, Trevor Hassall and Mick Broadbent, "Quality in higher education: From monitoring to management," *Quality Assurance in Education* 11, No. 1 (2003): 5–14.

⁴⁹ Lee Harvey and Diana Green, "Defining quality, Assessment and Evaluation in Higher Education," *Education Resources Information Center* 18, No. 1 (1993): 9-34.

IV. Quality as value for money means ruling the quality of provision, process and outcomes

against the overt and hidden costs, as Harvey and Green stated that:

Value for money is one definition of quality that judges the quality of provision, processes or outcomes against the monetary cost of making the provision, undertaking the process or achieving the outcomes.⁵⁰

The term value for money used to assess whether the institution has maintained the maximum benefit from the service provided in terms of return on investment and effectiveness against the available resources. This notion is of a great concern recently from different stakeholders, as it includes the conception of accountability and efficiency being based on providing and maintaining the same service, whilst restraining the costs or providing a higher level of service for the same money, as Lomas argued that “The notion of accountability is central to this definition of quality with accountability being based on the need for restraint in public expenditure.”⁵¹ Most of the governments worldwide seek to restrain their expenditures throughout accountability, as well as students pay more and more as they seek to have a value for what they pay; however, it is difficult to measure it because some of its elements incapable of being perceived.

V. Quality as transformation is a classic conception which means providing a ‘qualitative change’ to students during their university life throughout attitudes, skills, and qualifications to empower them or develop of new knowledge.⁵² The changes won’t take place only to students but to institutions.

⁵⁰ Lee Harvey and Diana Green, “Defining quality, Assessment and Evaluation in Higher Education,” *Education Resources Information Center* 18, No. 1 (1993): 9-34.

⁵¹ Laurie Lomas, “Does the development of mass education necessarily mean the end of quality?,” *Quality in Higher Education* 8, No. 1 (2002): 71-79.

⁵² Kim Watty, “When will Academics Learn about Quality?,” *Quality in Higher Education* 9, No. 3 (2003): 213-221.

One of the most commonly used definitions is quality as fitness for purpose; however, this concept could de-escalate the concept of ‘quality of teaching’ which is derived from the consumerisation and standardization of higher education service⁵³.

Quality of teaching can be defined according to OECD definition as the strategies, plans, methods and policies undertaken by faculty members to provide the best teaching in order to ensure the best learning of the students that meets labor market orientations. Nevertheless, enhancing the student learning process does not mean only targeting teachers' pedagogical skills, but it should take into account the whole institution's competencies and learning environment. Admittedly, student's achievement is highly correlated with their institutions that are enrolled in, as good teaching is connected with the institutions' potentials in leadership, management and their understanding of its mission and nature of education besides professors' enthusiasm. Quality of teaching is affected also by the students' understanding of the learning approach, whether it is deep or surface. Students, who are more likely to be affected by the lecturers and organization, are close associated with the syllabus⁵⁴.

In order to achieve better learning environment for students; it is crucial to evaluate and assess the quality of teaching process, as well this will consequently empower the institution and its students. Research found there is no single factor that can achieve ‘teaching excellence;’ however, there is four factors that catalyze good teaching which are the syllabus preparation along with having definite and clear understanding of material and teaching modes used within lecture halls besides the positive learning environment.⁵⁵

⁵³ Engi Gamal Eldin, “Assessing Egypt’s higher education service quality from a stakeholder’s relative concept,” *International Researchers* 1, No. 3 (2012): 77-94, <http://www.iresearcher.org/77-94%20Engi.pdf>

⁵⁴ Engi Gamal Eldin, “Assessing Egypt’s higher education service quality from a stakeholder’s relative concept,” *International Researchers* 1, No. 3 (2012): 77-94, <http://www.iresearcher.org/77-94%20Engi.pdf>

⁵⁵ Nira Hativa, Rachel Barak and Ety Simhi, “Exemplary University Teachers: Knowledge and Beliefs Regarding Effective Teaching Dimension and Strategies,” *The Journal of Higher Education* 72, No. 6 (2001): 699-729.

After conducting the review of the literature in the field, the researcher noticed that the crucial factors that boost students' learning environment are lecturer's experience, their master to design the curriculum and organize it effectively, besides their ability to clarify the syllabus throughout lecture outlines, headings, subheadings, and well-structured presentations. Moreover, there are other factors like the faculty's sensitivity to classroom, student's progress, their ability to understand students' ways of thinking and their problems and as well, their capabilities to encourage students to be creative and share their ideas through the lectures.

In fact, fostering the quality of teaching and learning requires the availability of much competencies which are: lecturers' openness to experiences locally and internationally, their ability to communicate with their peers and colleagues, their ability to lead and be consistent on track and their capability to engage with the students, and as well to be initiative, arranging learning methods, their ability to teach students to learn, their capability to maintain applied practice for the educational material, professional development, and personnel management.

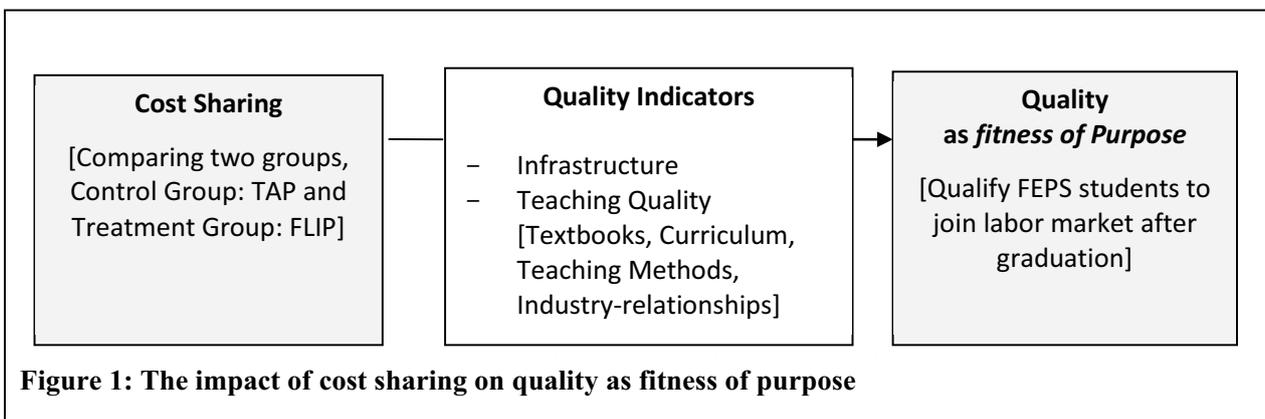
Eventually, this present research focuses on vital pillars for achieving better learning environment, which are faculty members, graduates and institution. The main significance of this research is to measure the impact of FLIP policy as an example of cost sharing, on quality as *a fitness of purpose* as well as; identifying the significant differences between FLIP and TAP in terms of quality variables such as: infrastructure availability like labs, libraries and textbooks used in instruction, teaching methods like either the interactive presentations or the use of modern technologies in teaching, counseling and academic support, as well the empirical practice of theory, practical experience in industry or services, interaction with faculty within and outside the classes and students' use to the school resources like labs and library in doing

their researches and assignments. Those quality variables mentioned earlier were inserted in both the graduates and faculty members' surveys.

2.4 Theoretical Framework

This research is based on the theory of cost sharing as articulated and extended by Johnstone studies since 1986. Cost-sharing policies worldwide stemmed from the urge of developing sustainable influx of nongovernmental revenues for higher education. The current research study is interested in measuring the impact of cost sharing policy reflected in FLIP on quality of education; as tuition fees is considered the fundamental key of cost sharing policy.

The argument the researcher anticipates to support here is that increasing tuition can be justified by the extra cost needed to offer programmes in foreign languages. This extra cost is needed to better the education in terms of the institutions' and faculty's capacity which would make the institution more responsive to the labor market needs; this would consequently lead to shrink the transition period between graduation and first entry into the labor market.



The figure above illustrates that the researcher would measure in her first research question the seeming impact of the high tuition programmes in FEPS on the institution and faculty's capacity in terms of infrastructure availability and teaching quality. Students enrolled in

high tuition programmes, modeled after cost sharing policy are expected to have better facilities and innovative teaching methods compared to their counterparts in TAP as a value for the money they pay in advance annually. Students in those programmes are expected to have high quality in terms of teaching. Quality of teaching includes the methods and plans undertaken by the institution and faculty to provide the best teaching in order to ensure quality education that is needed for the labor market. Accordingly, bettering students' learning environment requires a well-designed curriculum and an appropriate syllabus which clearly identifies the textbooks and references, interactive teaching modes within the classes, besides faculty's local and international openness in experiences, their capability to communicate with their peers and students and engage their students in discussions and debates. Moreover, faculty should have the capability to empirically practice of the theory and teach their students those qualifications and skills. In order to better the learning environment for students, we must encourage them to engage and involve in discussions, engage in academic life through making use of the faculty's available resources and eventually engage in extra-curricular activities and community services.

Moreover, the research is interested in studying the significant differences between FLIP and TAP in the distributions of quality indicators from graduates and faculty members' perceptions throughout the following variables: infrastructure availability like labs, libraries and textbooks used in instruction; teaching methods used to qualify students like either the interactive presentations or the use of modern technologies; as well counseling and academic support; empirical practice of the theory; practical experience in industry or services; interaction with faculty within and outside classes.

In fact, Sabry's dissertation which assessed the impact of tuition fees of FLIP at FEPS and FC on increasing non-governmental sources of fund and students' satisfaction with quality

of education concluded that the main core of FLIP policy as a means of cost sharing in public universities in Egypt is to achieve better quality of education not equity. Sabry's research stated that only those who get enrolled for those kinds of programmes are the students from affluent families. Moreover, the study realized that FLIP seemingly does not provide its students with significantly better quality education based on the student satisfaction.⁵⁶ Therefore, the significance of the current research springs from the urgent need for measuring the impact of cost sharing policy on quality of education, as there is lack of previous empirical research and standards for comparison.

The current research anticipates using Cross Sectional Data not Panel Data due to the baseline survey limitations. In the absence of the baseline survey instrument and at least a preliminary model that links policy instruments with outcomes; it is helpful to develop a control-treatment design which is considered the most effective way of assessing the impact of a policy change. Moreover, the current research study depends on Mann-Whitney U test, as well Kruskal-Wallis H test to study the statistical differences between FLIP and TAP in the distributions of quality indicators aforementioned.

⁵⁶ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss., State University of New York at Buffalo, 2010), 183–195.

CHAPTER 3

EGYPT HIGHER EDUCATION SYSTEM

3.1 Introduction

Since the 1952 Revolution Egypt's government introduced free education policies at all levels guaranteed by Articles 18 and 20 of the Egyptian constitution,⁵⁷ before that period education was mainly limited to elites during the British colonial. According to the 1961 constitution, public universities in Egypt do not charge tuition fees; students who passed the national high school final exam were eligible to apply for higher education institutions and then they only pay small administrative fees for registration and admission.⁵⁸

The expansion of higher education continued since the early 1980s and 1990s; however the decree of re-planning training and education policies in the higher education institutions undertaken by the Sadat's regime recalled for reducing students' enrollments by 5 percent annually. The desired transition stage in the early 1990s required Mubarak's regime to carry out a number of reforms in higher education financing, by introducing Law 101, a reform that authorizes and regulates the establishment of the private universities, as well as encouraging public universities to diversify their income sources beyond the limited tuition fee payments allowed.

The main purpose of reforming higher education sector in Mubarak's regime is to align the outputs of higher education system, rather than expanding quantitatively, with the innovation and labor market needs Egypt faced in the context of its ongoing modernization efforts. Consequently, Mubarak's regime set the sustainable funding strategy for reforming higher

⁵⁷ Gholamreza Arabsheibani, "Educational choice and achievement: The case of secondary schools in the Arab Republic of Egypt," *Higher Education* 17, no. 6 (1988): 637 – 646, doi: 10.1007/BF00143779.

⁵⁸ World Bank and OECD, *Review of National policies for Education – Higher Education in Egypt* (Paris: OECD Publishing, 2010), 267-268.

education as follows: increasing public investment, diversifying institutional revenues through greater cost sharing, expanding the private sector⁵⁹, reducing the retention rates, strengthening enrolment growth in the TVET sector, in addition to widening the use of new delivery technologies in teaching and learning.

However, the 1990s and 2000s witnessed massive expansion in Egypt's higher education system; public revenues remained almost the same in real terms which consequently have a disastrous effect on students' share from public spending to decrease by 35.4 percent in real terms. This can assuredly explain the inadequate and poor quality of education; hence this highlights the urgent need for reviewing the current education policies on quality either to scaling them up or cutting them for the purpose of reaping the benefits of investments on education.

3.2 Higher Education Access

Chart 1 shows that although the increase in the number of private universities to reach a number somehow near to public universities in Egypt, but still the new entrants to the public universities as a percentage of the whole higher education system represents the proportion. The proportion witnessed a noticeable increase until 2009/2010, meantime the public expenditures on higher education as a percentage of the GDP decreased.

There is a sharp decrease in the number of new entrants to public universities from 2009/2010 to 2010/2011, which is due to the so-called the vacuum years. Those students were the last generation of students who studied the basic education in only 5 years not 6; however the government adopted the policies and changed to be 6.

⁵⁹ The private sector is profitable in Egypt and education in such a sector is not that efficient compared to public universities except for the American University in Cairo.

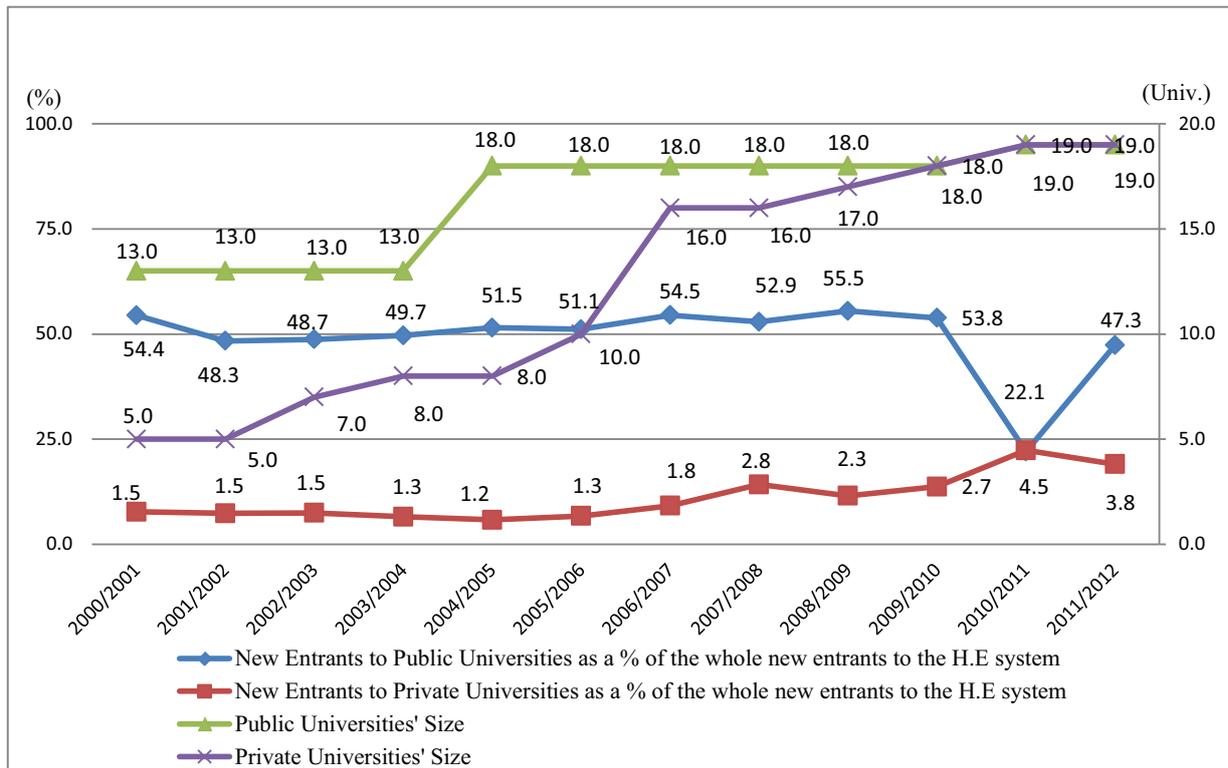


Figure 2: The new entrants to Public/ Private Universities as a % of the total new entrants to the whole higher education systems and the evolution of public and private universities (2000/2001 – 2011/2012)

Chart 2 highlights that the real public expenditures on higher education witnessed a noticeable decrease from 1998/99 to 2009/10 amounted 29.5%, meantime the total number of students enrolled in the public higher education institutions clearly increased.

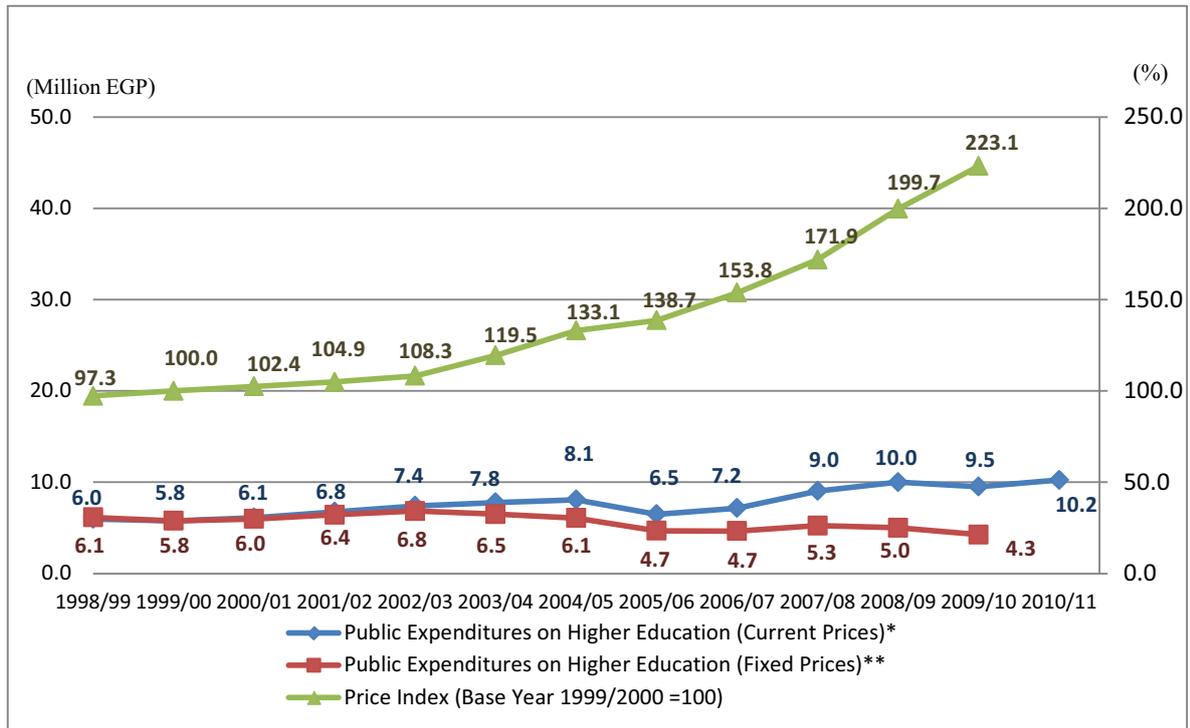


Figure 3: Public Expenditures on Higher Education (1998/99 – 2009/10)

Chart 3 illustrates that there is considerable decrease in real public expenditures on higher education. It illustrates as well an increase in the students’ enrollments to public higher education institutions which consequently have an impact on students’ share of the real public expenditures. As, it decreased from EGP 3147.9 in 2000/ 2001 to EGP 2032.3 in 2008/2009, a decrease amounted 35.4%, as well the number of students enrolled in higher education is rising from 1.897 million students in 2000/2001 to 2.465 million students in 2008/2009, an increase amounted 29.9% over the same period.

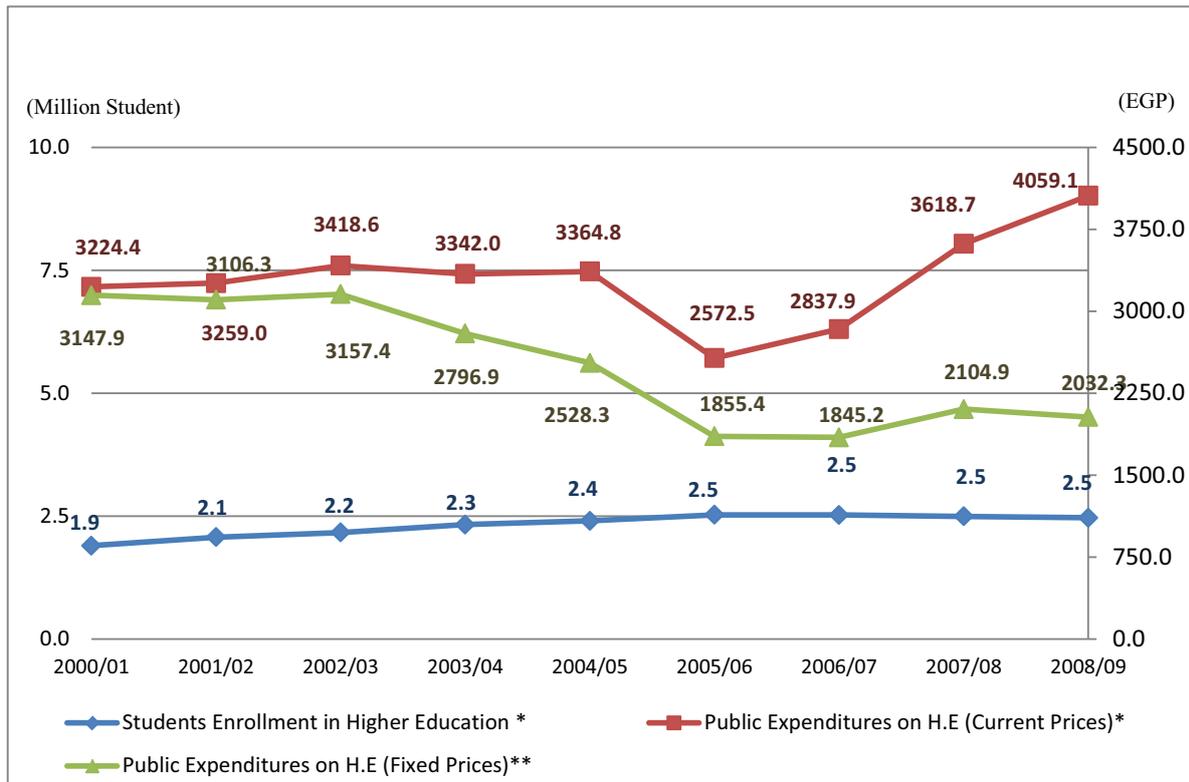


Figure 4: Public Expenditures on Higher Education per Student (2000/01 – 2008/09)

* Source: IDSC Higher Education Statistics Portal – www.higheducation.idsc.gov.eg

** Computed by the researcher.

Hence, there is a pressing need for non-governmental revenue sources in case if the government's mandate is to enrich quality in education, meanwhile with the expansion of higher education access and participation. The recent limited and scarce governmental resources are unable to pursue the severe rapid trends in higher education costs behind other prevailing pressing public needs. It is therefore crucial to research the effectiveness of cost sharing policies on quality in Egypt's public universities, as those kinds of programmes haven't been evaluated yet in terms of teaching and learning excellence as well the expenditures uses and its impact on developing the infrastructure and facilities within the school.

3.3 Higher Education Quality

The 2013-14 Global Competitiveness Report section on Egypt highlights that the country's political instability since the Arab spring is undermining the country's competitiveness and on-going potential macro-economic reforms. On the education side, although that Egypt ranking in terms of quantitative indicators like enrollment rates are improving, the country remains to be at the lowest level in terms of quality of its primary, secondary and tertiary education. The challenges of the current education system not only lie in large age cohort 18-22 years old, but in limited government budget as well. One of the most challenging causes hindering doing business in Egypt is inadequately educated workforce, along with policy instability, government instability, Crime and theft, and Corruption.⁶⁰

The quality of the education system in Egypt is worrisome. The poor quality of education system is explained by the poor teaching quality, inadequate pedagogy, and weak school-based management systems compared to other countries. Gamal Eldin's working paper 'Assessing Egypt's higher education service quality from a stakeholder's relative concept' declared that about 76% of university students within the sample highlighted their demand for eminent education, meanwhile about 55% only of students are somehow satisfied with the overall levels of teaching in universities. The working paper also addressed that about half the Egyptian universities' students within the sample are somehow satisfied with their teaching materials and courses in their faculties, and at least about 26% are dissatisfied.⁶¹

Textbooks and curriculum development are considered a main barrier in Egypt's higher education system, as the school doesn't have the full autonomy to develop their curriculum. The

⁶⁰ World Economic Forum, Global Competitiveness Report 2013-2014, by Klaus Schwab, and Xavier Sala i Martin, ISBN-13: 978-92-95044-73-9 (Geneva: World Economic Forum, 2013), 192-193.

⁶¹ Engi Gamal Eldin, "Assessing Egypt's higher education service quality from a stakeholder's relative concept," *International Researchers* 1, No. 3 (2012): 77-94, <http://www.iresearcher.org/77-94%20Engi.pdf>

report of field survey to gauge the views of students on the issues of higher education issued by the IDSC in Egypt, highlighted that about 36.8% of Egypt's universities students within the sample are at minimally dissatisfied with their textbooks, while about 42% are somehow satisfied with the textbooks required for learning. Moreover, only 31.2% of Egypt's university students are asked to evaluate their academic programmes, and only half of their schools respond to their suggestions and considerations in terms of curricular programmes and activities.

Moreover, higher education facilities and infrastructure are underdeveloped and vintage in terms of its labs particularly in public universities, assuredly Gamal Eldin's paper highlighted that university students in Egypt are dissatisfied with their school services, as the index amounted about 54.6 degree. This is due to their lower level of satisfactions with computer, language labs and other services like medical care system.⁶²

Higher education system in Egypt remains to be underdeveloped and uncompromising; however the expansion is taking place in terms of quantity not quality. The main problem of the current odds is the absence of clear and well identified vision of the purpose of higher education in the country whether it is only to produce assembly lines of graduates who are certified or to study the country's needs during the current transition stage from skills and qualifications. Despite the vocational seeming of the current education system worldwide; yet Egypt's universities do not pay attention for the importance of engaging potential and anticipated industry to education; as well the government doesn't control the influx of high school graduates into university and institute education and particularly in social sciences departments.

3.4 Cost Sharing Policy in Egypt

⁶² Engi Gamal Eldin, "Assessing Egypt's higher education service quality from a stakeholder's relative concept," *International Researchers* 1, No. 3 (2012): 77-94, <http://www.iresearcher.org/77-94%20Engi.pdf>

Egypt government, the World Bank and other international agencies highlighted that quality is the main hindrance of Egypt's education system as mentioned earlier. There are several forms of cost sharing taking place in Egypt since the early 1990s, for generating non-governmental funding of public universities, however the government disregarded measuring its effectiveness in terms of access, finance, and quality. The government undertook the following since the adoption of the policy:⁶³

- Introducing foreign language instructed programmes “FLIP” on a tuition-basis in public universities in Egypt in social sciences’ academic sectors.
- Introducing of credit hour programmes on a fee-basis in public universities in Egypt adopted by basic sciences’ academic sectors.
- Slightly increasing the nominal fees paid for registration, admission and exams in public universities in Egypt for all students.
- Setting up specialized university centres as a source of income generation.
- Introducing the dual track policy in some humanities and social science academic programmes, for the less qualified students to get enrolled in; however it was revoked due to its ineffectiveness recently.
- Eliminating the dorms subsidy; however it is still highly subsidized by the government.
- Charging substantial fees for taking an exam more than once, if the student fails to pass an exam in the first time; fees increase every time the students need to take the exam again.

⁶³ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 77-79.

- Charging tuition and fees for graduate studies, which use to be free. This was a new interpretation of the constitution, which guarantees free education at all levels. The argument is that free tuition at all levels doesn't include graduate studies.

The main rationale for introducing FLIP in public universities is to "... provide quality education, cross subsidization and graduates highly skilled for the job market."⁶⁴ Public universities in Egypt adopted FLIP under Specialized Private Universities Unit, as those units have their own sub-budget and technical personnel, and that those units have their technical, managerial and financial autonomy as well. The government receives by law 5 percent of their incomes from the state budget on an annual basis.

In truth, the 2003 World Bank report highlighted the main problems of FLIP in most of the Arab countries is the absence of a "well-defined vision"⁶⁵ which consequently has an effect on the learning environment in the institution. Therefore, the main purpose of this study is to gauge the impact of cost sharing policies reflected in FLIP on quality of education in one of Egypt's public universities which is the Faculty of Economics and Political Science "FEPS" at Cairo University. Tuition fees are considered the fundamental key of cost sharing policy which covers both the instructional costs and students' maintenance costs. And as aforementioned that the researcher found it is quite impossible to measure the true counterfactual effect of such a programme due to the *absence of baseline surveys*. Hence, the research is bounded to measure the impact of cost sharing on quality as *fitness of purpose* using Cross Sectional Data. And as

⁶⁴ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 83-84.

⁶⁵ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 84-85.

well outline the statistical differences in the distributions of quality indicators between FLIP and TAP from graduates and faculty perceptions.

3.5 Overview of FEPS

The Faculty of Economics and Political Science “FEPS” was inaugurated in 1960/61, offering originally undergraduate degrees in either of the following three major disciplines: Economics, Statistics and Political Science.

FEPS is at the forefront of the most prestigious public higher education institutions in Egypt due to the limited number of students’ enrollment in comparison with other academic institutions, in addition to its excellence role due to the nature of its studies in providing high quality education to students in the fields of economics, statistics and political science which consequently enables “...its graduates to assume leading positions in Egypt, Arab countries, and internationally as well.”⁶⁶

Table 1: The students’ size for the academic year 2012/2013

Unit: Student

	Arabic				English				French			
	1st	2nd	3rd	4th	1st	2 nd	3rd	4th	1st	2nd	3rd	4th
Economics		46	187	205		22	215	214		25	34	
Political Science		71	185	210		34	134	93			20	22
Statistics		7	23	48			29	30				
Total		124	395	463		56	378	337		25	54	22

Source: FEPS Students Affairs.

⁶⁶ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 93-94.

Students are admitted to FEPS throughout the general rules of admission in public universities, admittedly who have obtained an Egyptian secondary education certificate, literary or scientific sections, accordingly who have a scoring of a minimum 95 percent in the high school exit exams.

The Foreign Language Instructed Programmes “FLIP” were inaugurated in FEPS in the mid-1990s, the French Programme in 1994 and the English Programme in 1996. Accordingly, FEPS has three major undergraduate departments: Economics, Political Science and Statistics, within each department of the pervious departments there are three different languages of instruction which are English, Arabic, and French; except the statistics department it doesn’t have a French programme, it is only instructed in both English and Arabic languages.

Indeed, FEPS established new air-conditioned lecture halls connected with, fully equipped classrooms with computer & language labs and audiovisual facilities since the introduction of FLIP. The tuition fees obviously differ in FEPS according to both the programme and department the students enrolled to, as well as the textbooks are mandatory in the English and French Instructed Programmes as they are imported from the United Kingdom or the United States. However, the final fees for the textbooks are set annually based upon the real costs contrary to the students enrolled in the traditional programme instructed in Arabic ‘TAP’.

Table 2: The average tuition fees for the academic year 2012/2013

	Economics	Political Science	Statistics
Arabic	EGP 145.8	EGP 145.8	EGP 145.8
English	EGP 6711	EGP 6461	EGP 6711
French	EGP 7120.6	EGP 7145.6	-

Source: FEPS Student Affairs Data.

The researcher contacted the school to get figures about the total amount of expenditures per student in TAP and FLIP, however the school administration refrained from providing the statistics despite the fact the school provided the researcher with the graduates and faculty's statistics.

In order for students to get enrolled in the English Language Instructed Programme "ELIP", they have first to obtain an Egyptian secondary education certificate or the equivalent Foreign or Arab certificate with an overall percentage meeting the Faculty's admission percentage, in addition to obtaining at least 85% in the English Language but students' with higher grades take priority. Students enrolled in ELIP, have 60% of the courses instructed in English, while 40 % in Arabic. On the other hand, the French Language Instructed Programme "FrLIP" was inaugurated by the initiative from the French Embassy, the Ministry of Foreign Affairs in France and some of the faculty in FEPS. In addition the programme is affiliated with the Paris Institute for Political Studies. Students admit to the French Language Instructed Programme by obtaining a secondary education certificate, or the equivalent Foreign or Arab certificate, with an overall percentage which meets the Faculty's admission percentage, besides obtaining at least 85% in the French Language but students' with higher grades take priority, and finally accepted students take a placement test "language-based entrance exam". At the beginning of French Language Instructed Programme, 60 percent of courses were instructed in French and 40 percent instructed in Arabic, however since the academic year 2006/2007, 50 percent of courses were instructed in French and Arabic individually.

CHAPTER 4

RESEARCH METHODOLOGY

The purpose of the study is to assess the effect of cost sharing policies on quality in a single faculty in one of Egypt's public universities: Faculty of Economics and Political Science at Cairo University, to gauge the effectiveness of cost sharing policies in terms of quality from graduates and faculty perspectives.

The study assessed the effect of the cost-sharing policy on the education quality by comparing the Foreign Language Instructed Programmes 'FLIP', one of the cost sharing programmes prevailing in Egypt's public universities, with 'TAP,' the parallel highly subsidized programmes instructed in the native language, Arabic, in the same higher education institution, based on the perceptions of graduates and faculty members. This approach was taken due to the lack of previous empirical data and standards of comparison.⁶⁷

As mentioned earlier, the study is a case study of a single faculty in Cairo University: Faculty of Economics and Political Science 'FEPS'. FEPS successfully achieved a great step in being an international entity by earning Accreditation Certificate from National Authority for Quality Assurance and Accreditation of Education since the end of 2011. FEPS is the first faculty earning this certificate in social science field and the second faculty at Cairo University.

The study employed a mixed method design to collect data on faculty, first quantitative and then qualitative, which took place at FEPS, Cairo University in Egypt during May - June 2012.

⁽⁶⁷⁾ The researcher tried frequently to obtain the financial statements for FLIP and TAP separately, in order to examine the effect of imposing tuition fees in FLIP on quality of education to be compared with TAP. However FEPS dean and administrators refused to provide the researcher with needed statistics.

Moreover, the study collected data as well on FEPS graduates according to their various departments and language of instructions.

4.1 Restatement of Research Questions and Hypotheses

This research study is grounded on the theory of cost sharing which comes out from the urge of developing sustainable flow of non-governmental revenues for higher education, providing high quality education, cross subsidization, and high skilled graduates for the job market, however yet the issue of equity is still a constraint.

The current research study assesses the impact of cost sharing policy on the quality of education, and as the tuition fees are considered the fundamental key of cost sharing policy. The argument to support here is that increasing tuition can be justified by the extra cost needed to offer programmes in foreign languages. This extra cost is needed to better the education in terms of teaching environment which would make the institution more responsive to the labor market needs; this consequently would empower graduates to join the labor market in a short-period.

Moreover, the current research anticipates to study the statistical differences between FLIP and TAP in the distributions of quality indicators from graduates and faculty perceptions throughout the following variables: infrastructure availability like labs, libraries, textbooks, innovative teaching methods like interactive presentations, instructional technology, counseling and academic support, empirical practice of the theory, practical experience in industry or services and interaction with faculty within and outside the classrooms. As stated in Chapter 1, the main question this research is interested in is: What is the impact of the much higher tuition fees at the University of Cairo Foreign Language Instructed Programs ‘FLIP’ on increasing the quality of education?

The following sub-questions arose from the above research’s main question;

1. What is the effect of cost sharing policy in Egypt public universities, Faculty of Economics and Political Science ‘FEPS’ Case study on quality of education as designed in terms of reducing the transition period of graduates to join the labor market ‘quality as a fitness of purpose’?

The current research study anticipates measuring the impact of cost sharing policy on quality of education; as tuition fees is considered a substantial item of cost sharing policy which covers the instructional costs. In truth, this increase in expenditures per student reflected in public universities in terms of FLIP is supposedly to affect the institutions’ and faculty’s capacity which consequently would lead to higher employment rates reflected in reducing the transition period between graduation and joining the labor market.

To answer this research question, the study designed a survey on FEPS graduates, which consequently would enable the researcher to construct a multiple regression model to measure the impact of cost sharing policy on quality as *fitness of purpose*. However, there is a limitation of using Panel Data to conduct an impact-evaluation study⁶⁸ of current policy due to the absence of baseline surveys for FLIP and Traditional Arabic Programme “TAP”; hence the current research study will accommodate it by using Cross Sectional Data as an alternative.

Furthermore, the current research will run the Mann-Whitney U test to highlight the significance differences in teaching quality indicators between FLIP and TAP in terms of the variables qualifying them to join the labor market. The variables chosen to be tested, based on scanning the literature, are as follows: academic programmes, textbooks used in

⁶⁸ Campbell, D.T. and Stanley, J.C, *Experimental and quasi-experimental designs for research*. (Chicago: Rand McNally, 1963)

instruction, new and high-quality labs, faculty methods for explaining the syllabi, interaction with faculty members within and outside lecture halls, empirical practice of the theory, practical training in industry and eventually counseling and academic support.

Moreover, Kruskal–Wallis one-way analysis of variance will be used as well to compare the differences in the teaching quality indicators provided to TAP, ELIP and FrLIP individually between more than two independent groups; in order to compare the perceptions of faculty member's language of instructions within FEPS.

2. How has the cost sharing policy affected Public universities in Egypt?

To answer this research question, the study built a qualitative research on faculty, to gauge the differences that occurred in the school in general and particularly the various divisions since the introduction of FLIP in terms of infrastructure and facilities; academic courses and their development; textbooks and their contents; strengthening the ties with the productive industry and services in the labor market; and regarding as well applying the quality standards. Moreover, this part will test the following hypotheses:

- There are statistically significant differences in the transition period between graduation and joining the labor market between the FLIP and TAP.
- There are statistically significant differences in the variables, such as academic programmes, textbooks used in instruction, new and high-quality labs, empirical practice of the theory, and practical training in industry, qualifying graduates to the labor market between the FLIP and TAP.
- There are statistically significant differences in textbooks availability/ curriculum is clear in textbooks offered/ curriculum subjects covered in textbooks/ textbooks used in instruction qualify the graduates for labor market between the FLIP and TAP.

3. What needs to be done to further use the cost sharing policy to improve education quality?

This research question will be answered in the last chapter including conclusions and policy recommendations.

4.2 Target Population

The study included two targeted population. First, it included graduates of FEPS various departments reaching 5884 graduates since 2000. The researcher reached this figure from the graduates' list received from the Personnel Affairs; however the school was not able to provide the researcher with the statistics of graduates distributed by virtue of language of instruction and discipline. The second targeted population was the faculty members, who were working at economics, statistics and political science departments, excluding the lecturers and teaching assistants.

Table 3: The faculty members' size for the academic year 2012/2013

Unit: Faculty Member

	Economics	Political Science	Statistics
Professors	16	14	10
Emeritus Professors	7	10	6
Non Emeritus Professors	10	5	1
Associate Professors	5	5	12
Emeritus Associate Professors	2	2	2
Emeritus Assistant Professors	1		
Assistant Professors	14	9	9
Lecturer Assistants	18	10	10
Teaching Assistants	12	21	13
Total	85	76	63

Source: FEPS Personnel Affairs.

Answering the three research questions entails conducting the qualitative and quantitative components of the research. This consequently will outline the impact of cost sharing on quality and explore the significance differences between FLIP and TAP in terms of institution and faculty's capacity. Moreover, the study is interested in raised the question of how cost sharing policies presented here in FLIP enabled building up capacities to meet the labor market orientations and requirements. The quantitative data will answer the research questions presenting how the FLIP, referred to as a cost sharing policy, worked in FEPS and its strides to enhance the graduate capacities to respond to labor market demands. Moreover, the qualitative research will answer the question of what's the seeming impact of applying cost sharing policies in FEPS on the institution's capacity expansion in terms of quality of teaching and its impact on students' joining labor market.

4.3 Quantitative Research Method

I. Survey Sampling Design:

First, the study drew a random representative sample from the faculty member registers of FEPS Personnel Affairs, according to their shares in the whole population. The targeted population for this research numbered exactly 140 faculty members (55 in Economics, 45 in Political Science and 40 in Statistics Departments). The study surveyed only faculty member who were then working full time or part time in the faculty of economics and political science in the different programmes (Arabic, English and French), after excluding those who are studying abroad or working full time at research centres; moreover, the study excluded, from the targeted sample, both the teaching assistants and lecturer assistants. The FEPS faculty members can be overlapping in teaching students from Traditional Arabic Programme and the other Foreign Language

Instructed Programmes, which means that faculty members may be teaching both English and French Languages Instructed Programmes, or teaching both French Language Instructed Programmes and Traditional Arabic Programme or may be teaching both English Language Instructed Programme and Traditional Arabic Programme or may be teaching the three programmes: Arabic, English and French. The study aimed at reaching an amount of 60 faculty members including (24 Economics, 19 Political Science, and 17 Statistics), who are currently working at the departments' economics, statistics and political science FEPS. The research study chose 60 units, in order to make the estimate more reliable, where it is 95% probability that the calculated confidence interval encompasses the true value of the population parameter. Face-to-face interviews were conducted through a series of closed- and open-ended questions with faculty members in the Faculty of Economics and Political Science "FEPS".

Second, in order to measure the impact of cost sharing on quality as fitness of purpose, this requires targeting FLIP and TAP graduates in FEPS. Therefore, the researcher was able to get the graduates registered from FEPS Personnel Affairs. The targeted population for the graduates during (2000 – 2013) amounts exactly 5880 graduates, the first graduates of FLIP was in year 2000. The study aimed at reaching an amount of 100 graduates. The current research study conducted an online survey study with graduates, as the researcher obtained the graduates e-mails from the graduates' registers.

II. The Development of the Survey Instrument: A survey instrument was designed by the researcher to test for the quality of an educational programme. Two questionnaires were designed to run on faculty graduates in Arabic, the native language in Egypt, then translated into English. Both surveys' main purpose are to gauge the significance

differences within FLIP and TAP in terms of quality as a fitness of purpose, underlying the assumptions that user-charges (tuition fees) is a purpose for education quality, by textbooks, curricula, industry-relationship and their impact on students' opportunities to join labor market. Hence, the questionnaire designed aimed to tackle such significance differences between TAP and FLIP in terms of quality measured variables. However, the graduates' survey is more concerned with measuring the impact of cost sharing on quality.

Table 4: The main themes of graduates' and faculty members' questionnaires

Graduates Questionnaire	Faculty Questionnaire
<p>The questionnaire consists of two parts:</p> <ul style="list-style-type: none"> - The first part highlighted the respondents' demographic. - The second part focused on evaluating FEPS academic programmes throughout teaching quality indicators like faculty's master to academic course, and syllabi clarity with well-structured presentations, and definite explanations, along with their sensitivity to the classroom and student's progress and their capability to understand students' minds and their problems, as well their capabilities to communicate with students encouraging them to be 	<p>The questionnaire consists of ten parts:</p> <ul style="list-style-type: none"> - The first and second parts related to data entry, field check and desk review. - The third part included demographic information about the interviewees (gender, nationality, urban/rural location, contact numbers, age, and major discipline). - The fourth part measured the pedagogical experience of faculty by examining their current academic degree, years of teaching experience, average hours of lectures given, average of office hours availability and their participation in training courses before becoming lecturers. - The fifth part focused on exploring how Arabic, English and French programmes differ in terms of: curricula and exam homogeneity, textbooks availability, how far the syllabus is clear in books provided, the extent to which the syllabus is covered in the provided textbooks,

Graduates Questionnaire	Faculty Questionnaire
<p>creative, and share ideas within the classroom. Moreover, the graduates' survey questioned as well the degree to which the discipline and language of instruction helped them in finding a satisfying job vacancy.</p>	<p>classroom density, students' attending lectures, students' performance in assignments and final exams, obstacles facing the faculty and students in each language program, the extent to which students' education is compatible with the orientations and requirements of the labor market.</p> <ul style="list-style-type: none"> - The sixth part tackles, among other issues, lecturers' workload, lecture outlines, headings, subheadings, clear syllabus content, lecturers' ability to explain the syllabus in an easy and clearly understandable manner, clarity, preparation and practical application of the educational material, lecturers' professional development, personnel management and management of teaching and learning. - The seventh part measured lecturers' abilities to teach, to engage with the students in class as well as in extra-curricular activities and taking initiative. It also asked to what extent the faculty accommodates students' particular characteristics and needs. - The eighth part analyzed lecturers' skills related to evaluation, giving feedback, the faculty's availability for counseling and guidance, and the degree to which they would provide help to students. - The ninth part assessed the quality of teaching at higher education institutions in terms of infrastructure. - The last, tenth, part focused on the availability of

Graduates Questionnaire	Faculty Questionnaire
	feedback surveys to be filled out by students and the extent to which their comments are taken into consideration.

III. Survey Sample Size:

First, Graduates Survey Sample Size: The researcher was able to reach FEPS graduates, as aforementioned from the faculty’s Personnel Affairs. The school provided the researcher with the graduates’ e-mails; however it did not provide the researcher with the number of graduates disaggregated by different programmes (TAP, ELIP and FrLIP). The targeted population for the graduates during (2000 – 2013) amounts exactly to 5880 graduates. The researcher sent the survey link to the whole graduates, which was designed on Lime Survey; it is survey software to create online surveys. In fact, the number of graduates successfully responded to the online survey completely 93, yielding a response rate of 36.8 percent. Graduates who enrolled in ELIP amounted to 47.3 percent of the respondents, as well TAP. However, FrLIP amounted only to 5.4 percent of the respondents.

Second, Faculty Survey Sample Size: the number of faculty successfully interviewed were 50, yielding a response rate of 83.33 percent. The faculty interviewed in the economics department, yielding a response rate of 58.3 percent. The faculty interviewed in the political science department, yielding a response rate of 78.9 percent. The faculty interviewed in the statistics department, yielding a response rate of 123.5 percent. The increase in the response rates of the faculty in statistics department was because whenever the researcher goes to hold an interview with some of the faculty in their office,

other faculty members volunteered to have the interviews with them also, as they believe it crucial to discuss the study. Hence, researcher takes into account the proportion of the faculty members in the statistics department, that is why the results were weighted to make statistics computed from the actual responses more representative of the population. The researcher used the design weights to compensate for over- and under-sampling of specific cases.

4.4 Qualitative Research Method

This study did not rely only on quantitative research, but also used qualitative research to explore and explain in detail the variables that the quantitative study identified. In-depth semi-structured interviews with the faculty were conducted with a proportion of the quantitative study sample frame through a series of open-ended questions structured to evoke qualitative data and to gain deep understanding of the quantitative study results to better understand the pros and cons of the FLIP according to their practical experience. Moreover, to discover the significance difference that took place in the faculty and its programmes (Arabic, English and French) since the introduction of the FLIP in terms of infrastructure, academic programs and their development, textbooks and their contents, industry relationship, quality of education, and other aspects and their impact on the quality, industry-relationship with the faculty and partnerships with other international universities. Interviews were held in Arabic, as English is not the primary language of the participants, with six faculty and administrative staff, which represented 12% of the original sample⁶⁹.

4.5 Pilot Study

⁶⁹ After the main survey was completed, the researcher did not conduct any further interviews, because the results obtained from the questionnaire were deemed sufficient and well interpreted.

The faculty member questionnaire was tested with 4 interviewees before maintaining the main interviews of the current research study. According to the pre-test results as well as review from scholars in the field, the questionnaire was consequently enhanced. Moreover, pre-test results were not combined later with the results of post-test interviews.

4.6 Data Analysis Frame work

First, the research will measure the impact of cost sharing on quality as *fitness of purpose*, which is the main objective for the introduction of FLIP in public universities, using ordinal regression. The dependent variable is the question measuring ‘The gap interval between graduation and labor market first entry’ mapped in an ordinal manner, while the first independent variable is a dummy variable “FLIP/ TAP”. And in order to conduct this analysis, I used the variables FLIP and TAP, where all students enrolled in ELIP and FrLIP formed together the group 'FLIP' because there are only 5 respondents in FrLIP which will hinder running some statistical tests; however the rest are students enrolled in the subsidized programme “TAP”.

The ordinal regression model is classified as Generalized Linear Models (GZLM), which extend the General Linear Model (GLM) to predict dependent variables that are not continuous or not (conditionally) normally distributed.⁷⁰

The ordinal regression model is used to predict an ordinal dependent variable given one or more independent variables, which is considered either as generalization of multiple linear regression or binomial logistic regression. There are 4 assumptions for ordinal regression to be run which are: (1) Dependent variable to be measured at the ordinal level, (2) Independent variable either treated categorically or continuously, (3) There is no multicollinearity, and (4)

⁷⁰ Kleinbaum and Klein, *Logistic regression* - 3rd ed. (New York, NY: Springer, 2010).

The assumption of proportional odds means that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable.⁷¹

Second, The Mann-Whitney U test was conducted to test the difference in quality indicators among the various programmes, FLIP and TAP. The Mann-Whitney U test is used to compare differences between two independent groups which are: FLIP and TAP, when the dependent variable is either ordinal, but not normally distributed.

The Mann-Whitney U test is often considered the nonparametric alternative to the independent t-test. To use a Mann-Whitney U test, this requires the data to validate four assumptions which are: first, dependent variable should be measured at the ordinal or continuous level; second, independent variable should consist of two categorical independent groups; third, there is no relationship between the observations in each group; and finally, the Mann-Whitney U test can be used when the two variables are not normally distributed. Note that we have a one-tailed test, hence, we need to divide the two-tailed p-value in the Output by 2 to get the one-tailed p-value.⁷²

The Kruskal-Wallis H test is often known as "one-way ANOVA on ranks". It is a rank-based nonparametric test, used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable.⁷³ The Kruskal-Wallis H test was conducted on the faculty member survey, in order to compare the differences between more than two independent groups to compare the distribution results of quality indicators across faculty's language of instructions within FEPS.

⁷¹ "Lared Statistics," accessed January 31st, 2014, <https://statistics.laerd.com/spss-tutorials/ordinal-regression-using-spss-statistics.php>.

⁷² Alan Agresti, *Categorical data analysis, 3rd Edition* (Hoboken: John Wiley & Sons, 2013).

⁷³ Lehmann, *Nonparametrics: Statistical methods based on ranks*. (New York, NY: Springer, 2006).

CHAPTER 5

COST SHARING AND ITS IMPACT ON QUALITY

The purpose of this study was to measure the impact of cost sharing policy on quality as *fitness of purpose* using Cross Sectional Data not Panel Data due to the absence of baseline surveys. This chapter includes the analysis of the first research question, the seeming impact of cost sharing on the faculty's capacity. Moreover, this chapter depicts the analysis of Ordinal logistic regression used to measure the impact of cost sharing policy on quality as *fitness of purpose*.

5.1 The Financial Impact of FLIP

This section aims to present the analysis of the impact of cost sharing policy reflected in tuition-fee based programmes instructed in a foreign language in FEPS on increasing the other-than governmental resources expectedly to have impact on quality of education.

This section presents the analysis of the first research question, which depends on the qualitative data analysis. The researcher was not able to obtain the financial statements for each programme individually; despite the frequent attempts with the dean and administration. One of the administration staff claimed that this kind of data does not exist, which is the separate financial statements for FLIP and TAP. This can be explained by the fact that may be FEPS do not follow the legal regulations on spending; hence, the faculty hinders the financial statements due to the lack of powerful government supervision on the Specialized University Units. This is consistent with the findings explored by Sabry highlighting one of FEPS officials' quotes in that

specific theme “...while the law prevents us from spending some of the FLIP income on the TAP or any other activities not related to students enrolled in the FLIP.”⁷⁴

However, the researcher was able to find in Sabry's dissertation a World Bank source presenting the statistics of Student Tuition and Fees in the academic year 2006/2007 according to the admission in the various programmes: TAP, ELIP and FrLIP.

Table (5) shows the student tuition and other fees' differences between TAP and FLIP; those fees in FLIP exceed the fees in TAP by almost 29 times. The differences between TAP and FLIP mainly coexist in the following items: instruction tuition, computer and internet, and finally in textbooks.

Table 5: Student Tuition and Fees in the academic year 2006/2007 by TAP, ELIP and FrLIP ⁷⁵

Items	TAP (\$ PPP* 2005)	ELIP (\$ PPP* 2005)	FrLIP (\$ PPP* 2005)
<u>Instruction Tuition</u>	<u>0</u>	<u>1852</u>	<u>1852</u>
Facilities Fees	12.3	12.3	12.3
Efficiency enhancement fees	1.5	1.5	1.5
Student services fees	38	38	38
ID card	6	6	6
Invent fees	15.4	15.4	15.4
<u>Computer and internet</u>	<u>31</u>	<u>93</u>	<u>93</u>
Student guide	6	6	6
Additional fees	9	9	9
Stamps	0.28	0.28	0.28
Student fund	3	3	3
Student support fund	3	3	3
<u>Textbooks</u>	<u>Not mandatory</u>	<u>1543</u>	<u>1543</u>
Total	125.48	3583	3583

* **Source:** World Bank (2005) ICP Global results: Summary Table

⁷⁴ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 128.

⁷⁵ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 96–97.

FLIP is identified under the regulations of Specialized University Unit; those units, as aforementioned, have their own sub-budget, technical personnel and supposedly have their technical, managerial and financial autonomy. 5 percent of their income is transferred to the government, and 20 percent of the income goes to the university funds; while the remainder remained for the programme expenses itself.

Most of the faculty members in the qualitative research affirmed that the faculty resources—in terms of lecture halls, facilities, computer labs and providing new pedagogical tools—improved after the introduction of the programmes instructed in foreign languages. The faculty members stated that the school was able to build a new connecting building for FLIP only, as the improvement was limited to the resources available to those programs only. This means that 75% of the income sources of FLIP are, supposedly, to be spent only on FLIP programme in terms of operational costs, capital expenses, salaries and incentives for faculty members and administration. Accordingly, students in TAP do not benefit from the same tools and facilities as students in the FLIP by law. However, the administration in the French Division confirmed that the TAP students can benefit from the facilities provided to FrLIP only after the end of the division's lectures. The French and English Division ensured that the computer labs built for FLIP only can be used by TAP students; however not the same like students in the FLIP programmes.

The faculty members affirmed that differences between FLIP and TAP are not in the subjects of academic courses; however, in the language of instruction; as they confirmed that there is no gap between the curricula in these languages because it is the faculty who develops similar curricula for the various programs, however what is extremely different is the textbooks. Students in FLIP have mandatory textbooks as they pay for it; while TAP students don't have

mandatory textbooks. The faculty members from the Statistics department highlighted the fact that textbooks for the English and Arabic programmes are identical and that they rely on English references for both due to the nature of their discipline, which includes numbers, equations and terminology written only in English. While, the academic faculty members in the Economics department observed that the FLIP provide mandatory textbooks that are more relevant to their discipline and that no adequate equivalence of these references is available in TAP.

Moreover, the faculty members declared that the faculty succeeded in building relationships with businesses and employers after the introduction of the ELIP in specific. Accordingly, the faculty members stated that employers prefer to hire graduates who speak English, as the chances of a graduate from the ELIP to find employment are greater, according to the faculty members' perceptions. However, the respondents meanwhile affirmed that students in TAP are competing with their counterparts from English through submitting their graduation projects in English, as the faculty members stated that "TAP students put a lot of efforts in studying the language and obtaining good grades; as a result, graduates from the Arabic programme are often appointed as teaching assistants." Furthermore, The French programme provides their students with counsel and academic support; hence, the FrLIP students are more likely to find scholarships to resume their postgraduate studies in French, and U.S universities.

The French programme administrator complained of the decision "Tansiq" of the Bureau of University Admission, which allowed large number of students to be accepted for the 2011/2012 academic year, considering the faculty programmes (TAP, ELIP, and FrLIP) as separated schools while students' admission, besides admitted students are no more subjected to the programme admission requirements. Moreover, the administrator highlighted before the 2011/2012 academic year, there was a trade-off between students admitted to the French

division; the selection was based on a final score that included nominal score of students' grades from secondary school added to their degrees in French, in addition to results from the written and oral exams they have to pass in order to determine their levels. This complaint can be explained by the fact that the French programme generally accepts a maximum of 50 students a year, as it has only two lecture rooms available that can hardly accommodate that number of students. The faculty members from the English programme as well complained about the very high number of students admitted, especially because these numbers now are almost the same as enrolment in the TAP.

The faculty members ensured that those working for FLIP at the early years of implementing the programme seemed to have higher salaries compared to their peers in the TAP, as they are paid instructional incentives. However, this had created some tension among the faculty members in the TAP generally, as those teaching in FLIP receive higher salaries compared to their counterparts teaching the TAP. This problem was solved later by recent compensations made to faculty members teaching TAP only in order to shrink the pay gap between FLIP and TAP.

5.2 Ordinal Regression Analysis

This section shows the results of measuring the impact of cost sharing policy on quality as *fitness of purpose*, and whether the government succeeded in introducing the cost sharing policy as planned in order to decrease unemployment and increase the quality of higher education outputs.

The results in Table (6) show that before and after controlling other variables that might affect the transition period between graduation and first entry to labor market, the variable FLIP which is introduction of cost sharing policy in FEPS remains insignificant and cannot explain the

dependent variable, as well the estimate settled its direction and there showed slight changes in magnitude. Meanwhile, I conducted the Mann-Whitney U test⁷⁶ in SPSS to evaluate the null hypothesis that graduates enrolled in the FLIP and TAP have no significant variances in the transition period between graduation and first entry into the labor market. The results showed that there is no significant difference between TAP and FLIP in reducing the transition period between graduation and work, as the Sig. (2-tailed) = 0.120. Since the P-value is more than the specified α level (0.05), we accept $H_{0\text{ above}}$. And this can be explained from the qualitative study findings; there seems to be a spill-over effect from the introduction of the Foreign Language Instructed Programme in FEPS.

Moreover, after controlling for other variables the results in Table (6) showed that the factors affecting the transition period between graduation and first entry to labor market is GPA, counseling & academic support and partly the field trip to the foreign universities.

Model 5 showed that high levels of counseling and academic support are more likely to reduce the transition period between graduation and work compared without it. Table (6) as well showed that field visits to foreign universities is less likely to reduce the transition period between graduation and first entry to labor market. This is actually true because graduates, who travelled to study one year abroad in the listed foreign universities by FEPS, complained that this study is not taken into account and not counted for graduation requirements and students have to study back again and resume their credit hours locally for graduation. Hence, this encourage large number of students not to travel abroad, in order to graduate on time.

⁷⁶ Mann-Whitney U = 875, Z= -1.554676, and P-value (2 tailed) = 0.120. Mean Rank (FLIP) = 42.87, and Mean Rank (TAP) = 50.64.

Table 6: Comparing the 5 Models Results*

	Model 5			Model 4			Model 3			Model 2			Model 1		
	Estimate	Std. Error	Sig.												
Threshold															
[Q11 = 1]	8.491	.896	.000	12.043	.797	.000	15.454	.563	.000	15.520	.375	.000	-0.38-	.295	.898
[Q11 = 2]	9.226	.875	.000	12.743	.782	.000	16.096	.562	.000	16.127	.368	.000	.595	.302	.049
[Q11 = 3]	10.289	.855	.000	13.748	.775	.000	17.073	.587	.000	17.071	.395	.000	1.486	.350	.000
[Q11 = 4]	11.332	.866	.000	14.704	.808	.000	18.016	.658	.000	17.974	.486	.000	2.359	.457	.000
[Q11 = 5]	11.882	.902	.000	15.177	.850	.000	18.473	.718	.000	18.414	.561	.000	2.788	.539	.000
[Q11 = 6]	12.247	.944	.000	15.504	.894	.000	18.786	.774	.000	18.724	.630	.000	3.090	.610	.000
Location															
[Q6 REG=00]	-1.012-	.525	.054	-779-	.489	.111	-626-	.456	.169	-564-	.435	.195	-637-	.407	.117
[Q6 REG=1.00]	0 ^a														
[Q7=2]	9.878	.508	.000	12.516	.499	.000	14.496	.463	.000	14.860	.450	.000			
[Q7=3]	11.028	.000	.	13.702	.000	.	15.778	.000	.	16.128	.000	.			
[Q7=4]	0 ^a														
[Q33 REG=2.00]	2.563	2.049	.211	.693	1.516	.648	-1.038-	1.180	.379						
[Q33 REG=3.00]	4.361	2.038	.032	1.821	1.417	.199	-332-	1.012	.743						
[Q33 REG=4.00]	5.436	1.748	.002	3.413	1.229	.005	1.311	.789	.097						
[Q33 REG=5.00]	4.011	1.735	.021	2.138	1.087	.049	.450	.591	.447						
[Q33 REG=6.00]	0 ^a			0 ^a			0 ^a								
[Q35 Reg=1.00]	-2.320-	1.493	.120	-2.842-	1.489	.056									
[Q35 Reg=2.00]	-4.123-	1.584	.009	-3.679-	1.466	.012									
[Q35 Reg=3.00]	-3.733-	1.378	.007	-3.253-	1.323	.014									
[Q35 Reg=4.00]	-3.945-	1.470	.007	-3.067-	1.371	.025									
[Q35 Reg=5.00]	-3.155-	1.386	.023	-2.650-	1.320	.045									
[Q35 Reg=6.00]	0 ^a			0 ^a											
[Q34 Reg=1.00]	-18.787-	1637.047	.991												
[Q34 Reg=2.00]	-2.836-	1.603	.077												
[Q34 Reg=3.00]	-2.414-	1.545	.118												
[Q34 Reg=4.00]	-2.200-	1.345	.102												
[Q34 Reg=5.00]	-1.947-	1.480	.188												
[Q34 Reg=6.00]	0 ^a														

Link function: Logit. The desired significance level for the results is 0.05.

a. This parameter is set to zero because it is redundant.

* Ordinal Logistic Regression Variables are identified in Appendix 4, Table A4-1.

CHAPTER 6

RESULTS OF GRADUATES AND FACULTY SURVEY

This chapter includes the analysis of the quantitative survey for graduates and faculty members, including the descriptive analysis and statistical tests used to study the statistical differences between FLIP and TAP in distribution of teaching methods used to qualify students like interactive presentations or the use of modern technologies in teaching; counseling and academic support; empirical practice of the theory; practical experience in industry in the discipline area; interaction with faculty within and outside the classes and students' use to the school resources like labs and library in doing their research and assignments.

6.1 Graduates Survey

This section of chapter six presents the analysis of the quantitative data analysis for graduates, including descriptive analysis, and Mann-Whitney U test to compare the distribution results across FLIP and TAP within FEPS in quality variables aforementioned.

- **Demographic Analysis**

The number of graduates who successfully completed the online-survey was 93, yielding a response rate of 36.8%, this is acceptable due to the nature of online surveys. A total of 93 graduates completed the survey; 46 graduate from the Economics department, yielding a response rate of 49.5%, as shown in Table (7). While 22 graduates from the Political Science department, yielding a response rate of 23.7%. In Statistics, 25 graduates were interviewed for a response rate of 26.9%.

Table 7: The number of graduates within the sample by discipline

Discipline	Frequency	Percent
Economics	46	49.5
Political Science	22	23.7
Statistics	25	26.9
Total	93	100

25.8% of the graduates within the sample are males, while females are 74.2% as shown in Table (8).

Table 8: The number of graduates within the sample by gender

Gender	Frequency	Percent
Male	24	25.8
Female	69	74.2
Total	93	100

90.3% live in urban areas and only 8.6% live in rural areas; about 1.1% of the respondents did not mention their residence, as shown in Table (9).

Table 9: The number of graduates within the sample by urban/rural

Urban/ Rural	Frequency	Percent
Urban	84	90.3
Rural	8	8.6
Did not Specify	1	1.1
Total	93	100

Table (10) highlights the disaggregation of the graduates sample according to the language of instruction, 47.3% study at ELIP, while 47.3% study at TAP; however 5.4% only study at FrLIP.

Table 10: The number of graduates within the sample by language of instruction

Language of Instruction	Frequency	Percent
TAP	44	47.3
ELIP	44	47.3
FrLIP	5	5.4
Total	93	100

- **Hypotheses Studied**

Hypothesis 1: There are statistically significant differences in the transition period between graduation and joining the labor market among the FLIP and TAP [Does the median on the transition period between graduation and joining the labor market differ significantly between FLIP and TAP?]

A Mann-Whitney U test was run on SPSS to evaluate the null hypothesis that students enrolled in the FLIP and students enrolled in the TAP join labor market at the same time. Distributions of the transition period between work and graduation for TAP and FLIP were similar, since the p-value is more than the specified α level (0.05). The results of the test were in the expected direction; however, there is no significant differences between FLIP and TAP in joining the labor market, on average. Moreover, the median of the transition period between graduation and joining the labor market was not statistically significantly different between TAP and FLIP, $U = 875.5$, $Z = -1.555$, $P\text{-value} = 0.120$, using an exact sampling distribution for U .

The results shown in Appendix 5 [Table (A5-2)] as well highlighted, there is no significant differences between TAP and FLIP into which the discipline helped them find satisfying jobs, $U = 773$, $Z = -0.641$, $P\text{-value} = 0.521$, using an exact sampling distribution for U . Moreover, the Mann Whitney test was run to determine if there were differences between FLIP and TAP, in the acquired abilities during their study which may foster the graduates to join the labor market. The results showed that the distributions of this variable were similar for TAP and FLIP; however the mean rank for FLIP was 43.23, which was higher than TAP who had a mean rank of 39.50. Yet these mean ranks are not statistically significantly different, as shown in Appendix 5 [Tables (A5-1) and (A5-2)].

The results highlighted as well no statistical significance difference between TAP and FLIP into which the discipline helps them build and enhance their personnel abilities, $U = 818.5$, $Z = -0.174$, $P\text{-value} = 0.862$, using an exact sampling distribution for U . The results depicted as well, the mean ranks for FLIP was 41.90, which was similar to TAP who had a mean rank of 41.04, as shown in Appendix 5 [Tables (A5-1) and (A5-2)].

Hypothesis 2: There are statistically significant differences in the variables qualifying graduates to the labor market among the FLIP and TAP [Does the median on the variables qualifying the graduates to labor market differ significantly between FLIP and TAP?]

A Mann-Whitney U test was run to determine if there were differences in the variable academically qualified in their discipline, qualifying the graduates to join the labor market between FLIP and TAP. The results depicted in Appendix 5 [Table (A5-2)], showed that since the p-value ($_{2\text{-sign.}}$) is 0.76 more than the specified α level (0.05), we accept H_0 above. The results showed that the distributions of the variable academically qualified in their discipline for TAP and FLIP were similar. Hence, this means there is no significant variances in the variables qualifying them to labor market, as the distributions were similar for TAP and FLIP.

Moreover, when the researcher used Mann-Whitney U test to identify if there were differences in the following variables qualifying the graduates to join the labor market between FLIP and TAP: academic programmes in discipline, academic programmes in language of instruction, textbooks used in instruction, new and high-quality labs, faculty methods of explaining the syllabi, Interaction with faculty within lecture halls, interaction with faculty outside lecture halls, teaching assistants' ways of explaining, practical experience of teaching assistants, interaction with teaching assistants within lecture halls, the interest in the empirical practice of the theory, field visits to foreign universities in the discipline area, practical training

in industry operating in the same area of discipline and counseling and academic support. The results of the test were in the expected direction, as it highlighted there is no statistical significant differences between TAP and FLIP in their perceptions about the variables qualifying them to labor market, as displayed below in Appendix 5 [Table (A5-2)]. The only significant variable is 'Textbooks used in instruction', since the Mann-Whitney $U = 715.5$, $Z = -2.93$, and P-value (2 tailed) = 0.003. It was evident that the mean ranks for FLIP and TAP were not similar, as the mean rank $_{(FLIP)} = 39.60$, and mean rank $_{(TAP)} = 55.24$; this means that the TAP perceptions on average is higher than FLIP in terms of the textbooks used in instruction qualifying them to join the labor market. The current result is acceptable, as long as the TAP students photocopy their counterparts mandatory textbooks, meanwhile they do not pay the same tuition fees; however at the end due to the spill-over effects FLIP and TAP both join the labor market within somehow the same transition period between work and graduation. Hence, they consider that the textbooks could be a main qualifying factor that specifically reduces the transition period between graduation and work. Analyzing the open questions in graduates' survey, the results showed that the graduates from TAP confirmed that they used to copy the mandatory textbooks and references assigned to the ELIP students.

Hypothesis 3: There are statistically significant differences between FLIP and TAP in the textbooks availability, the coverage of curriculum and its obviousness in textbooks

A Mann-Whitney U test in SPSS was run to evaluate the null hypothesis that students enrolled in the FLIP and TAP have no significant variances in the textbooks availability and clarity. This kind of question was asked as a matter of checking up the survey's reliability in terms of textbooks availability.

The results in Appendix 5 [Table (A5-2)] show that there is statistical significant differences between TAP and FLIP in their perceptions about the textbooks availability, clarity and the coverage of curriculum subjects, since the p-value is less than the specified α level (0.05) for each. This can be explained as aforementioned, from the faculty members' and graduates' surveys, that FLIP receive mandatory textbooks; however TAP recourses the current situation by photocopying FLIP references, and textbooks.

Hypothesis 4: There are statistically significant differences between FLIP and TAP in the following variables illustrated below, undertaken by faculty members while teaching the curriculum

A Mann-Whitney U test was run to evaluate the null hypothesis that students enrolled in the FLIP and TAP have no significant variances in the following teaching quality variable: faculty members identify the overall goal of the academic course they are teaching. Since the Mann-Whitney U = 1073, Z= -0.04, and P-value (2 tailed) = 0.97, we accept H_0 above. This means that the distributions of the quality variable: faculty members identify the overall goal of the academic course they are teaching, were similar for TAP and FLIP, as the mean rank (FLIP) = 46.90, and mean rank (TAP) = 47.11. Those results of the test were in the expected direction, as aforementioned from the qualitative study findings that there is consolidation in the curriculum taught to the various programmes: TAP and FLIP.

Furthermore, when conducting the Mann-Whitney U test to test the null hypotheses that students enrolled in the FLIP and TAP have no significant variances in the following teaching quality variable: the faculty members define the course requirements before the semester begins. The results highlighted that the distributions of the above variables were relatively similar since the mean rank (FLIP) = 47.54, and mean rank (TAP) = 46.40 and the P-value (2 tailed) = 0.832.

A Mann-Whitney U test was as well used to identify the following null hypotheses that students enrolled in the FLIP and TAP have no significant variances in the following teaching quality variables: faculty inform students with course plan, faculty distribute the syllabi logically throughout the academic calendar, faculty members review the course plan constantly and refine it if needed, faculty members modify the course during the semester due to the unforeseen circumstances in the short term, and the faculty members compile the scientific sources on the lectures' topic from multiple references. Since the p-value is more than the specified α level (0.05) for each hypothesis, we accept $H_{0\text{ above}}$. This ensures that there are no significant variances between FLIP and TAP in the above-mentioned variables, and hence this means that there are no statistically significant differences in the above quality variables between TAP and FLIP using an exact sampling distribution for U, as shown in Appendix 5 [Tables (A5-1) and (A5-2)].

Moreover, a Mann-Whitney U test in SPSS was run to determine if there were differences between TAP and FLIP in the variable: faculty members have regular office hours. The results in Appendix 5 [Tables (A5-1) and (A5-2)] showed that since the P-value (2 tailed) = 0.035 which is less than the specified α level (0.05), this means that the distributions of this variable were different, as mean rank $(_{\text{FLIP}}) = 52.33$, and mean rank $(_{\text{TAP}}) = 41.07$. Therefore, we can conclude that there is a statistically significant difference between FLIP and TAP in the above variable, where FLIP perceptions on average is higher than TAP in terms of the faculty providing them with regular office hours.

However, when the Mann-Whitney U test was run to determine the following null hypotheses that students enrolled in the FLIP and TAP have no significant variances in the following variables undertaken by the faculty members: available during their office hours, Strengthening the ties with the productive firms and services in the labor market, using modern

technologies in teaching, using computers in submitting assignment and research papers, using e-communication to follow up students assignments, and training them to use internet for the purpose of academic course. Since their p-value is more than the specified α level (0.05) for each hypothesis, we can conclude to accept $H_{0 \text{ above}}$ for each hypothesis. And hence there is no significant variances between FLIP and TAP in the aforementioned quality variables, where the distributions of those variables were similar between TAP and FLIP.

In Appendix 5 [Table (A5-2)], the results showed that as P-value is more than the specified α level (0.05), there is no significant differences between TAP and FLIP in the following variables were undertaken by the faculty members: their interest in empirical practice of theory, in giving feedback to students in discussions and responding to students' questioning, and setting in advance the rules of students' performance evaluations, and finally show and discuss the results of follow-up evaluations with students. Hence, we can derive that the distributions for those quality variables were similar between TAP and FLIP.

Nevertheless, when the researcher conducted the Mann-Whitney U test in SPSS to test the null hypothesis that students enrolled in the FLIP and TAP have no significant variances in the variable: the faculty members' interest in the practical applications of the scientific material. The results showed a significant difference between FLIP and TAP, as FLIP perceptions on average is higher than TAP in the above variable, where the mean rank $_{(FLIP)} = 52.20$, and mean rank $_{(TAP)} = 41.20$. This could be explained by the fact driven from the qualitative findings that after the introduction of ELIP, employers were more interested in training and employing their students; however the qualitative study also highlighted that this inspired TAP students to excel in their study in order to seize such opportunities provided for them if and only if they obtained high grades.

Furthermore, a Mann-Whitney U test was run to test the null hypotheses that students enrolled in the FLIP and TAP have no significant variances in following up their performances and the faculty members assessment. Since the p-value is less than the specified α level (0.05), we reject $H_{0 \text{ above}}$. This ensures that there are statistically significant differences between FLIP and TAP in the above-mentioned variable, as well TAP perceptions on the average are higher than FLIP in terms of this variable⁷⁷.

When conducting the Mann-Whitney U test to estimate the null hypotheses that students enrolled in the FLIP and TAP have no significant differences in the following teaching quality variables undertaken by faculty members: encouraging students to innovate and think logically, debate and build a constructive dialogue, thinking based on evidence, thinking independently, adorning the academic thinking when discussing scientific issues in class, together with encouraging them to join the community activities, discovering the young talents and guiding them through unions and student activities, broadcasting the team spirit, teamwork and volunteerism among students. Since the p-value is more than the specified α level (0.05) for each hypothesis individually, we accept $H_{0 \text{ above}}$. And hence we can conclude that the distributions of the above variables individually were similar for TAP and FLIP.

Hypothesis 5: There are statistically significant differences between FLIP and TAP in using libraries/ labs in doing their assignments

The researcher had run the Mann-Whitney U test in SPSS to test the null hypothesis that students enrolled in the FLIP and TAP have no significant differences in using school labs in doing assignments. Since the p-value is less than the specified α level (0.05), we reject $H_{0 \text{ above}}$, as FLIP perceptions on average is higher than TAP in terms of using the school labs in doing

⁽⁷⁷⁾ Mean Rank _(FLIP) = 41.60, and Mean Rank _(TAP) = 53.01.

assignments⁷⁸. The results of the test were in the expected direction, as aforementioned from the qualitative study findings, the faculty resources in terms of lecture halls, facilities, and pedagogy improved after the introduction of FLIP and was limited to the students enrolled in FLIP only to benefit from; however TAP students can rarely benefit from the same facilities.

Moreover, with reference to conducting the same test itself to determine if there were differences between FLIP and TAP in the use of school library in doing assignments, the results for P-value (2 tailed) = 0.000, were strongly significant, hence we can conclude accordingly that the distributions of the students' use of the school library in doing the assignments were different between TAP and FLIP, as mean rank (FLIP) = 56.07, and mean rank (TAP) = 36.90. The results as well referred that FLIP perceptions on average is higher than TAP in terms of using the school library in doing assignments. This can be explained accordingly from the fact that FLIP facilities are only limited to its students; however, TAP students can benefit from such facilities rarely.

6.2 Faculty Members' Survey Results

This part of chapter six presents the analysis of the quantitative data analysis, including descriptive analysis, and Kruskal–Wallis one-way analysis of variance to compare the distribution results between the faculty members' language of instructions within FEPS.

- Characteristics of the respondents

The results in Table (11) showed that 49.1% of the faculty members within the sample are males and 50.9% females. 71.1% live in urban areas and only 7.8% live in rural areas; about 21.2% of the respondents did not mention their residence, as shown in Table (12).

⁽⁷⁸⁾ Mean Rank (FLIP) = 54.64, and Mean Rank (TAP) = 38.49.

Table 11: The number of faculty members within the sample by gender

	Frequency	Percent
Male	25	49.1
Female	25	50.9
Total	50	100

Table 12: The number of faculty members within the sample by urban/ rural

	Frequency	Percent
Urban	36	71.1
Rural	4	7.8
Not defined	11	21.2
Total	50	100

The results in Table (13) showed that 31.4% are professors, 28.1% assistant professors, about 14.5% associate professors, almost 16.9% emeritus professors, while only 9.1% are non-emeritus professors. The whole faculty members successfully interviewed is appointed in FEPS.

Table 13: The number of faculty members within the sample by academic degree

Academic Degree	Frequency	Percent
Assistant Professor	14	28.1
Associate Professor	7	14.5
Professor	16	31.4
Emeritus Professor	8	16.9
Non-Emeritus Professor	5	9.1
Total	50	100

Table (14) highlights a total of 28 faculty member teaches both TAP and ELIP, representing 55.1% of the whole sample. Those who teach in TAP only constituted 26.7%. There is a slight decrease in the number of faculty members who teach both TAP and FrLIP (1.4%), while those who teach both ELIP and FrLIP represented 2.8%. 7.8% only of the faculty members teach the programmes: TAP, FrLIP and ELIP.

Table 14: The number of faculty members by the language of instruction

Language of instruction	Frequency	Percent
Teaches TAP only	13	26.7
Teaches both TAP and ELIP	28	55.1
Teaches TAP, ELIP and FrLIP	4	7.8
Teaches TAP and FrLIP	1	1.4
Teaches ELIP only	3	6.2
Teaches both FrLIP and ELIP	1	2.8
Total	50	100

The average years of teaching for the faculty members in the sample are 27.4, with minimum 3 years and maximum 52 years, as shown in Table (15).

Table 15: The average years of teaching for faculty members within the sample

Years of teaching in general	Minimum	Maximum	Mean	Standard Deviation
	3	52	27.4	12.4

Table (16) shows that only 9.1% of faculty members have prior teaching experience before getting appointed to FEPS, whereas 15% of the faculty members in the Economics department, with prior higher education teaching experience before being appointed in FEPS, taught in foreign universities. 6.7% of the faculty members in Statistics department taught in the Institute of National Planning before coming to FEPS. And 6.1% of the faculty members in the Political Science department taught in the following higher education institutions: Simmons College, University of Mary Washington, and King Abdul-Aziz University.

Table 16: The number of faculty members who have prior teaching experiences before getting appointed to FEPS

Have you got any prior teaching experience before getting appointed in FEPS?	Frequency	Percent
Yes	5	9.1
No	45	90.9
Total	50	100

Table (17) shows that 79.6% of the faculty members completed a training course prior to getting appointed as lecturers in FEPS. Of this group, 65.9% went through a teacher preparation program, 8.5% had a training course in teaching methods, while only 7% had a training course in

using technology in education and research methods. 8.3% of the faculty members who completed a training course prior to getting appointed as lecturers had training courses in curriculum preparation and 6.9% of them in student assessment.

Table 17: The number of faculty members who got training courses prior getting appointed to the degree of assistant professor

Have you got any training courses prior to getting appointed to the degree of assistant professor?	Frequency	Percent
Yes	40	79.6
No	10	20.4
Total	50	100

- Hypothesis Studied

Hypothesis 6: There is a statistically significant difference in the curriculum subjects between ELIP, FrLIP and TAP from faculty members' perspectives

The Kruskal Wallis H test was used to determine if there are statistically significant differences between faculty members' according to their language of instruction on their perceptions of the homogeneity in curriculum between TAP, ELIP and FrLIP. Since the p-value is 0.165 more than the specified α level (0.05), we can conclude that there are not statistically significant difference between the groups in the above variable tested.

Table (18) shows as well, that 64.1% of the faculty members in FEPS stated that the curriculum in the Arabic, English and French programmes are largely homogenous, while 33.1% only stated that they are “somehow homogenous.” The results were largely in the expected direction, as aforementioned from the qualitative study findings the respondents stated that “there is consolidation between the various programmes TAP, ELIP, and FLIP to harmonize the curriculum.” Hence, there is no gap between the curricula in the various programmes FLIP and TAP; however, the only difference is in the language of instruction and textbooks availability for each programme. Those results are as well consistent with the findings driven from the graduates’

survey. The results in Table (19) showed as well, that there is a greater overlap in FrLIP between the curriculum and textbook contents compared with the other two programmes: TAP and ELIP. The high proportion in TAP can be explained by the fact that TAP graduates photocopy the textbooks provided to their counterparts in the ELIP.

Table 18: Faculty members' perceptions about the level of homogeneity in the curriculum between TAP, ELIP and FrLIP.

To what extent is there homogeneity in the scientific material/subject between the three divisions in the school?	Frequency	Percent
To a large extent	32	64.1
Somehow	17	33.1
Missing	1	2.8
Total	50	100

Table 19: Faculty members' perceptions about the obviousness of curriculum contents

To what extent are the curriculum contents obvious in the textbooks provided to	TAP (%)	ELIP (%)	FrLIP (%)
To a large extent	60.8	75.1	100
Somehow	33.8	17.8	
Refuse to answer	5.4	7.1	
Total	100		100

With reference to measuring the comparability in the distributions of the question ‘To what extent do the textbooks easily display the themes of the scientific study taught to each programme individually TAP, ELIP and FrLIP’ at a significant level of 0.05, using the Kruskal Wallis H test. The results showed that the distribution is the same across faculty members' different language of instructions for TAP (P-value_(TAP) = 0.361 (P-value > 0.05)), ELIP (P-value_(ELIP) = 0.299 (P-value > 0.05)), and FrLIP (P-value_(FrLIP) = 0.289 (P-value > 0.05)).

The results in Table (20) also indicated that it is more likely that the textbooks provided to the students in ELIP cover the curriculum comprehensively —68% reported the answer “to a large extent,” 29.3% reported “somewhat,” and 2.7% did not define). While, 60.8% of faculty members reported that the textbooks provided to TAP students “to a large extent” cover the curriculum comprehensively, followed by 33.8% reported the answer “somewhat,” and 3.1%

reported the answer "Not at all", while 2.4% refused to answer. In comparison, textbooks in FrLIP are less likely to cover adequately the themes of the curriculum, as shown in Table (20), 44.6% of faculty members reported the answer "to a large extent," 45.5% reported the answer "somewhat," and 9.9% refused to answer.

Table 20: Faculty members' perceptions about the extent to which the textbooks used in each programme individually cover comprehensively the curriculum

To what extent do the textbooks used in each programme individually TAP, ELIP and FrLIP cover comprehensively the curriculum	TAP (%)	ELIP (%)	FrLIP (%)
To a large extent	60.8	68.0	44.6
Somehow	33.8	29.3	45.5
Not at all	3.1		
Refuse to answer	2.4	2.7	9.9
Total	100	100	100

Hypothesis 7: There is a statistically significant difference between the various faculty members' language of instruction in the faculty study's capability to qualify each TAP, ELIP and FrLIP to join the labor market

A Kruskal Wallis H test was used to determine if there are statistically significantly differences between the faculty members' groups in the extent to which the school's study qualify their students to join the labor market for each programme individually. The results, in Appendix 6 [Tables (A6-1) and (A6-2)], showed that distribution is the same across faculty members' groups for TAP ($P\text{-value}_{(TAP)} = 0.928$ ($P\text{-value} > 0.05$)). And it is the same also, for ELIP and FrLIP as $P\text{-value}_{(ELIP)} = 0.761$ ($P\text{-value} > 0.05$) and $P\text{-value}_{(FrLIP)} = 0.271$ ($P\text{-value} > 0.05$) respectively.

Based on Table (21), one can conclude that students in ELIP are better qualified to join the labor market after graduation compared to FrLIP and TAP from faculty members' perspectives. The full breakdown of the answers to the question 'To what extent does the faculty's study qualify TAP, ELIP or FrLIP graduates to join the labor market' is as follows:

60.3% thought that the curriculum prepares ELIP students well for the labor market, 34.8% thought that it qualifies them “somehow,” 4.9% refused to answer. Verily, the faculty members in the qualitative study affirmed that the faculty succeeded in building relationships with businesses and employers after the introduction of ELIP, because employers prefer to hire English speaking graduates. Although Arabic is very important, the chances of a graduate from ELIP to find employment are greater, according to the faculty members' perceptions.

However, 18.4% only of faculty members asserted that TAP students are qualified, while 76.7% declared that the curriculum qualifies them “somehow” and 4.9% refused to answer. While, 57.5% of the faculty members indicated that FrLIP students are qualified, 35.3% declared that the curriculum qualifies them “somehow”, while 4.9% stated that the curriculum does not qualify them. This can be explained by the results reached from the qualitative study, as the faculty members stated that FrLIP students are more likely to find scholarships to resume their postgraduate studies abroad.

Table 21: Faculty members' perceptions about the extent to which the school study qualify TAP, ELIP and FrLIP students to join the labor market

To what extent does the school study for each programme individually (TAP, ELIP and FrLIP) qualify them to join the labor market	TAP (%)	ELIP (%)	FLIP (%)
To a large extent	18.4	60.3	57.5
Somehow	76.7	34.8	35.3
Not at all	4.9		4.9
Refuse to answer		4.9	
Total	100	100	100

Hypothesis 8: There is a statistically significant difference between the various faculty member’s language of instruction in their satisfaction with the faculty’s infrastructure and facilities

A Kruskal Wallis H test was used to determine if there were statistically significantly differences between the faculty members' groups in the distribution of the question “How often are the faculty members' satisfied with the school’s infrastructure in terms of lecture halls,

toilets,...etc.”. The results showed that the distribution is probably the same across the faculty members' groups (P-value = 0.656 (P-value > 0.05)), as shown in Appendix 6 [Table (A6-2)]. Table (22) shows that 54.4% of the faculty members are “satisfied” with the faculty/ school's infrastructure, 9% are “very satisfied,” while 31.6% are “somewhat satisfied,” and only 4.9% are “not satisfied.”

Second, when testing the comparability between the faculty members' groups in the distribution of the question “How often the faculty members' are satisfied with the school’s labs”. The results showed that the distribution is probably the same across faculty members' various languages of instruction (P-value = 0.504 (P-value > 0.05)), as shown in Appendix 6 [Table (A6-2)]. The results in Table (22) showed that the largest proportion of faculty members within the sample, are “somehow satisfied” with the labs, while 27.7% are “satisfied,” 14.8% are “unsatisfied at all,” and 14.6% are “wholly unsatisfied,” and only 4.9% are not satisfied at all with the faculty's/ school's labs.

Third, Kruskal Wallis H test was used to determine the variances in the distribution of the question “How often are the faculty members' satisfied with the library services in terms of the number of books and its quality,” at the level of significance 0.05. The results showed that the distribution is probably the same for various faculty members' groups (P-value = 0.408 (P-value > 0.05)). Moreover, the results in Table (22) showed that the largest proportion of faculty members within the sample, 40.3%, are “satisfied” with library services, 16.8% are “somehow satisfied,” 19.8% are “unsatisfied,” 14.8% are “wholly unsatisfied,” and only 6.9% are “well satisfied.”

As regards using Kruskal Wallis H test to determine the differences in the distribution of the question “How often are the faculty members' satisfied with the availability of recent and

updated references in the library,” at the level of significance 0.05. The results declared that the distribution is probably the same for various faculty members' groups (P-value = 0.190 (P-value > 0.05)). The response breakdown is as follows: 29.8% of the faculty members are satisfied, whereas 26.6% “somehow satisfied,” 22.6% are “unsatisfied,” 14.2% “wholly unsatisfied,” and only 6.9% are “wholly satisfied,” as shown in Table (22).

The analysis, in Appendix 6 [Table (A6-2)], figured out as well that the distribution is probably the same for various faculty members' groups in their satisfaction with extra-curricular activities, (P-value = 0.257 (P-value > 0.05)). Moreover, the results in Table (22) showed that 43.1% reported they are “satisfied,” whereas 24.7% are “totally satisfied,” 15.3% are “somehow satisfied,” only 4.3% are “unsatisfied,” and 12.6% refused to answer.

Table 22: Faculty members' satisfaction with the school's infrastructure, labs, library services, and extra-curricular activities

How often are you satisfied with the following activities	Very Satisfied	Satisfied	Somehow Satisfied	Not Satisfied	Not Satisfied at all	Refused to answer
The school’s infrastructure	9	54.4	31.6	4.9		
The labs	14.6	27.7	33.7	14.8	4.9	4.3
The library services	6.9	40.3	16.8	19.8	14.8	1.4
The availability of new references in the library	6.9	29.8	26.6	22.6	14.2	
The extra-curricular activities	24.7	43.1	15.3	4.3		12.6
Total	100	100	100	100	100	100

CHAPTER 7

SUMMARY, CONCLUSION, DISCUSSION, RECOMMENDATIONS AND IMPLICATIONS

This chapter includes the summary and conclusion of the study drawn from the qualitative and quantitative research hold, further the chapter depicts as well a discussion of the findings, besides the policy recommendations for interested stakeholders.

7.1 Summary and Conclusions of the Findings

Cost-sharing policy in Egypt was introduced in the early 1990s and stemmed from the urgent need for non-governmental funding for higher education; and as the literature of cost sharing highlights the rationale to achieve efficiency and equity as institutions would be more responsive to various demands through expanding quality.

Cost-sharing was introduced in Egypt as an echo for the rising demand for additional resources needed to increase quality and diversify the revenue sources alongside; in addition, raising tuition should be accompanied with loans and generous financial aid to reserve or even improve equity. However Egypt's government disregarded to monitor and evaluate the policy itself and its implications on quality and equity in public universities. The government as well did not pay attention to introducing tuition in public universities along with a means-tested student loan scheme; it only sufficed with introducing the tuition fees in order to diversify the sources of higher education finance which it failed to supply.

This research study is interested only in the quality aspect of one of the cost sharing policies that has been implemented in Egypt. The purpose of the study was to measure the effectiveness of cost sharing policies on the quality of education in Egypt's public universities and to determine whether the policy introduced was implemented as designed or not.

The study measured the impact of cost sharing policy on the education quality using a post evaluation analysis through control treatment design due to the lack of baseline surveys, as well lack of previous empirical data and standards of comparison

The faculty resources in terms of new lecture halls fully equipped with air-conditions, computer and language labs, audiovisual facilities, and providing new pedagogical tools, improved after the introduction of programmes instructed in foreign languages. However, the improvement was limited to the resources available to FLIP programs only—students in TAP, for example, do not benefit directly from the same tools and facilities as students in FLIP except after the end of the daily use of FLIP. Meanwhile, faculty members stated that TAP students benefit indirectly, from the introduction of cost sharing policy in FEPS, in the form of using FLIP's computer labs and lecture halls; however, not like their counterparts in the FLIP.

The Ordinal Regression Model results showed that introducing the cost sharing policy reflected in terms of FLIP does not explain the variable: quality as *fitness of purpose* 'reducing the transition period between graduation and first entry into join labor market'. Meanwhile, there is no difference between TAP and FLIP when it comes to joining the labor market. This can be explained by the fact that faculty ensured there is consolidation in terms of curriculum between the various programmes TAP, ELIP, and FrLIP. And the faculty members ensured that there is no gap in the curricula between different programmes, although the only difference exists in the language of instruction and the textbooks available for each programme.

The results as well showed significant difference among TAP and FLIP graduates in terms of their perceptions about the "Textbooks used in instruction" as being a variable qualifying them to labor market, the study declared accordingly that graduates in TAP photo-

copy the mandatory textbooks for FLIP, as students in FLIP and TAP share together some courses instructed in mother tongue language.

The results showed as well, according to the graduates' perceptions, that there is no significance difference between TAP and FLIP in quality variables qualifying them to join labor market: new and high-quality labs, faculty methods of explaining the syllabi, the interest in the empirical practice of the theory, field visits to foreign universities in the discipline area, practical training in industry operating in the same area of discipline and counseling and academic support. However, FEPS should pay more attention to the role of counseling and academic support and field trips to the foreign universities in reducing the transition period between graduation and work.

7.2 Discussions of the Findings

Cost-sharing practices emerged in Egypt since the early 1990s, but their application still underdeveloped in public universities. The main rationale for adopting cost sharing in Egypt is for income generation and for bettering the quality of graduates; however the government disregarded to monitor its application and implications on quality.

Cost sharing in Egypt differs from other similar worldwide policies; it has its own frame of application. It was applied in some schools/faculties in the public universities in the form of a dual track policy; one track is fully subsidized paying only registration fees, and the other track is a tuition fees programme not providing a means-tested financial assistance scheme.

The 2010 World Bank & OECD Report highlighted the introduction of cost sharing in Egypt's education system, as a step forward to delivering quality education and to ensuring diversification of resources as well. However, measuring the impact of cost sharing on quality

remains a barrier due to the absence of separate financial statements for each programme, the subsidized and the tuition-fees programme.

The case study of FEPS draws our attention to the fact empirically investigated that the cost sharing policy in FEPS is insignificant, as there is no significant difference between the two groups FLIP and TAP in terms of the quality indicators qualifying them to join the labor market. This shows that those who pay for tuition are the same as those who do not, and this could be explained by the fact of spill-over effect in the school/faculty, especially that the curriculum is unified among the various programmes, meanwhile TAP students photocopy FLIP textbooks, and the faculty members' overlapping in teaching the various programmes. It could be an advantage if and only if the quality is proper and concrete; these findings align with Sabry's study, where she concluded that FLIP seemingly does not provide its students with significantly better quality education from the student self-perception of quality.⁷⁹

Further, when graduates were asked if they think the tuition fees they paid worth the quality of education they received, the results declared that according to the FLIP graduates, 42.9% of them find it somehow values the quality of education, and 32.7% reported the answer 'Yes', whereas 24.5% stated 'No'. On the other side, 38.6% of the TAP graduates stated that the tuition fees 'registration and administration fees' they paid values the quality of education received, and 31.8% reported the answer 'Somehow', while 25% stated 'No' and 4.5% of them refused to answer the question. These results show how the students who do not pay tuition fees in TAP, and only pay for registration and administration fees tend to be more likely satisfied with the quality provided; however FLIP students tends to be less satisfied.

⁷⁹ Manar Sabry, "Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education" (PhD diss. State University of New York at Buffalo, 2010), 183–195.

Cost sharing in FEPS takes into consideration the basic requirements of the contemporary labor market, especially that the school reinforced the industry-relationship after the introduction of ELIP as realized from the qualitative study developed. Since the creation of its English-language division, FEPS has been able to engage with potential employers and provide the labor market with high-caliber graduates proficient in English, which, from the employers' perspective, is an advantage in all disciplines.

The French division has also succeeded in mentoring their graduates and securing for them internships, fellowships, and scholarships—in the 2010/2011 academic year, for example, they provided their students with ten scholarships. Although, TAP students did not have the same opportunities, a glimmer of hope—appears when they compete with other students in ELIP and FLIP in terms of their graduation reports, and appointments as teaching assistants. This can accordingly highlight the spill-over effect that takes place in the school/ faculty whether from the institution, faculty and students' side, that could be a reason for shrinking the gap between TAP and FLIP.

However, this does not guarantee that the quality in FEPS is proper, especially for - those who pay the tuition fees - the quality they receive does not value when compared to TAP, who are subsidized. Most of FLIP literature highlighted the main purpose of FLIP is to provide better quality on account of equity, however, in this case, study it depicts plainly that there is no difference among TAP and FLIP in the quality variables qualifying them for labor market, meanwhile teaching methods are somehow similar. This ensures that we are about to face the challenge of students being charged without receiving the real expected return from quality.

7.3 Implications for Policy Makers

Even though the system of private universities has been developed in Egypt, public universities continue to be the main provider for higher education in Egypt. However, the expenditures in real terms of public post-secondary education are noticeably decreasing over-time.

Government resources are limited, and cannot keep up with the rapid changes in higher education costs and in competition with the other necessary public expenditures in the real economy sectors. Hence, this recalled for a pressing need for diversifying revenue sources other than governmental funding for achieving the desired quality of access to higher education institutions. However, students are charged a large sum of money for tuition fees and foreign textbooks cost, yet they don't receive a quality that value the amount of money paid. It seems that the application of the cost sharing policy in Egypt was introduced not to respond to the stakeholders' demands for bettering the learning environment, but in order to diversify the income resources in order to substitute the decrease in the governmental fund allocated for the public higher education sector.

Before implementing the cost sharing policy, the government should have had a concrete vision about the sustainable ways of funding through tuition fees along with the mechanism and tools of bettering the services provided to the students. It was expected that those who pay for their tuition fees and textbooks would receive a "better" quality in comparison with the heavily subsidized students in TAP. Higher education institutions should assess the services they provide in order to maximize the students' benefit and achieve positive return on investment. This can be accomplished by putting a system of accountability and transparency.

The quantitative analysis of this study demonstrated that there is no significant difference in teaching methods used between TAP and FLIP. Nevertheless, if the teaching methods and curriculum are almost similar, there is no reason for expecting different results assuming all other variables are constant.⁸⁰

7.4 Suggestions for Further Studies

Egypt is not the only country facing such overwhelming challenges in the higher education sector in terms of accessibility, finance and quality. Although that Egypt ranking in terms of quantity indicators are improving according to the 2013-14 Global Competitiveness Report, the country remains to be at the lowest level in terms of quality indicators. The challenges of the current education system not only lie in large age cohort 18-22 years old, but in limited government budget as well.⁸¹

Higher education funding mechanisms are crucial due to its impact on shaping the higher education outcomes in quality, effectiveness and responsiveness. In fact, Hanushek and Wobmann research highlighted the fact that education quality is strongly tied to economic growth. Their research concluded that 75% of differences in economic growth is explained by quality; whereas, the quantity indicators – like enrollment rates or years of schooling - account only for 25%.⁸²

This current research represents an important addition in the field since there is lack of previous empirical research and standards for comparison measuring the impact of cost sharing

⁸⁰ Manar Sabry, “Foreign Language Instructed Programs in Public Universities in Egypt: Implications for Resource Diversification, Quality and Equity in Higher Education” (PhD diss. State University of New York at Buffalo, 2010), 194–195.

⁸¹ World Economic Forum, Global Competitiveness Report 2013-2014, by Klaus Schwab, and Xavier Sala i Martin, ISBN-13: 978-92-95044-73-9 (Geneva: World Economic Forum, 2013), 192-193.

⁸² Hanushek, Eric A. and Wobmann, Ludger, *The Quality of Education and Economic Growth* (Washington D.C: The World Bank, 2007).

policy on quality of education in Egypt public universities. However, there is urgent need for further research on Language Instructed Programmes “FLIP” and Credit Hour Programmes “CHP” to be able to generalize the findings reached on the population. It is as well recommended to study the optimal solutions for balancing quality and equity in financing higher education in Egypt.

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APENDICIES

APPENDIX 1
FEPS GRADUATES SURVEY

Good Morning, I am a senior researcher measuring the impact of cost sharing policies introduced by Egypt's government in Public universities for the purpose of improving quality. Hence, this questionnaire aims to measure the effectiveness of such programmes on the graduates of Faculty of Economics & Political Science 'FEPS'. I ask you kindly to respond the survey; it will take from you less than 15 minutes. Data is used for the purpose of scientific research only.

First: Respondents' Demographic Data

<input type="checkbox"/> Urban (1) <input type="checkbox"/> Rural (2)		(2) Urban/Rural: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Governorate (1)
<input type="checkbox"/> Female (2)	<input type="checkbox"/> Male (1)	(4) Gender:	(3) Graduation Year : <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Statistics (3)		<input type="checkbox"/> Political Science (2)	<input type="checkbox"/> Economics (1) (5) Discipline [Major]
<input type="checkbox"/> FrLIP (3)	<input type="checkbox"/> ELIP (2)	<input type="checkbox"/> TAP (1)	(6) Section [Language of Instruction]
<input type="checkbox"/> Pass (4)	<input type="checkbox"/> Good (3)	<input type="checkbox"/> Very Good (2)	<input type="checkbox"/> Excellent (1) (7) GPA
<input type="checkbox"/> General Secondary – Private Arabic (3)	<input type="checkbox"/> General Secondary – Experimental (2)	<input type="checkbox"/> General Secondary – Public Arabic (1)	(8) What type of secondary school did you attend?
<input type="checkbox"/> IGCSE (6)	<input type="checkbox"/> American Diploma (5)	<input type="checkbox"/> General Secondary – Private Language (4)	
<input type="checkbox"/> <input type="checkbox"/> :Others <input type="checkbox"/>		<input type="checkbox"/> General Secondary – Al-Azhar (7)	
<input type="checkbox"/> No(2)		<input type="checkbox"/> Yes(1)	(9) Did you have any loans to cover your fees?
▲ Skip to Q(11)			
EGP <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		(10) The loan amount	
<input type="checkbox"/> 6 months – less than a year (2)		<input type="checkbox"/> Less than 6 months (1)	(11)When you did you join labor market after graduation?
<input type="checkbox"/> 2 – less than 3 years (4)		<input type="checkbox"/> 1 – less than 2 years (3)	
<input type="checkbox"/> More than 4 years (6)		<input type="checkbox"/> 3 – less than 4 years (5)	
<input type="checkbox"/> Others : <input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> Did not work since graduation(7)	
<input type="checkbox"/> Does not Work (2)	Skip to Q(13) <	<input type="checkbox"/> Work (1)	(12) Current employment status
..... <input type="checkbox"/> <input type="checkbox"/>			?Why (12-A)
..... <input type="checkbox"/> <input type="checkbox"/>			

Second: Evaluating the academic programmes

NA (98)	Very Weak (5)	Weak (4)	Fair (3)	Good (2)	Very Good (1)	In case you are not working, the answer for the following questions is Not applicable "NA".
						(13) To what extent your discipline helps you find a satisfying job vacancy?
						(14) To what extent your discipline helps you build your abilities and

						qualify you to join the labor market?
						(15) To what extent your discipline helps you build and enhance your personnel abilities?
						(16) To what extent your language of instruction helps you find a satisfying job vacancy?
						(17) To what extent your language of instruction qualify you to join the labor market?
(18) To what extent are there available textbooks in your language of instruction?						
<input type="checkbox"/> Definitely Unavailable (5)	<input type="checkbox"/> Unavailable (4)	<input type="checkbox"/> Probably (3)	<input type="checkbox"/> Available (2)	<input type="checkbox"/> Definitely Available (1)		
(19) To what extent are the curriculum contents in textbooks available in the language of instruction clear?						
<input type="checkbox"/> Definitely Unclear (5)	<input type="checkbox"/> Unclear (4)	<input type="checkbox"/> Probably (3)	<input type="checkbox"/> Clear (2)	<input type="checkbox"/> Definitely Clear(1)		
(20) To what extent do the textbooks cover the curriculum subjects in the language of instruction you were enrolled in?						
<input type="checkbox"/> Very Weak (5)	<input type="checkbox"/> Weak (4)	<input type="checkbox"/> Fair (3)	<input type="checkbox"/> Good (2)	<input type="checkbox"/> Very Good (1)		
To what extent do the following statements qualify you for labor market? <u>In case you are not working, the answer for the following questions is Not applicable "NA".</u>						
NA (98)	Definitely (5) Insign.	Weakly (4) Sign.	Probably (3)	Significant (2)	Definitely (1) Sign.	
						(21) Academically qualified in your discipline
						(22) Academic programmes in discipline
						(23) Academic programmes in language of instruction
						(24) Textbooks used in instruction
						(25) New and High-Quality labs
						(26) The Faculty methods of explaining the syllabi
						(27) Interaction with the faculty within lecture halls
						(28) Interaction with the faculty outside lecture halls
						(29) Teaching assistants ways of explaining

						(30) Practical experience of teaching assistants
						(31) Interaction with the teaching assistants within lecture halls
						(32) The interest in the empirical practice of the theory
						(33) Field visits to foreign universities in the discipline area (Joint Programmes with foreign universities)
						(34) Practical training in industry operating in the same area of discipline
						(35) Counseling and academic support
Never (5)	Rarely (4)	Occasionally (3)	Often (2)	Frequently (1)	To what extent does the faculty undertake the following while teaching the curriculum you were assigned to?	
					(36) Identify the overall goal of the academic course you are teaching	
					(37) Define the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)	
					(38) Inform students with course plan (Objectives, Course Contents, Exam Style, and References)	
					(39) Distribute the syllabi logically throughout the academic calendar	
					(40) Review the course plan constantly and refine it if needed	
					(41) Modify the course during the semester due to the unforeseen circumstances in the short term	
					(42) Gather the scientific sources of the lectures' topic from multiple references	
					(43) Staff have regular office hours	
					(44) Staff is available during their office hours	
					(45) Interest in the practical applications of the scientific material	
					(46) Develop the applied assignment for	

Never (5)	Rarely (4)	Occasionally (3)	Often (2)	Frequently (1)	To what extent does the faculty undertake the following while teaching the curriculum you were assigned to?
					academic course and link it with labor market orientations
					(47) Strengthen the ties with the productive firms and services in the labor market.
					(48) The use of modern technologies in teaching whether visual, or audio or both.
					(49) Train students to use computers and internet in the tasks assigned to them
					(50) Depend on e-contents in teaching like computer softwares, CDs,...etc.
					(51) Use of computers in submitting assignment and research papers
					(52) Use of e-communication to follow up students assignments
					(53) Train students to use internet to find information needed for purpose of academic course
					(54) Encourage students to innovate and think logically
					(55) Encourage students to debate and build a constructive dialogue
					(56) Encouraging students to think based on evidence
					(57) Encouraging students to think independently
					(58) Staff is adorn to the academic thinking when discussing scientific issues in class
					(59) Encouraging students to join the community programmes such as participating in community services, awareness programmes in rural areas, slums, .. etc.
					(60) Discover the young talents and guide it through unions and student activities.
					(61) Broadcast the team spirit, teamwork and volunteerism among students.
					(62) Follow up students' performance and assess them frequently.
					(63) Staff interest in empirical practice of academic course theory.
					(64) Staff interest in giving feedback to exams

Never (5)	Rarely (4)	Occasionally (3)	Often (2)	Frequently (1)	To what extent does the faculty undertake the following while teaching the curriculum you were assigned to?
					and assignments.
					(65) Staff interest in discussions and responding to students' questioning
					(66) Set in advance the rules of students' performance evaluations
					(67) Show and discuss the results of follow-up evaluations with students
Never (5)	Rarely (4)	Occasionally (3)	Often (2)	Frequently (1)	Define your use of the following in undertaking the course required assignments
					(68) The use of school labs in doing assignments like (Pcs, Internet, ..etc.)
					(69) The use of school library in doing assignments
<input type="checkbox"/> No (3)	<input type="checkbox"/> Somehow(2)	<input type="checkbox"/> Yes(1)		(70) Do you think that the admission requirements in FLIP is appropriate for students to get enrolled?	
<input type="checkbox"/> No (3)	<input type="checkbox"/> Somehow(2)	<input type="checkbox"/> Yes(1)		(71) Do you think that the tuition fees you paid value the quality of education?	
..... <input type="checkbox"/> <input type="checkbox"/>					(72)Why?
..... <input type="checkbox"/> <input type="checkbox"/>					
..... <input type="checkbox"/> <input type="checkbox"/>					
..... <input type="checkbox"/> <input type="checkbox"/>					
(73)The average monthly income. [In case you do not work, the answer is not applicable]					
<input type="checkbox"/> EGP 2000 – less than 4000 (5)	<input type="checkbox"/> EGP 1000 – less than 2000 (6)	<input type="checkbox"/> EGP 500 – less than 1000 (7)	<input type="checkbox"/> Less than EGP 500 (8)	<input type="checkbox"/> Not applicable (98)	
<input type="checkbox"/> More than EGP 10,000 (1)	<input type="checkbox"/> EGP 8000 – less than 10,000 (2)	<input type="checkbox"/> EGP 6000 – less than 8000 (3)	<input type="checkbox"/> EGP 4000 – less than 6000 (4)		
Data is used for scientific research only					

APPENDIX 2

THE FACULTY SURVEY - QUANTITATIVE STUDY

First: Survey Team Data:			
..... <input type="checkbox"/>	Supervisor : <input type="checkbox"/>	Team No. :
..... <input type="checkbox"/>	Field Researcher : <input type="checkbox"/>	Field Reviewer :
□□/□□/□□			Interview Date:
Partially Completed <input type="checkbox"/> (2)		Wholly Completed <input type="checkbox"/> (1)	
Postponed <input type="checkbox"/> (4)		Refused <input type="checkbox"/> (3)	
1st Interview Results:			
Refused <input type="checkbox"/> (3)	Partially Completed <input type="checkbox"/> (2)	Wholly Completed <input type="checkbox"/> (1)	
Final Interview Results:			
2 nd : Review Team & Data Entry Office:			
□□/□□/□□	: Date □□	: Review Check Officer
□□/□□/□□	: Date □□	: Data Entry Officer
□□/□□/□□	: Date □□	Data Entry Checks :
3rd: Social & Demographic Data for Respondents:			
<input type="checkbox"/> Female (2) <input type="checkbox"/> Male (1) (3. 2) Gender:		(3. 1) Name :	
(3. 3) Nationality :			□□□
□□□	(3.5) District:	□□	(3.4) Governorate:
<input type="checkbox"/> Urban (1) <input type="checkbox"/> Rural (2)	(3.7) Urban/ Rural:	□□□	(3.6) City/ Village:
(3.8) Current Address:			
(3.10) Age : □□	(3.9) Mobile. : □□□/□□□□□□□□		
(3. 12) Faculty:		(3.11) University:	
(3. 13) Discipline/ Department:			□□
4th: The Respondents' Teaching Experiences:			
(4.1) Academic Degree			
<input type="checkbox"/> Non-Emeritus Professor (5)	<input type="checkbox"/> Emeritus Professor (4)	<input type="checkbox"/> Professor (3)	<input type="checkbox"/> Associate Professor (2)
		<input type="checkbox"/> Assistant Professor (1)	
Multiple Choice Answer		(4.2) Would please decide the language of instruction you currently teach in the school?	
		<input type="checkbox"/> French (C)	<input type="checkbox"/> English (B)
		<input type="checkbox"/> Arabic (A)	

<input type="checkbox"/> Tenure (4)	<input type="checkbox"/> Part time (3)		<input type="checkbox"/> Appointed(1)	(4.3) The contract type :
(4.4) Year of Appointment/ Tenure:□□□□				
(4.5) Years of teaching in general :			□□ Years	
4.8	1 Skip to ← 2	<input type="checkbox"/> Yes..... <input type="checkbox"/> No.....	(4.6) Do you have any prior teaching experiences before getting appointed in FEPS?	
(4.7) If Yes, List your prior teaching experiences?				
-1		□□□		
-2		□□□		
-3		□□□		
-4		□□□		
-5		□□□		
		lecture □□	(4.8) Number of lectures you weekly have	
		minutes □□ hours □□	(4.9) Average Number of lecture's actual hours	
4.12	1 Skip to ← 2	<input type="checkbox"/> Yes..... <input type="checkbox"/> No.....	(4.10) Do you provide your students with regular office hours?	
		minutes □□ hours □□	(4.11) If Yes, how many hours weekly on average?	
	1 Skip to ← 2	<input type="checkbox"/> Yes..... <input type="checkbox"/> No.....	(4.12) Have you got any training course prior to getting appointed to the degree of assistant professor?	
(4.13) If Yes, would you list the course contents?				
1-		□□□		
2-		□□□		
3-		□□□		
4-		□□□		
5-		□□□		

5th: Differences within FEPS language taught programs in teaching the scientific curriculum:

Doesn't apply (8)	Doesn't mention (7)	Not at all (3)	Somehow (2)	To a large extent (1)	
					(5.1)To what extent is there homogeneity of the scientific material/ subject between the three divisions in the school?
					(5.2.1)To what extent are the textbooks available to the Arabic division students?
					(5.2.2)To what extent are the textbooks available to the English division students?
					(5.2.3)To what extent are the textbooks available to the French division students?
					(5.3.1)To what extent are the curriculum contents obvious in the textbooks provided for the Arabic students' division?
					(5.3.2)To what extent are the curriculum contents obvious in the textbooks provided for the English students' division?
					(5.3.3)To what extent are the curriculum contents obvious in the textbooks provided for the French students' division?
					(5.4.1) To what extent do the textbooks meet the core subjects of the scientific study taught to the Arabic students' division?
					(5.4.2) To what extent do the textbooks meet the core subjects of the scientific study taught to the English students' division?
					(5.4.3) To what extent do the textbooks meet the core subjects of the scientific study taught to the French students' division?
					(5.5.1) To what extent do the textbooks easily present the themes of the scientific study taught to the Arabic students' division?
					(5.5.2) To what extent do the textbooks easily present the themes of the scientific study taught to the English students' division?

						division?
						(5.5.3)To what extent do the textbooks easily present the themes of the scientific study taught to the French students' division?
						(5.6) To what extent are the scientific study exams conform to the various FEPS language taught programmes and the uniform programme (Arabic, English and French Divisions)?
						(5.7.1) To what extent does the school's study qualify the Arabic students' division to join the labor market
						(5.7.2) To what extent does the school's study qualify the English students' division to join the labor market?
						(5.7.3) To what extent does the school's study qualify the French students' division to join the labor market?
Doesn't mention (8)	Not Satisfied at all(5)	Not Satisfied (4)	Somehow Satisfied(3)	Satisfied (2)	Very Satisfied (1)	How often are you satisfied with a liqert scale (1 – 5) about:
						(5.8.1)Students' density in lecture halls in the Arabic Division
						(5.8.2)Students' density in lecture halls in the English Division
						(5.8.3)Students' density in lecture halls in the French Division
						(5.8.1)Students' density throughTA sessions in the Arabic Division
						(5.8.2)Students' density through TA sessions in the English Division
						(5.8.3)Students' density through TA sessions in the French Division
						(5.9.1) Arabic Students' division attendance at the lectures
						(5.9.2) English Students' division attendance at the lectures
						(5.9.3) French Students' division attendance at the lectures

Doesn't mention (8)	Not Satisfied at all(5)	Not Satisfied (4)	Somehow Satisfied(3)	Satisfied (2)	Very Satisfied (1)	How often are you satisfied with a liqert scale (1 – 5) about:
						(5.10.1) Arabic students' division engagement through the lectures
						(5.10.2) English students' division engagement through the lectures
						(5.10.3) French students' division engagement through the lectures
						(5.11.1) Arabic students' division performance in the tasks assigned to them
						(5.11.2) English students' division performance in the tasks assigned to them
						(5.11.3) French students' division performance in the tasks assigned to them
						(5.12.1) Arabic students' division performance in the final exams
						(5.12.2) English students' division performance in the final exams
						(5.12.3) French students' division performance in the final exams
<p>..... 1</p> <p><input type="checkbox"/> <input type="checkbox"/> 2</p> <p>..... 3</p> <p><input type="checkbox"/> <input type="checkbox"/>4</p> <p>..... 5</p> <p><input type="checkbox"/> <input type="checkbox"/> 6</p> <p><input type="checkbox"/> Doesn't apply6</p>						(5.13.1) From your own point of view, What are the main common problems facing the staff teaching the Arabic students' division ?
<p>..... 1</p> <p><input type="checkbox"/> <input type="checkbox"/> 2</p> <p>..... 3</p> <p><input type="checkbox"/> <input type="checkbox"/>4</p> <p>..... 5</p>						(5.13.2) From your own point of view, What are the main common problems facing the Arabic division students?

..... 5

Doesn't apply 6

Sixth: Planning and Teaching Skills for the academic courses (Curriculum)					
Never (5)	Rarely (4)	Sometimes (3)	Frequently (2)	Always (1)	How often do you carry out the following functions, the measure is scaled on a liqert scale (1 – 5)
					(6.1) Identifying the overall goal/ aim of the academic course you are teaching
					(6.2) Identifying the overall aim with regard to the available time schedule
					(6.3) Defining the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)
					(6.4) Choosing the academic topics that meet students' level in your course
					(6.5) Distributing the syllabus through the semester' s schedule logically
					(6.6) Identifying the expected teaching methods to be used matching the curriculum objectives
					(6.7) Selecting the interesting educational activities (Data Show, Simulation, ...) that motivate students to think
					(6.8)Reviewing the course plan constantly and refining it every now an then if needed (Modification's taking place doesn't require the same year)
					(6.9)Modifying the course during the semester due to unforeseen circumstances in the short term.
					(6.10)Gathering the scientific article on the topic of lecture from multiple references.
					(6.11)Preparing for the lecture well in advance.
					(6.12)Identifying the appropriate teaching strategy for the lecture.
					(6.13)Redeveloping the course to include current and recent events; examples and developments.
					(6.14)Abiding by the quality standards in determining the scientific substances in charge of teaching
					(6.15)Using new and modern educational sources which contribute to the lecture contents
					(6.16)Preparing a summary of the most important

					keys in the lecture
					(6.17)Developing the students' thinking abilities in the lecture
					(6.18)Informing students of the course plan (Objectives, contents, activities, references and evaluation terms)
					(6.19)Monitoring the performance of TA in practical applications
					(6.20)Holding regular meetings with TA to coordinate and follow up the course objectives set
					(6.21)Having interest in the practical applications of the scientific material
					(6.22)Developing the applied research for the academic course to be linked to the labor market orientations
					(6.23)Strengthening the ties with the productive firms and services in the labor market
Seventh: Communication Skills					
Never (5)	Rarely (4)	Sometimes (3)	Frequently (2)	Always (1)	How often do you carry out the following functions in teaching your course, the measure is scaled on a liqert scale (1 – 5)
					(7.1) Using modern technologies means in teaching (visual, audio or both)
					(7.2)Using computer for making presentations in the academic course you teach
					(7.3)Training students to use computers and the internet in the tasks you assign
					(7.4)Depending on electronic contents (Computer Programs, CDs, ...) in teaching your academic course
					(7.5)Assigning students to use computer in making reports and research projects
					(7.6)Using e-communication tools to follow up students during their research projects
					(7.7)Training students to use the internet to get the information needed from the internet/ web.
					(7.8)Encouraging students to innovate and think logically.
					(7.9)Encouraging students to debate and build a constructive dialogue.
					(7.10)Encouraging students to think evidently
					(7.11)Encouraging students to think independently

					(7.12)Adorning students to the academic thinking when discussing scientific issues in the class
					(7.13)Encouraging students to join the community programmes such as participating in community services and awareness in rural areas, slums, ... extra.
					(7.14)Discovering the young talents and guiding them through unions, and student activities.
					(7.15)Broadcasting the team spirit, teamwork voluntarily among students.

Eighth: Evaluation & Feedback

Never (5)	Rarely (4)	Sometimes (3)	Frequently (2)	Always (1)	How often do you carry out the following functions in teaching your course, the measure is scaled on a liqert scale (1 – 5)
					(8.1)Training students to put/ solve various types of questions
					(8.2)Follow up the students and evaluate them constantly
					(8.3)Laying the rules of assessing the students' performance
					(8.4)Displaying the assessment results with the students
					(8.5)Adhering to the scientific standards in writing the exams
					(8.6)Setting appropriate exams to cover the contents taught which meet the course objectives
					(8.7)Writing Exams that measure the students' real capabilities and explore the differences amongst them

Nineth: Faculty's satisfaction with the school's infrastructure and facilities

Not Satisfied at all (5)	Not Satisfied (4)	Somehow Satisfied (3)	Satisfied (2)	Very Satisfied (1)	How often are you satisfied with the following facilities, the measure is scaled on a liqert scale? (1 – 5)
					(9.1) The school's infrastructure (lecture halls, toilets, ...)
					(9.2) The labs (computer, language, accessing the internet,...)
					(9.3) The library services (metaphor methods, number and quality of books, ...)

				(9.4) The availability of new-references in the library
				(9.5) The extra-curricular activities (political, social, artistic....)
Tenth: The staff appraisal system				
Skip to End	1	<input type="checkbox"/> Yes.....		(10.1)Does the school run a survey to assess the curriculum?
	2	<input type="checkbox"/> No.....		
	8	<input type="checkbox"/> Don't Know.....		
Skip to Q10.4	1	<input type="checkbox"/> Yes.....		(10.2)Do you receive any reports that depict students' comments on the academic course you teach?
	2	<input type="checkbox"/> No.....		
	1	<input type="checkbox"/> Yes.....		(10.3)Do you take students' suggestions and comments into consideration and respond to them?
	2	<input type="checkbox"/> No.....		
	8	<input type="checkbox"/> Doesn't mention		
	A	<input type="checkbox"/> Abiding by attending training courses.....		(10.4) What are the procedures followed by the school when professors have poor evaluations? (Don't read the alternatives)
	B	<input type="checkbox"/> Draw their attentions to such a period.....		
	C	<input type="checkbox"/> Deducting from the salary		
	X	<input type="checkbox"/> Others (Specify)..... <input type="text"/>		
	7	<input type="checkbox"/> School doesn't take any actions.....		
	8	<input type="checkbox"/> Doesn't		
<input type="text"/>		(10.5)What are the procedures followed by the school when professors have high evaluations
<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
<input type="text"/>		

☺ Thank respondents for his/her time ☺

Notes	
<input type="checkbox"/> Yes.....	Can we contact you in case we would like to inquire about something related to your answers?
<input type="checkbox"/> No.....	
Be sure to check the form and complete all the questions before leaving. Don't forget to thank the respondent for his/her cooperation with you before ending the interview.	
Field Researcher Notes:	
Office Review Observations:	



APPENDIX 3

THE FACULTY VIEWS OF QUALITY IN FEPS - QUALITATIVE STUDY

1st: Social & Demographic Data for Respondents:	
(1.1) Name:.....	(1.2) Gender: <input type="checkbox"/> Male (1) <input type="checkbox"/> Female (2)
(1.3) Nationality:.....	(1.4) Governorate:.....
(1.5) District:.....	(1.6) City/ Village:.....
(1.7) Current Address:.....	(1.8) Urban/ Rural: <input type="checkbox"/> Urban (1) <input type="checkbox"/> Rural (2)
(1.9) Age:	(1.10) Mobile: <input type="text"/> <input type="text"/> <input type="text"/> / <input type="text"/>
(1.11) Faculty:.....	(1.12) University:.....
(1.13) Discipline/ Department:.....	
2nd: Differences within FEPS language taught programs	
<p>(2.1) What are the differences that have occurred in the school in general and particularly the various divisions since introducing the foreign language programmes.</p> <ul style="list-style-type: none"> - With regard to infrastructure and facilities. - With regard to the academic courses and its development. - With regard to textbooks and its contents. - With regard to strengthening the ties with the productive and service in the labor market. - With regard to applying the quality standards. - With regard to other aspects (the respondent would like to add) 	

APPENDIX 4

THE ORDINAL REGRESSION MODELS RESULTS

Table A4- 1: Ordinal Logistic Regression Variables

		N	Marginal Percentage
(Q11) When did you join labor market after graduation?	1.00 Less than 6 months	48	56.5%
	2.00 6 months – less than a year	11	12.9%
	3.00 1 year – less than 2 years	13	15.3%
	4.00 2 years – less than 3 years	7	8.2%
	5.00 3 years – less than 4 years	2	2.4%
	6.00 More than 4 years	1	1.2%
	7.00 has not worked yet since graduation	3	3.5%
(Q6_REG) Ordinal Regression	FLIP	43	50.6%
	TAP	42	49.4%
(Q7) Cumulative GPA	2.00 Very Good	40	47.1%
	3.00 Good	44	51.8%
	4.00 Pass	1	1.2%
(Q33_Reg) Field visits to foreign universities in the discipline area (Joint Programmes with foreign universities)	2.00 Significant	6	7.1%
	3.00 Probably	7	8.2%
	4.00 Weakly Significant	10	11.8%
	5.00 Definitely Insignificant	45	52.9%
	6.00 NA	17	20.0%
(Q35_Reg) Counseling and academic support	1.00 Definitely Significant	7	8.2%
	2.00 Significant	14	16.5%
	3.00 Probably	23	27.1%
	4.00 Weakly Significant	11	12.9%
	5.00 Definitely Insignificant	23	27.1%
	6.00 NA	7	8.2%
(Q34_Reg) Practical training in industry operating in the same area of discipline	1.00 Definitely Significant	3	3.5%
	2.00 Significant	13	15.3%
	3.00 Probably	10	11.8%
	4.00 Weakly Significant	14	16.5%
	5.00 Definitely Insignificant	32	37.6%
	6.00 NA	13	15.3%
Valid		85	100.0%
Missing		8	
Total		93	

Table A4- 2: Test Multicollinearity Assumption⁸³

	Collinearity Statistics	
	Tolerance	VIF
Q2 Urban/Rural	.592	1.690
Q4 Gender	.719	1.391
Q5 Discipline [Major]	.714	1.400
Q7 Cumulative GPA	.704	1.420
Q6_REG FLIP/TAP	.724	1.381
Q21 To what extent do the following statements qualify you for labor market? Academically qualified in your discipline	.003	391.817
Q22 To what extent do the following statements qualify you for labor market? Academic programmes in discipline	.001	756.616
Q23 To what extent do the following statements qualify you for labor market? Academic programmes in language of instruction	.002	406.389
Q24 To what extent do the following statements qualify you for labor market? Textbooks used in instruction	.004	263.774
Q25 To what extent do the following statements qualify you for labor market? New and High-Quality labs	.224	4.461
Q26 To what extent do the following statements qualify you for labor market? Faculty methods of explaining the syllabi	.002	482.800
Q27 To what extent do the following statements qualify you for labor market? Interaction with faculty within lecture halls	.002	637.606
Q28 To what extent do the following statements qualify you for labor market? Interaction with faculty outside lecture halls	.004	268.979
Q29 - To what extent do the following statements qualify you for labor market? Teaching assistants' ways of explaining	.005	185.920
Q30 To what extent do the following statements qualify you for labor market? Practical experience of teaching assistants	.002	650.854
Q31 To what extent do the following statements qualify you for labor market? Interaction with teaching assistants within lecture halls	.002	655.613
Q32 To what extent do the following statements qualify you for labor market? The interest in the empirical practice of the theory	.305	3.281
Q33 To what extent do the following statements qualify you for labor market? Field visits to foreign universities in the discipline area (Joint Programmes with foreign universities)	.217	4.606
Q34 To what extent do the following statements qualify you for labor market? Practical training in industry operating in the same area of discipline	.219	4.574
Q35 To what extent do the following statements qualify you for labor market? Counseling and academic support	.247	4.043

Dependent Variable: Q11 When did you join labor market after graduation?

⁸³ To find out if there is a problem of multicollinearity; Table (A4-2) shows the "Tolerance" and "VIF" values in the Coefficients table, as shown above. If the Tolerance values are greater than 0.1 and VIF values are much less than 10, so we can be fairly confident that we do not have a problem with collinearity. Variables in the shaded cells in greens are not included in the model, as their tolerance values are less than 0.1 and VIF exceeds than 10.

Model 1: Measuring the effect of cost sharing policy (FLIP) on quality as a fitness of purpose (The transition period between graduation and the first entry to labour market)⁸⁴

Table A4- 3: Model 1 - Model Fit

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	39.838			
Final	37.374	2.464	1	0.117

Link function: Logit.

Table A4- 4: Model 1 - Parameter Estimates Table

		Estimate [Log Odds]	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Q11 = 1]	-.038-	.295	.017	1	.898	-.616-	.540
	[Q11 = 2]	.595	.302	3.870	1	.049	.002	1.187
	[Q11 = 3]	1.486	.350	18.056	1	.000	.801	2.172
	[Q11 = 4]	2.359	.457	26.689	1	.000	1.464	3.253
	[Q11 = 5]	2.788	.539	26.811	1	.000	1.733	3.844
	[Q11 = 6]	3.090	.610	25.626	1	.000	1.893	4.286
Location	[Q6 REG=.00]	-.637-	.407	2.454	1	.117	-1.435-	.160
	[Q6 REG=1.00]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a.This parameter is set to zero because it is redundant.

Model 2: After controlling for GPA only⁸⁵

⁸⁴ Before we start looking at the marginal effects of each explanatory variable in the model, we first need to determine whether the model improves our ability to predict the outcome which is measuring the effect of cost sharing on quality as *fitness of purpose*. Table (A4-3) showed that the Language of Instruction does not explain the quality as fitness of purpose variable, as the p-value > 0.05. Table (A4-4) as well declared that the Language of Instruction does not explain the dependent variable. The odds of FLIP reducing the transition period between graduation and first entry into labor market is 0.569 compared to the TAP; however the variable 'Language of Instruction' is not significant (odds ratio of 0.569 (95% CI, -1.42 to 0.29)), Wald $\chi^2(1) = 1.68$, p = 0.195.

⁸⁵ The results in Table (A4-5) show that the model tends to be significant as the p-value < 0.05, after controlling for GPA. The Goodness of fit statistics in Table (A4-6) is intended to test whether the observed data are consistent with the fitted model. We start from the null hypothesis that the fit is good. If we do not reject this hypothesis, this means that the p-value is large, and then we conclude that the data and the model predictions are similar and that we have a good model. However if we reject the assumption of a good fit, conventionally if p-value < 0.05, then the model does not fit the data well. The results for our analysis suggest here that the model does fit somehow well as the p-value > 0.05. The R2 statistics in the linear regressions is not the same as in logistic and ordinal regression models, therefore the three approximations below in Table (A4-7) are computed instead. We would notice here that the pseudo R2 values (e.g. Nagelkerke = 12.8%) which indicates that the independent variables explain relatively low proportion of the variation in the period between graduation and first entry to labor market. It was noticed from Table (A4-8) shows that after controlling for the GPA, the model turns to be

Table A4- 5: Model 2 - Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	67.327			
Final	56.546	10.782	3	.013

Link function: Logit.

Table A4- 6: Model 2 - Goodness-of-Fit Statistics

	Chi-Square	df	Sig.
Pearson	17.636	21	0.672
Deviance	19.239	21	0.570

Link function: Logit.

Table A4- 7: Model 2 - Pseudo R-Square Statistics

Cox and Snell	.119
Nagelkerke	.128
McFadden	.047

Link function: Logit.

Table A4- 8: Model 2 - Parameter Estimates

		Estimate [Log Odds]	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Q11 = 1]	15.520	.375	1715.449	1	.000	14.785	16.254
	[Q11 = 2]	16.127	.368	1917.771	1	.000	15.406	16.849
	[Q11 = 3]	17.071	.395	1866.954	1	.000	16.297	17.846
	[Q11 = 4]	17.974	.486	1369.717	1	.000	17.022	18.926
	[Q11 = 5]	18.414	.561	1075.555	1	.000	17.314	19.515
	[Q11 = 6]	18.724	.630	882.309	1	.000	17.489	19.960
Location	[Q6 REG=.00]	-.564-	.435	1.682	1	.195	-1.415-	.288
	[Q6 REG=1.00]	0 ^a	.	.	0	.	.	.

significant which means that GPA tends to explain the dependent variable 'the transition period between graduation and first entry into labor market'; however still the variable FLIP is insignificant and the estimates keep its direction and somehow the magnitude (-0.564). The odds of reducing the transition period between graduation and work are 0.569 for FLIP compared to the TAP; however the variable 'Language of Instruction' is not significant (odds ratio of 0.569 (95% CI, -1.42 to 0.29)), Wald $\chi^2(1) = 1.68$, $p = 0.195$. The results in Table (A4-8) showed as well that having a 'Very Good' in GPA is less likely to broaden the transition period between graduation and work compared to those who obtain 'Pass' in their GPA. This could be actually explained by the fact that GPA is not the main variable that employers choose their applicants accordingly; there are other variables which could be like nepotism, favoritism, and others.

	Estimate [Log Odds]	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
[Q7=2]	14.860	.450	1089.501	1	.000	13.978	15.743
[Q7=3]	16.128	.000	.	1	.	16.128	16.128
[Q7=4]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Model 3: After controlling for GPA and the quality indicator: Field visits to foreign universities in the discipline area⁸⁶

Table A4- 9: Model 3 - Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	118.230			
Final	101.562	16.669	7	.020

Link function: Logit.

Table A4- 10: Model 3 - Goodness-of-Fit Statistics

	Chi-Square	df	Sig.
Pearson	59.056	107	1.000
Deviance	52.268	107	1.000

Link function: Logit.

Table A4- 11: Model 3 - Pseudo R-Square Statistics

Cox and Snell	.178
Nagelkerke	.191

⁸⁶ The results in Table (A4-9) show that the model tends to be significant as the p-value < 0.05, after controlling for GPA and the quality indicator: Field visits to foreign universities in the discipline area. The results in Table (A4-10) suggest that the model does fit very well as the p-value > 0.05. Moreover, Table (A4-11) presents the pseudo R2 values (e.g. Nagelkerke = 19.1%) which indicates that the independent variables explain relatively modest proportion of the variation in the period between graduation and first entry to labor market. It was noticed from Table (A4-12) that even after controlling for the GPA and the quality indicator: Field visits to foreign universities in the discipline area. The model remains significant only after controlling for the GPA, which explains the dependent variable significantly. However still the variable 'Language of Instruction not significant and the estimates for FLIP keeps its direction and magnitude (Log estimates=-0.626), as the odds of reducing the transition period between graduation and work are about 0.569 for FLIP compared to the TAP (odds ratio of 0.569⁸⁶ (95% CI, -1.519 to 0.267)), Wald $\chi^2(1) = 1.69$, p = 0.169. The results in Table (A4-12) showed as well that having a 'Very Good' in GPA is less likely to broaden the transition period between graduation and work compared to those who obtain 'Pass' in their GPA. Controlling for the variable 'Field visits to foreign universities in the discipline area' showed that it cannot explain the dependent variable.

McFadden	.073
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Link function: Logit.

Table A4- 12: Model 3 - Parameter Estimates

		Estimate [Log Odds]	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Q11 = 1]	15.454	.563	754.609	1	.000	14.351	16.557
	[Q11 = 2]	16.096	.562	819.363	1	.000	14.994	17.198
	[Q11 = 3]	17.073	.587	844.551	1	.000	15.922	18.224
	[Q11 = 4]	18.016	.658	750.303	1	.000	16.727	19.306
	[Q11 = 5]	18.473	.718	661.636	1	.000	17.065	19.881
	[Q11 = 6]	18.786	.774	589.256	1	.000	17.269	20.303
Location	[Q6 REG=.00]	-.626-	.456	1.889	1	.169	-1.519-	.267
	[Q6 REG=1.00]	0 ^a	.	.	0	.	.	.
	[Q7=2]	14.496	.463	978.456	1	.000	13.588	15.404
	[Q7=3]	15.778	.000	.	1	.	15.778	15.778
	[Q7=4]	0 ^a	.	.	0	.	.	.
	[Q33 REG=2.00]	-1.038-	1.180	.774	1	.379	-3.350-	1.274
	[Q33 REG=3.00]	-.332-	1.012	.108	1	.743	-2.316-	1.652
	[Q33 REG=4.00]	1.311	.789	2.760	1	.097	-.236-	2.857
	[Q33 REG=5.00]	.450	.591	.578	1	.447	-.710-	1.609
	[Q33 REG=6.00]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Model 4: After controlling for GPA and the quality indicators: Field visits to foreign universities in the discipline area and Counselling & academic support⁸⁷

⁸⁷ The results in Table (A4-13) show that the model tends to be significant as the p-value < 0.05, after controlling for GPA and the quality indicators. Moreover, the results in Table (A4-14) conclude that the model does fit very well as the p-value > 0.05. Table (A4-15) presents the pseudo R2 values (e.g. Nagelkerke = 27.7%), which indicates that the independent variables explain relatively modest proportion of the variation in the dependent variable. It was noticed in Table (A4-16) that after controlling for the GPA and the quality indicators: Field visits to foreign universities in the discipline area, and counselling & academic support, the model is as well significant. However still the variable 'Language of Instruction' is not significant and the estimates for FLIP keeps its direction and magnitude, as the odds of reducing the transition period between graduation and work are about 0.469 for FLIP compared to the TAP. The results in Table (A4-16) showed that high levels of counseling and academic support are more likely to reduce the transition period between graduation and work compared without it. The table showed as well that field visits to foreign universities is less likely to reduce the transition period, and that is true because graduates who travelled to study one year abroad in the listed foreign universities by FEPS, complained that this study is not taken into account and not counted for graduation requirements and

Table A4- 13: Model 4 - Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	175.281			
Final	149.973	25.307	12	.013

Link function: Logit.

Table A4- 14: Model 4 - Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	210.920	252	.972
Deviance	115.436	252	1.000

Link function: Logit.

Table A4- 15: Model 4 - Pseudo R-Square Statistics

Cox and Snell	.258
Nagelkerke	.277
McFadden	.111

Link function: Logit.

Table A4- 16: Model 4 - Parameter Estimates

		Estimate [Log Odds]	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Q11 = 1]	12.043	.797	228.120	1	.000	10.480	13.605
	[Q11 = 2]	12.743	.782	265.710	1	.000	11.211	14.275
	[Q11 = 3]	13.748	.775	314.725	1	.000	12.229	15.266
	[Q11 = 4]	14.704	.808	331.177	1	.000	13.120	16.287
	[Q11 = 5]	15.177	.850	318.557	1	.000	13.510	16.844
	[Q11 = 6]	15.504	.894	300.567	1	.000	13.752	17.257
Location	[Q6 REG=.00]	-.779	.489	2.544	1	.111	-1.737	.178
	[Q6 REG=1.00]	0 ^a	.	.	0	.	.	.
	[Q7=2]	12.516	.499	629.814	1	.000	11.538	13.493
	[Q7=3]	13.702	.000	.	1	.	13.702	13.702
	[Q7=4]	0 ^a	.	.	0	.	.	.
	[Q33 REG=2.00]	.693	1.516	.209	1	.648	-2.278	3.664
	[Q33 REG=3.00]	1.821	1.417	1.652	1	.199	-.956	4.599

students have to study back again and resume their credit hours locally for graduation. Hence, this encourages a lot of students not to travel abroad, in order to graduate on time.

	Estimate [Log Odds]	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
[Q33 REG=4.00]	3.413	1.229	7.716	1	.005	1.005	5.821
[Q33 REG=5.00]	2.138	1.087	3.871	1	.049	.008	4.268
[Q33 REG=6.00]	0 ^a	.	.	0	.	.	.
[Q35 Reg=1.00]	-2.842-	1.489	3.642	1	.056	-5.761-	.077
[Q35 Reg=2.00]	-3.679-	1.466	6.294	1	.012	-6.552-	-.805-
[Q35 Reg=3.00]	-3.253-	1.323	6.047	1	.014	-5.846-	-.660-
[Q35 Reg=4.00]	-3.067-	1.371	5.004	1	.025	-5.754-	-.380-
[Q35 Reg=5.00]	-2.650-	1.320	4.030	1	.045	-5.238-	-.063-
[Q35 Reg=6.00]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Model 5: After controlling for GPA and the quality indicators: Field visits to foreign universities in the discipline area, Counselling & academic support and Practical training in industry operating in the same area of discipline⁸⁸

Table A4- 17: Model 5 - Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	192.834			
Final	159.234	33.600	17	.009

Link function: Logit.

Table A4- 18: Model 5 - Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	223.563	331	1.000

⁸⁸ The results in Table (A4-17) declare that the model remains significant after controlling for more independent variables, as the p-value < 0.05. The results in Table (A4-18) conclude that the model does fit very well as the p-value > 0.05. Furthermore, the pseudo R2 values (e.g. Nagelkerke = 35.1%), as shown in Table (A4-19), indicates that the independent variables explain relatively rational proportion of the variation in the dependent variable. Table (A4-20) declares that after controlling for the GPA and the quality indicators: Field visits to foreign universities in the discipline area, counselling & academic support and Practical training in industry operating in the discipline area. The model is yet significant, as the p-value < 0.05; however, still the variable FLIP is insignificant and the estimates keep its direction and magnitude settled. The results in Table (A4-20) showed that high levels of counseling and academic support is more likely to reduce the transition period between graduation and work, and that the factors affecting the transition period to be reduced is GPA, counseling & academic support and partly the field trip to the foreign universities. However, yet the language of instruction can not explain the dependent variable, moreover there is no significant difference between FLIP and Tap in reducing the transition period between graduation and work.

Deviance	135.375	331	1.000
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Link function: Logit.

Table A4- 19: Model 5 - Pseudo R-Square Statistics

Cox and Snell	.327
Nagelkerke	.351
McFadden	.148

Link function: Logit.

Table A4- 20: Model 5 - Parameter Estimates

		Estimate [Log Odds]	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Q11 = 1]	8.491	.896	89.715	1	.000	6.734	10.248
	[Q11 = 2]	9.226	.875	111.175	1	.000	7.511	10.942
	[Q11 = 3]	10.289	.855	144.931	1	.000	8.614	11.964
	[Q11 = 4]	11.332	.866	171.265	1	.000	9.635	13.030
	[Q11 = 5]	11.882	.902	173.587	1	.000	10.114	13.649
	[Q11 = 6]	12.247	.944	168.250	1	.000	10.396	14.098
Location	[Q6_REG=.00]	-1.012-	.525	3.705	1	.054	-2.041-	.018
	[Q6_REG=1.00]	0 ^a	.	.	0	.	.	.
	[Q7=2]	9.878	.508	378.620	1	.000	8.883	10.873
	[Q7=3]	11.028	.000	.	1	.	11.028	11.028
	[Q7=4]	0 ^a	.	.	0	.	.	.
	[Q33_REG=2.00]	2.563	2.049	1.564	1	.211	-1.453-	6.578
	[Q33_REG=3.00]	4.361	2.038	4.579	1	.032	.367	8.355
	[Q33_REG=4.00]	5.436	1.748	9.666	1	.002	2.009	8.862
	[Q33_REG=5.00]	4.011	1.735	5.345	1	.021	.611	7.411
	[Q33_REG=6.00]	0 ^a	.	.	0	.	.	.
	[Q35_Reg=1.00]	-2.320-	1.493	2.414	1	.120	-5.247-	.607
	[Q35_Reg=2.00]	-4.123-	1.584	6.775	1	.009	-7.227-	-1.018-
	[Q35_Reg=3.00]	-3.733-	1.378	7.344	1	.007	-6.433-	-1.033-
	[Q35_Reg=4.00]	-3.945-	1.470	7.203	1	.007	-6.826-	-1.064-
	[Q35_Reg=5.00]	-3.155-	1.386	5.179	1	.023	-5.873-	-.438-
	[Q35_Reg=6.00]	0 ^a	.	.	0	.	.	.
[Q34_Reg=1.00]	-18.787-	1637.047	.000	1	.991	-3227.341-	3189.767	
[Q34_Reg=2.00]	-2.836-	1.603	3.129	1	.077	-5.978-	.306	
[Q34_Reg=3.00]	-2.414-	1.545	2.441	1	.118	-5.443-	.614	

	Estimate [Log Odds]	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
[Q34 Reg=4.00]	-2.200-	1.345	2.678	1	.102	-4.836-	.435
[Q34 Reg=5.00]	-1.947-	1.480	1.732	1	.188	-4.848-	.953
[Q34 Reg=6.00]	0 ^a	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

APPENDIX 5

MANN-WHITNEY U TEST RESULTS

Table A5- 1: Mann-Whitney U Test: Mean Ranks

Questions tested in Hypothesis	FLIP/TAP	N	Mean Rank	Sum of Ranks
Q11 When did you join labor market after graduation?	FLIP	49	42.87	2100.50
	TAP	43	50.64	2177.50
	Total	92		
Q13 To what extent does your discipline help you find a satisfying job vacancy	FLIP	44	42.93	1889.00
	TAP	38	39.84	1514.00
	Total	82		
Q14 To what extent does your discipline help you build your abilities and qualify you to join the labor market	FLIP	44	43.23	1902.00
	TAP	38	39.50	1501.00
	Total	82		
Q15 To what extent does your discipline help you build and enhance your personnel abilities	FLIP	44	41.90	1843.50
	TAP	38	41.04	1559.50
	Total	82		
Q16 To what extent does your language of instruction help you find a satisfying job vacancy	FLIP	44	38.56	1696.50
	TAP	38	44.91	1706.50
	Total	82		
Q17 To what extent does your language of instruction qualify you to join the labor market	FLIP	44	41.19	1812.50
	TAP	38	41.86	1590.50
	Total	82		
Q18 To what extent are there available textbooks in your language of instruction?	FLIP	49	41.03	2010.50
	TAP	44	53.65	2360.50
	Total	93		
Q19 To what extent are the curriculum contents are clear in textbooks available in the language of instruction?	FLIP	49	41.82	2049.00
	TAP	44	52.77	2322.00
	Total	93		
Q20 To what extent do the textbooks cover the curriculum subjects in the language of instruction you were enrolled in?	FLIP	49	42.30	2072.50
	TAP	44	52.24	2298.50
	Total	93		
Q21 To what extent do the following statements qualify you for labor market? Academically qualified in your discipline	FLIP	49	46.24	2266.00
	TAP	44	47.84	2105.00
	Total	93		
Q22 To what extent do the following statements qualify you for labor market? Academic programmes in discipline	FLIP	49	46.95	2300.50
	TAP	44	47.06	2070.50
	Total	93		
Q23 To what extent do the following statements qualify you for labor market? Academic programmes in language of instruction	FLIP	49	45.19	2214.50
	TAP	44	49.01	2156.50
	Total	93		
Q24 To what extent do the following statements qualify you for labor	FLIP	49	39.60	1940.50

Questions tested in Hypothesis	FLIP/TAP	N	Mean Rank	Sum of Ranks
market? Textbooks used in instruction	TAP	44	55.24	2430.50
	Total	93		
Q25 To what extent do the following statements qualify you for labor market? New and High-Quality labs	FLIP	49	46.91	2298.50
	TAP	44	47.10	2072.50
Q26 To what extent do the following statements qualify you for labor market? Faculty methods of explaining the syllabi	Total	93		
	FLIP	49	49.70	2435.50
Q27 To what extent do the following statements qualify you for labor market? Interaction with faculty within lecture halls	TAP	44	43.99	1935.50
	Total	93		
Q28 To what extent do the following statements qualify you for labor market? Interaction with faculty outside lecture halls	FLIP	49	47.71	2338.00
	TAP	44	46.20	2033.00
Q29 To what extent do the following statements qualify you for labor market? Teaching assistants' ways of explaining	Total	93		
	FLIP	49	49.07	2404.50
Q30 To what extent do the following statements qualify you for labor market? Practical experience of teaching assistants	TAP	44	44.69	1966.50
	Total	93		
Q31 To what extent do the following statements qualify you for labor market? Interaction with teaching assistants within lecture halls	FLIP	49	45.76	2242.00
	TAP	44	48.39	2129.00
Q32 To what extent do the following statements qualify you for labor market? The interest in the empirical practice of the theory	Total	93		
	FLIP	49	46.36	2271.50
Q33 To what extent do the following statements qualify you for labor market? Field visits to foreign universities in the discipline area (Joint Programmes with foreign universities)	TAP	44	47.72	2099.50
	Total	93		
Q34 To what extent do the following statements qualify you for labor market? Practical training in industry operating in the same area of discipline	FLIP	49	46.68	2287.50
	TAP	44	47.35	2083.50
Q35 To what extent do the following statements qualify you for labor market? Counseling and academic support	Total	93		
	FLIP	49	49.22	2412.00
Q36 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Identify the overall goal of the academic course you are teaching	TAP	44	44.52	1959.00
	Total	93		
Q37 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Define the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)	FLIP	49	43.08	2111.00
	TAP	44	51.36	2260.00
Q38 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Inform students with course plan	Total	93		
	FLIP	49	44.03	2157.50
	TAP	44	50.31	2213.50
	Total	93		
	FLIP	49	46.39	2273.00
	TAP	44	47.68	2098.00
	Total	93		
	FLIP	49	46.90	2298.00
	TAP	44	47.11	2073.00
	Total	93		
	FLIP	49	47.54	2329.50
	TAP	44	46.40	2041.50
	Total	93		
	FLIP	49	47.89	2346.50
	TAP	44	46.01	2024.50
	Total	93		

Questions tested in Hypothesis	FLIP/TAP	N	Mean Rank	Sum of Ranks
(Objectives, Course Contents, Exam Style, and References)	Total	93		
Q39 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Distribute the syllabi logically throughout the academic calendar	FLIP	49	45.44	2226.50
	TAP	44	48.74	2144.50
	Total	93		
Q40 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Review the course plan constantly and refine it if needed	FLIP	49	43.94	2153.00
	TAP	44	50.41	2218.00
	Total	93		
Q41 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Modify the course during the semester due to the unforeseen circumstances in the short term	FLIP	49	47.03	2304.50
	TAP	44	46.97	2066.50
	Total	93		
Q42 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Gathering the scientific sources on the lectures' topic from multiple references	FLIP	49	48.43	2373.00
	TAP	44	45.41	1998.00
	Total	93		
Q43 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff have regular office hours	FLIP	49	52.33	2564.00
	TAP	44	41.07	1807.00
	Total	93		
Q44 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff is available during their office hours	FLIP	49	49.90	2445.00
	TAP	44	43.77	1926.00
	Total	93		
Q45 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Interest in the practical applications of the scientific material	FLIP	49	52.20	2558.00
	TAP	44	41.20	1813.00
	Total	93		
Q46 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Develop the applied assignment for academic course and link it with labor market orientations	FLIP	49	49.96	2448.00
	TAP	44	43.70	1923.00
	Total	93		
Q47 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Strengthen the ties with the productive firms and services in the labor market	FLIP	49	47.48	2326.50
	TAP	44	46.47	2044.50
	Total	93		
Q48 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? The use of modern technologies in teaching whether visual, or audio or both	FLIP	49	50.60	2479.50
	TAP	44	42.99	1891.50
	Total	93		
Q49 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Train students to use computers and internet in the tasks assigned to them	FLIP	49	49.37	2419.00
	TAP	44	44.36	1952.00
	Total	93		
Q50 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Depend on e-contents in teaching like computer softwares, CDs,...etc.	FLIP	49	49.36	2418.50
	TAP	44	44.38	1952.50
	Total	93		
Q51 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Use of computers in submitting assignment and research papers	FLIP	49	44.79	2194.50
	TAP	44	49.47	2176.50
	Total	93		
Q52 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Use of e-communication to follow up students assignments	FLIP	49	48.21	2362.50
	TAP	44	45.65	2008.50
	Total	93		

Questions tested in Hypothesis	FLIP/TAP	N	Mean Rank	Sum of Ranks
Q53 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Train students to use internet to find information needed for purpose of academic course	FLIP	49	49.02	2402.00
	TAP	44	44.75	1969.00
	Total	93		
Q54 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encourage students to innovate and logically think logically	FLIP	49	48.38	2370.50
	TAP	44	45.47	2000.50
	Total	93		
Q55 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encourage students to debate and build a constructive dialogue	FLIP	49	49.55	2428.00
	TAP	44	44.16	1943.00
	Total	93		
Q56 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to think based on evidence	FLIP	49	49.49	2425.00
	TAP	44	44.23	1946.00
	Total	93		
Q57 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to think independently	FLIP	49	48.95	2398.50
	TAP	44	44.83	1972.50
	Total	93		
Q58 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff is adorn to the academic thinking when discussing scientific issues in class	FLIP	49	50.17	2458.50
	TAP	44	43.47	1912.50
	Total	93		
Q59 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to join the community programmes such as participating in community services, awareness programmes in rural areas, slums, .. etc.	FLIP	49	47.27	2316.00
	TAP	44	46.70	2055.00
	Total	93		
Q60 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Discover the young talents and guide them through unions and student activities	FLIP	49	43.49	2131.00
	TAP	44	50.91	2240.00
	Total	93		
Q61 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Broadcast the team spirit, teamwork and volunteerism among students	FLIP	49	44.70	2190.50
	TAP	44	49.56	2180.50
	Total	93		
Q62 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Follow up students' performance and assess them frequently	FLIP	49	41.60	2038.50
	TAP	44	53.01	2332.50
	Total	93		
Q63 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in empirical practice of academic course theory	FLIP	49	49.79	2439.50
	TAP	44	43.90	1931.50
	Total	93		
Q64 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in giving feedback to exams and assignments	FLIP	49	48.01	2352.50
	TAP	44	45.88	2018.50
	Total	93		
Q65 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in discussions and responding to students' questioning	FLIP	49	47.19	2312.50
	TAP	44	46.78	2058.50
	Total	93		
Q66 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Set in advance the rules of students' performance evaluations	FLIP	49	46.51	2279.00
	TAP	44	47.55	2092.00
	Total	93		
Q67 To what extent does the faculty undertake the following while teaching	FLIP	49	50.76	2487.00

Questions tested in Hypothesis	FLIP/TAP	N	Mean Rank	Sum of Ranks
the curriculum you were assigned to? Show and discuss the results of follow-up evaluations with students	TAP	44	42.82	1884.00
	Total	93		
Q68 Define your use of the following in undertaking the course required assignments? The use of school labs in doing assignments like (Pcs, Internet, ..etc.)	FLIP	49	54.64	2677.50
	TAP	44	38.49	1693.50
	Total	93		
Q69 Define your use of the following in undertaking the course required assignments? The use of school library in doing assignments	FLIP	49	56.07	2747.50
	TAP	44	36.90	1623.50
	Total	93		

Table A5- 2: Mann-Whitney U Test

Questions tested in Hypothesis	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Q11 When you joined labor market after graduation?	875.500	2100.500	-1.555	.120
Q13 To what extent your discipline helps you find a satisfying job vacancy	773.000	1514.000	-.641	.521
Q14 To what extent does your discipline help you build your abilities and qualify you to join the labor market	760.000	1501.000	-.756	.450
Q15 To what extent does your discipline help you build and enhance your personnel abilities	818.500	1559.500	-.174	.862
Q16 To what extent does your language of instruction help you find a satisfying job vacancy	706.500	1696.500	-1.267	.205
Q17 To what extent does your language of instruction qualify you to join the labor market	822.500	1812.500	-.133	.895
Q18 To what extent are there available textbooks in your language of instruction?	785.500	2010.500	-2.454	.014
Q19 To what extent are the curriculum contents clear in textbooks available in the language of instruction?	824.000	2049.000	-2.074	.038
Q20 To what extent do the textbooks cover the curriculum subjects in the language of instruction you were enrolled in?	847.500	2072.500	-1.873	.061
Q21 To what extent do the following statements qualify you for labor market? Academically qualified in your discipline	1041.000	2266.000	-.300	.764
Q22 To what extent do the following statements qualify you for labor market? Academic programmes in discipline	1075.500	2300.500	-.020	.984
Q23 To what extent do the following statements qualify you for labor market? Academic programmes in language of instruction	989.500	2214.500	-.722	.471
Q24 To what extent do the following statements qualify you for labor market? Textbooks used in instruction	715.500	1940.500	-2.926	.003
Q25 To what extent do the following statements qualify you for labor market? New and High-Quality labs	1073.500	2298.500	-.035	.972
Q26 To what extent do the following statements qualify you for labor market? Faculty methods of explaining the syllabi	945.500	1935.500	-1.090	.276
Q27 To what extent do the following statements qualify you for labor market? Interaction with faculty within lecture halls	1043.000	2033.000	-.282	.778
Q28 To what extent do the following statements qualify you for labor market? Interaction with faculty outside lecture halls	976.500	1966.500	-.803	.422
Q29 To what extent do the following statements qualify you for labor market? Teaching assistants ways of explaining	1017.000	2242.000	-.489	.625
Q30 To what extent do the following statements qualify you for labor market? Practical experience of teaching assistants	1046.500	2271.500	-.250	.803

Questions tested in Hypothesis	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Q31 To what extent do the following statements qualify you for labor market? Interaction with teaching assistants within lecture halls	1062.500	2287.500	-.123	.902
Q32 To what extent do the following statements qualify you for labor market? The interest in the empirical practice of the theory	969.000	1959.000	-.862	.389
Q33 To what extent do the following statements qualify you for labor market? Field visits to foreign universities in the discipline area (Joint Programmes with foreign universities)	886.000	2111.000	-1.614	.106
Q34 To what extent do the following statements qualify you for labor market? Practical training in industry operating in the same area of discipline	932.500	2157.500	-1.161	.246
Q35 To what extent do the following statements qualify you for labor market? Counseling and academic support	1048.000	2273.000	-.236	.813
Q36 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Identify the overall goal of the academic course you are teaching	1073.000	2298.000	-.040	.968
Q37 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Define the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)	1051.500	2041.500	-.212	.832
Q38 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Inform students of the course plan (Objectives, Course Contents, Exam Style, and References)	1034.500	2024.500	-.353	.724
Q39 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Distribute the syllabi logically throughout the academic calendar	1001.500	2226.500	-.621	.534
Q40 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Review the course plan constantly and refine it if needed	928.000	2153.000	-1.208	.227
Q41 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Modify the course during the semester due to the unforeseen circumstances in the short term	1076.500	2066.500	-.012	.990
Q42 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Gathering the scientific sources on the lectures' topic from multiple references	1008.000	1998.000	-.569	.569
Q43 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff have regular office hours	817.000	1807.000	-2.113	.035
Q44 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff is available during their office hours	936.000	1926.000	-1.145	.252
Q45 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Interest in the practical applications of the scientific material	823.000	1813.000	-2.047	.041
Q46 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Develop the applied assignment for academic course and link it with labor market orientations	933.000	1923.000	-1.158	.247
Q47 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Strengthen the ties with the productive firms and services in the labor market	1054.500	2044.500	-.189	.850
Q48 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? The use of modern technologies in teaching whether visual, or audio or both	901.500	1891.500	-1.416	.157
Q49 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Train students to use	962.000	1952.000	-.920	.357

Questions tested in Hypothesis	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
computers and internet in the tasks assigned to them				
Q50 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Depend on e-contents in teaching like computer softwares, CDs,...etc.	962.500	1952.500	-.919	.358
Q51 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Use of computers in submitting assignment and research papers	969.500	2194.500	-.856	.392
Q52 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Use of e-communication to follow up students assignments	1018.500	2008.500	-.473	.636
Q53 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Train students to use internet to find information needed for purpose of academic course	979.000	1969.000	-.785	.432
Q54 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encourage students to innovate and think logically	1010.500	2000.500	-.538	.590
Q55 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encourage students to debate and build a constructive dialogue	953.000	1943.000	-1.001	.317
Q56 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to think based on evidence	956.000	1946.000	-.975	.329
Q57 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to think independently	982.500	1972.500	-.763	.445
Q58 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff is adorn to the academic thinking when discussing scientific issues in class	922.500	1912.500	-1.260	.208
Q59 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Encouraging students to join the community programmes such as participating in community services, awareness programmes in rural areas, slums, .. etc.	1065.000	2055.000	-.104	.917
Q60 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Discover the young talents and guide them through unions and student activities	906.000	2131.000	-1.376	.169
Q61 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Broadcast the team spirit, teamwork and volunteerism among students	965.500	2190.500	-.910	.363
Q62 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Follow up students' performance and assess them frequently	813.500	2038.500	-2.111	.035
Q63 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in empirical practice of academic course theory	941.500	1931.500	-1.099	.272
Q64 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in giving feedback to exams and assignments	1028.500	2018.500	-.394	.694
Q65 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Staff interest in discussions and responding to students' questioning	1068.500	2058.500	-.077	.938
Q66 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Set in advance the rules of students' performance evaluations	1054.000	2279.000	-.193	.847
Q67 To what extent does the faculty undertake the following while teaching the curriculum you were assigned to? Show and discuss the results of follow-up evaluations with students	894.000	1884.000	-1.459	.145

Questions tested in Hypothesis	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Q68 Define your use of the following in undertaking the course required assignments? The use of school labs in doing assignments like (Pcs, Internet, ..etc.)	703.500	1693.500	-2.971	.003
Q69 Define your use of the following in undertaking the course required assignments? The use of school library in doing assignments	633.500	1623.500	-3.566	.000

The desired significance level is 0.05.

APPENDIX 6

KRUSKALL-WALLIS TEST RESULTS

Table A6- 1: Kruskal-Wallis Test: Mean Ranks

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(5.1) To what extent is there homogeneity of the scientific material/ subject between the three divisions in the school.	TAP	13	29.42
	ELIP	4	17.50
	TAP & ELIP	28	23.63
	TAP & FrLIP	1	42.00
	ELIP & FrLIP	1	42.00
	TAP & ELIP & FrLIP	3	25.67
	Total	50	
(5.2.1) To what extent are the textbooks available to the Arabic division students	TAP	13	25.65
	ELIP	4	44.25
	TAP & ELIP	28	22.21
	TAP & FrLIP	1	34.50
	ELIP & FrLIP	1	47.50
	TAP & ELIP & FrLIP	3	20.17
	Total	50	
(5.2.2) To what extent are the textbooks available to the English division students	TAP	13	38.62
	ELIP	4	19.00
	TAP & ELIP	28	21.50
	TAP & FrLIP	1	19.00
	ELIP & FrLIP	1	19.00
	TAP & ELIP & FrLIP	3	19.00
	Total	50	
(5.2.3) To what extent are the textbooks available to the French division students	TAP	13	26.65
	ELIP	4	30.50
	TAP & ELIP	28	27.82
	TAP & FrLIP	1	5.50
	ELIP & FrLIP	1	5.50
	TAP & ELIP & FrLIP	3	5.50
	Total	50	
(5.3.1) To what extent are the curriculum contents obvious in the textbooks provided for the Arabic students' division	TAP	13	24.54
	ELIP	4	46.00
	TAP & ELIP	28	22.46
	TAP & FrLIP	1	35.00
	ELIP & FrLIP	1	46.00
	TAP & ELIP & FrLIP	3	20.67
	Total	50	

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(5.3.2) To what extent are the curriculum contents obvious in the textbooks provided for the English students' division	TAP	13	38.73
	ELIP	4	16.50
	TAP & ELIP	28	21.57
	TAP & FrLIP	1	16.50
	ELIP & FrLIP	1	35.50
	TAP & ELIP & FrLIP	3	16.50
	Total	50	
(5.3.3) To what extent are the curriculum contents obvious in the textbooks provided for the French students' division	TAP	1	5.50
	TAP & ELIP	4	5.50
	TAP & FrLIP	1	5.50
	ELIP & FrLIP	1	5.50
	TAP & ELIP & FrLIP	3	5.50
	Total	10	
(5.4.1) To what extent do the textbooks meet the core subjects of the scientific study taught to the Arabic students' division	TAP	13	17.62
	TAP & ELIP	28	24.50
	TAP & FrLIP	1	35.50
	TAP & ELIP & FrLIP	3	28.17
	Total	45	
(5.4.2) To what extent do the textbooks meet the core subjects of the scientific study taught to the English students' division	TAP	4	26.50
	ELIP	4	15.50
	TAP & ELIP	27	19.83
	TAP & FrLIP	1	15.50
	ELIP & FrLIP	1	35.00
	TAP & ELIP & FrLIP	3	22.00
	Total	40	
(5.4.3) To what extent do the textbooks meet the core subjects of the scientific study taught to the French students' division	TAP	3	8.83
	TAP & ELIP	4	4.50
	TAP & FrLIP	1	4.50
	ELIP & FrLIP	1	10.00
	TAP & ELIP & FrLIP	3	6.33
Total	12		
(5.5.1) To what extent do the textbooks easily present the themes of the scientific study taught to the Arabic students' division	TAP	13	19.23
	TAP & ELIP	28	23.80
	TAP & FrLIP	1	35.00
	TAP & ELIP & FrLIP	3	27.83
Total	45		
(5.5.2) To what extent do the textbooks easily present the themes of the scientific study taught to the English students' division	TAP	3	29.17
	ELIP	4	23.75
	TAP & ELIP	28	18.88
	TAP & FrLIP	1	14.00
	ELIP & FrLIP	1	14.00

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank	
(5.5.3) To what extent do the textbooks easily present the themes of the scientific study taught to the French students' division	TAP & ELIP & FrLIP	3	27.00	
	Total	40		
	TAP	2	8.75	
	TAP & ELIP	3	4.50	
	TAP & FrLIP	1	3.00	
	ELIP & FrLIP	1	3.00	
	TAP & ELIP & FrLIP	3	6.00	
	Total	10		
	(5.6) To what extent do the scientific study's exams' are homogenous among the various FEPS language taught programmes and the uniform programme (Arabic, English and French Divisions)	TAP	13	28.35
		ELIP	4	16.00
TAP & ELIP		28	24.61	
TAP & FrLIP		1	16.00	
ELIP & FrLIP		1	38.00	
TAP & ELIP & FrLIP		3	33.17	
Total		50		
(5.7.1) To what extent do the school's study qualify the Arabic students' division to join the labor market		TAP	13	26.19
		ELIP	4	22.50
		TAP & ELIP	28	25.93
	TAP & FrLIP	1	28.50	
	ELIP & FrLIP	1	28.50	
	TAP & ELIP & FrLIP	3	20.50	
	Total	50		
	(5.7.2) To what extent do the school's study qualify the English students' division to join the labor market	TAP	13	27.69
		ELIP	4	27.00
		TAP & ELIP	28	24.43
TAP & FrLIP		1	15.00	
ELIP & FrLIP		1	39.00	
TAP & ELIP & FrLIP		3	23.00	
Total		50		
(5.7.3) To what extent do the school's study qualify the French students' division to join the labor market		TAP	13	26.81
		ELIP	4	33.75
		TAP & ELIP	28	26.09
	TAP & FrLIP	1	9.00	
	ELIP & FrLIP	1	9.00	
	TAP & ELIP & FrLIP	3	14.33	
	Total	50		
	(5.8.1) Students' density within lecture halls in the Arabic Division	TAP	13	23.62
		TAP & ELIP	28	21.30
		TAP & FrLIP	1	42.00
TAP & ELIP & FrLIP		3	29.83	
Total		45		

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(5.8.2) Students' density within lecture halls in the English Division	TAP	3	24.67
	ELIP	4	12.00
	TAP & ELIP	28	19.54
	ELIP & FrLIP	1	26.00
	TAP & ELIP & FrLIP	3	28.33
	Total	39	
(5.8.3) Students' density within lecture halls in the French Division	TAP	3	6.67
	TAP & ELIP	1	3.50
	TAP & FrLIP	1	3.50
	ELIP & FrLIP	1	7.50
	TAP & ELIP & FrLIP	3	3.50
	Total	9	
(5.9.1) Students' density within TA sessions in the Arabic Division	TAP	12	20.71
	TAP & ELIP	23	17.98
	TAP & FrLIP	1	33.00
	TAP & ELIP & FrLIP	3	28.33
	Total	39	
(5.9.2) Students' density within TA sessions in the English Division	TAP	3	21.00
	ELIP	4	10.50
	TAP & ELIP	23	16.48
	ELIP & FrLIP	1	32.00
	TAP & ELIP & FrLIP	3	26.33
	Total	34	
(5.9.3) Students' density within TA sessions in the French Division	TAP	3	5.83
	TAP & ELIP	2	5.75
	TAP & FrLIP	1	3.00
	ELIP & FrLIP	1	8.50
	TAP & ELIP & FrLIP	3	4.83
	Total	10	
(5.10.1) Arabic Students' division attendance at the lectures	TAP	13	22.65
	TAP & ELIP	28	22.54
	TAP & FrLIP	1	37.00
	TAP & ELIP & FrLIP	3	24.17
	Total	45	
(5.10.2) English Students' division attendance at the lectures	TAP	2	30.50
	ELIP	4	19.13
	TAP & ELIP	28	17.64
	ELIP & FrLIP	1	34.00
	TAP & ELIP & FrLIP	3	25.17
	Total	38	
(5.10.3) French Students' division attendance at the lectures	TAP	2	5.75

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(5.11.1) Arabic students' division engagement with the lectures	TAP & FrLIP	1	2.00
	ELIP & FrLIP	1	2.00
	TAP & ELIP & FrLIP	3	4.17
	Total	7	
	TAP	13	21.58
	TAP & ELIP	28	23.07
	TAP & FrLIP	1	25.00
	TAP & ELIP & FrLIP	3	27.83
	Total	45	
(5.11.2) English students' division engagement with the lectures	TAP	2	29.75
	ELIP	4	17.88
	TAP & ELIP	28	18.79
	ELIP & FrLIP	1	37.00
	TAP & ELIP & FrLIP	3	15.67
	Total	38	
(5.11.3) French students' division engagement with the lectures	TAP	2	5.75
	TAP & FrLIP	1	2.00
	ELIP & FrLIP	1	4.50
	TAP & ELIP & FrLIP	3	3.33
	Total	7	
(5.12.1) Arabic students' division performance in the tasks assigned to them	TAP	13	22.50
	TAP & ELIP	28	22.43
	TAP & FrLIP	1	41.00
	TAP & ELIP & FrLIP	3	24.50
	Total	45	
(5.12.2) English students' division performance in the tasks assigned to them	TAP	2	22.50
	ELIP	4	14.50
	TAP & ELIP	28	19.70
	ELIP & FrLIP	1	35.00
	TAP & ELIP & FrLIP	3	17.17
	Total	38	
(5.12.3) French students' division performance in the tasks assigned to them	TAP	2	5.50
	TAP & FrLIP	1	2.00
	ELIP & FrLIP	1	5.50
	TAP & ELIP & FrLIP	3	3.17
	Total	7	
(5.13.1) Arabic students' division performance in the final exams	TAP	13	19.85
	TAP & ELIP	28	25.39
	TAP & FrLIP	1	26.00
	TAP & ELIP & FrLIP	3	13.33
	Total	45	

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(5.13.2) English students' division performance in the final exams	TAP	2	18.50
	ELIP	4	18.50
	TAP & ELIP	28	19.84
	ELIP & FrLIP	1	33.50
	TAP & ELIP & FrLIP	3	13.67
	Total	38	
(5.13.3) French students' division performance in the final exams	TAP	2	5.50
	TAP & FrLIP	1	2.00
	ELIP & FrLIP	1	2.00
	TAP & ELIP & FrLIP	3	4.33
	Total	7	
(6.1) Identify the overall goal/ aim of the academic course you are teaching	TAP	13	25.38
	ELIP	4	23.50
	TAP & ELIP	28	25.32
	TAP & FrLIP	1	23.50
	ELIP & FrLIP	1	23.50
	TAP & ELIP & FrLIP	3	31.67
	Total	50	
(6.2) Identify the overall aim with regard to the available time schedule	TAP	13	23.77
	ELIP	4	26.13
	TAP & ELIP	28	24.38
	TAP & FrLIP	1	20.00
	ELIP & FrLIP	1	44.50
	TAP & ELIP & FrLIP	3	38.17
	Total	50	
(6.3) Defining the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)	TAP	13	23.85
	ELIP	4	28.88
	TAP & ELIP	28	25.55
	TAP & FrLIP	1	22.00
	ELIP & FrLIP	1	22.00
	TAP & ELIP & FrLIP	3	30.00
	Total	50	
(6.4) Choosing the academic topics that meets students' level in your course	TAP	13	20.69
	ELIP	4	38.38
	TAP & ELIP	28	26.07
	TAP & FrLIP	1	13.50
	ELIP & FrLIP	1	34.50
	TAP & ELIP & FrLIP	3	24.83
	Total	50	
(6.5) Distributing the syllabus through the semester's schedule logically	TAP	13	23.27
	ELIP	4	23.75

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(6.6) Identifying the expected teaching methods to be used matching the curriculum objectives	TAP & ELIP	28	25.54
	TAP & FrLIP	1	17.50
	ELIP & FrLIP	1	42.50
	TAP & ELIP & FrLIP	3	34.17
	Total	50	
	TAP	13	24.12
	ELIP	4	24.00
	TAP & ELIP	28	25.13
	TAP & FrLIP	1	18.00
	ELIP & FrLIP	1	18.00
(6.7) Selecting the interesting educational activities (Data Show, Simulation, ...) that motivate students to think	TAP & ELIP & FrLIP	3	42.00
	Total	50	
	TAP	13	29.85
	ELIP	4	37.00
	TAP & ELIP	28	23.45
	TAP & FrLIP	1	11.50
	ELIP & FrLIP	1	36.50
	TAP & ELIP & FrLIP	3	11.50
	Total	50	
	(6.8) Reviewing the course plan constantly and refining it every now and then if needed (Modification taking place doesn't require the same year)	TAP	13
ELIP	4	34.50	
TAP & ELIP	28	25.39	
TAP & FrLIP	1	13.50	
ELIP & FrLIP	1	13.50	
TAP & ELIP & FrLIP	3	38.50	
Total	50		
(6.9) Modifying the course during the semester due to unforeseen circumstances in the short term.	TAP	13	29.35
	ELIP	4	21.63
	TAP & ELIP	28	25.02
	TAP & FrLIP	1	14.50
	ELIP & FrLIP	1	14.50
	TAP & ELIP & FrLIP	3	25.83
	Total	50	
	TAP	13	29.35
	ELIP	4	21.63
	TAP & ELIP	28	25.02
(6.10) Compiling the scientific article on the lecture topic from multiple references..	TAP & FrLIP	1	14.50
	ELIP & FrLIP	1	14.50
	TAP & ELIP & FrLIP	3	25.83
	Total	50	
	TAP	13	16.50
	ELIP	4	22.38
	TAP & ELIP	28	30.05
	TAP & FrLIP	1	16.50
	ELIP & FrLIP	1	16.50
	TAP & ELIP & FrLIP	3	32.17
(6.11) Preparing for the lecture well in advance.	Total	50	
	TAP	13	23.08

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(6.12) Identifying the appropriate teaching strategy for the lecture.	ELIP	4	22.88
	TAP & ELIP	28	25.66
	TAP & FrLIP	1	50.00
	ELIP & FrLIP	1	17.00
	TAP & ELIP & FrLIP	3	32.67
	Total	50	
	TAP	13	20.38
	ELIP	4	26.50
	TAP & ELIP	28	26.71
	TAP & FrLIP	1	50.00
(6.13) Redeveloping the course to include the current and recent events examples and developments.	ELIP & FrLIP	1	46.00
	TAP & ELIP & FrLIP	3	20.00
	Total	50	
	TAP	13	22.38
	ELIP	4	20.13
	TAP & ELIP	28	29.68
	TAP & FrLIP	1	14.50
	ELIP & FrLIP	1	14.50
	TAP & ELIP & FrLIP	3	14.50
	Total	50	
(6.14) Abide by the quality standards in determining the scientific substances in charge of teaching	TAP	13	23.19
	ELIP	4	25.50
	TAP & ELIP	28	25.73
	TAP & FrLIP	1	19.50
	ELIP & FrLIP	1	43.50
	TAP & ELIP & FrLIP	3	29.33
	Total	50	
	TAP	13	30.31
	ELIP	4	23.13
	TAP & ELIP	28	24.45
(6.15) Using new and modern educational sources which contributes to the lecture contents	TAP & FrLIP	1	11.50
	ELIP & FrLIP	1	29.00
	TAP & ELIP & FrLIP	3	21.17
	Total	50	
	TAP	13	22.54
	ELIP	4	22.63
	TAP & ELIP	28	27.13
	TAP & FrLIP	1	13.50
	ELIP & FrLIP	1	13.50
	TAP & ELIP & FrLIP	3	35.00
(6.16) Preparing a summary for the most important keys in the lecture	Total	50	

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(6.17) Developing the thinking abilities for students in the lecture	TAP	13	22.27
	ELIP	4	20.00
	TAP & ELIP	28	26.11
	TAP & FrLIP	1	49.50
	ELIP & FrLIP	1	20.00
	TAP & ELIP & FrLIP	3	35.00
	Total	50	
(6.18) Inform students of the course plan (Objectives, contents, activities, references and evaluation terms)	TAP	13	26.38
	ELIP	4	24.50
	TAP & ELIP	28	25.41
	TAP & FrLIP	1	24.50
	ELIP & FrLIP	1	24.50
	TAP & ELIP & FrLIP	3	24.50
	Total	50	
(6.19) Monitoring the performance of TA in practical applications	TAP	13	26.69
	ELIP	4	20.00
	TAP & ELIP	28	25.96
	TAP & FrLIP	1	20.00
	ELIP & FrLIP	1	20.00
	TAP & ELIP & FrLIP	3	27.00
	Total	50	
(6.20) Holding regular meetings with TA to coordinate and follow up the course objectives set	TAP	13	25.00
	ELIP	4	14.00
	TAP & ELIP	28	26.55
	TAP & FrLIP	1	14.00
	ELIP & FrLIP	1	14.00
	TAP & ELIP & FrLIP	3	40.83
	Total	50	
(6.21) Having interest in the practical applications of the scientific material	TAP	13	22.85
	ELIP	4	16.50
	TAP & ELIP	28	26.63
	TAP & FrLIP	1	50.00
	ELIP & FrLIP	1	45.50
	TAP & ELIP & FrLIP	3	23.67
	Total	50	
(6.22) Developing the applied research for the academic course and to be linked to the labor market orientations	TAP	13	25.27
	ELIP	4	20.00
	TAP & ELIP	28	26.04
	TAP & FrLIP	1	11.50
	ELIP & FrLIP	1	28.50
	TAP & ELIP & FrLIP	3	32.50
	Total	50	

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(6.23) Strengthening the ties with the productive firms and services in the labor market	Total	50	
	TAP	13	23.96
	ELIP	4	16.75
	TAP & ELIP	28	28.50
	TAP & FrLIP	1	5.00
	ELIP & FrLIP	1	24.50
	TAP & ELIP & FrLIP	3	23.00
(7.1) The use of modern technologies means in teaching (visual, audio or both)	Total	50	
	TAP	13	35.08
	ELIP	4	30.00
	TAP & ELIP	28	22.61
	TAP & FrLIP	1	8.00
	ELIP & FrLIP	1	8.00
	TAP & ELIP & FrLIP	3	16.67
(7.2) The use of computer for making presentations in the academic course you teach	Total	50	
	TAP	13	35.46
	ELIP	4	30.13
	TAP & ELIP	28	22.36
	TAP & FrLIP	1	9.00
	ELIP & FrLIP	1	9.00
	TAP & ELIP & FrLIP	3	16.50
(7.3) Training students to use computers and the internet in the tasks you assign	Total	50	
	TAP	13	23.96
	ELIP	4	30.50
	TAP & ELIP	28	28.09
	TAP & FrLIP	1	11.00
	ELIP & FrLIP	1	11.00
	TAP & ELIP & FrLIP	3	11.00
(7.4) Depending on electronic contents (Computer Programs, CDs, ...) in teaching your academic course	Total	50	
	TAP	13	31.96
	ELIP	4	16.88
	TAP & ELIP	28	26.41
	TAP & FrLIP	1	4.00
	ELIP & FrLIP	1	4.00
	TAP & ELIP & FrLIP	3	14.83
(7.5) Advising students to use the computer in making reports and research projects	Total	50	
	TAP	13	26.42
	ELIP	4	24.63
	TAP & ELIP	28	25.55
	TAP & FrLIP	1	8.50
	ELIP & FrLIP	1	8.50

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(7.6) The use of e-communication tools to follow up students during their research projects	TAP & ELIP & FrLIP	3	33.50
	Total	50	
	TAP	13	30.92
	ELIP	4	33.63
	TAP & ELIP	28	24.02
	TAP & FrLIP	1	6.00
	ELIP & FrLIP	1	6.00
	TAP & ELIP & FrLIP	3	18.00
(7.7) Training students to use the internet to get the needed information from the internet/ web.	Total	50	
	TAP	13	24.81
	ELIP	4	26.00
	TAP & ELIP	28	28.70
	TAP & FrLIP	1	9.00
	ELIP & FrLIP	1	9.00
	TAP & ELIP & FrLIP	3	9.00
	Total	50	
(7.8) Encouraging students to innovate and to think logically.	TAP	13	21.69
	ELIP	4	16.50
	TAP & ELIP	28	28.23
	TAP & FrLIP	1	16.50
	ELIP & FrLIP	1	48.00
	TAP & ELIP & FrLIP	3	24.00
	Total	50	
	TAP	13	24.38
(7.9) Encouraging students to debate and build a constructive dialogue.	ELIP	4	22.50
	TAP & ELIP	28	25.13
	TAP & FrLIP	1	50.00
	ELIP & FrLIP	1	47.00
	TAP & ELIP & FrLIP	3	22.50
	Total	50	
	TAP	13	23.35
	ELIP	4	21.50
(7.10) Encouraging students to think based on evidence	TAP & ELIP	28	26.77
	TAP & FrLIP	1	50.00
	ELIP & FrLIP	1	21.50
	TAP & ELIP & FrLIP	3	21.50
	Total	50	
	TAP	13	26.92
	ELIP	4	27.00
	TAP & ELIP	28	24.57
(7.11) Encouraging students to think independently	TAP & FrLIP	1	21.00

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(7.12) Adorning students to the academic thinking when discussing scientific issues in the class	ELIP & FrLIP	1	45.00
	TAP & ELIP & FrLIP	3	21.00
	Total	50	
	TAP	13	26.65
	ELIP	4	26.25
	TAP & ELIP	28	26.11
	TAP & FrLIP	1	18.50
	ELIP & FrLIP	1	18.50
	TAP & ELIP & FrLIP	3	18.50
	Total	50	
(7.13) Encouraging students to join the community programmes such as participating in community services, in awareness programmes in rural areas, slums, ... extra.	TAP	13	19.35
	ELIP	4	36.00
	TAP & ELIP	28	27.73
	TAP & FrLIP	1	9.50
	ELIP & FrLIP	1	33.50
	TAP & ELIP & FrLIP	3	20.00
	Total	50	
	TAP	13	24.81
	ELIP	4	40.13
	TAP & ELIP	28	26.64
(7.14) Discovering the young talents and guiding it through unions, and student activities.	TAP & FrLIP	1	4.00
	ELIP & FrLIP	1	22.00
	TAP & ELIP & FrLIP	3	6.67
	Total	50	
	TAP	13	27.04
	ELIP	4	12.50
	TAP & ELIP	28	27.71
	TAP & FrLIP	1	12.50
	ELIP & FrLIP	1	12.50
	TAP & ELIP & FrLIP	3	24.17
(7.15) Broadcasting the team spirit, teamwork and volunteerism among students.	Total	50	
	TAP	13	25.69
	ELIP	4	17.50
	TAP & ELIP	28	26.36
	TAP & FrLIP	1	38.00
	ELIP & FrLIP	1	42.50
	TAP & ELIP & FrLIP	3	17.50
	Total	50	
	TAP	13	22.81
	ELIP	4	17.50
(8.1) Training students to assign/ solve various types of questions	TAP & ELIP	28	26.59
	Total	50	
	TAP	13	22.81
	ELIP	4	17.50
(8.2) Follow up the students and evaluate them constantly	TAP & ELIP	28	26.59

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(8.3) Laying the rules of assessing the students' performance	TAP & FrLIP	1	17.50
	ELIP & FrLIP	1	40.50
	TAP & ELIP & FrLIP	3	35.33
	Total	50	
	TAP	13	25.77
	ELIP	4	22.00
	TAP & ELIP	28	25.63
	TAP & FrLIP	1	22.00
	ELIP & FrLIP	1	22.00
	TAP & ELIP & FrLIP	3	30.17
(8.4) Displaying the assessment results with the students	Total	50	
	TAP	13	21.65
	ELIP	4	18.50
	TAP & ELIP	28	26.77
	TAP & FrLIP	1	18.50
	ELIP & FrLIP	1	18.50
	TAP & ELIP & FrLIP	3	44.33
	Total	50	
	TAP	13	24.12
	ELIP	4	20.50
(8.5) Adhering to the scientific standards in writing the exams	TAP & ELIP	28	25.05
	TAP & FrLIP	1	20.50
	ELIP & FrLIP	1	44.00
	TAP & ELIP & FrLIP	3	37.83
	Total	50	
	TAP	13	25.54
	ELIP	4	19.50
	TAP & ELIP	28	26.55
	TAP & FrLIP	1	19.50
	ELIP & FrLIP	1	43.50
(8.6) Setting appropriate exams to cover the contents taught which meet the course objectives	TAP & ELIP & FrLIP	3	19.50
	Total	50	
	TAP	13	22.04
	ELIP	4	18.50
	TAP & ELIP	28	27.21
	TAP & FrLIP	1	48.50
	ELIP & FrLIP	1	18.50
	TAP & ELIP & FrLIP	3	28.50
	Total	50	
	TAP	13	27.00
(9.1) The school's infrastructure (lecture halls, toilets,)	ELIP	4	35.13

Questions tested in Hypothesis	Faculty Member's Language of Instruction	N	Mean Rank
(9.2) The labs (computer, language, accessing the internet,....)	TAP & ELIP	28	23.82
	TAP & FrLIP	1	19.00
	ELIP & FrLIP	1	19.00
	TAP & ELIP & FrLIP	3	26.17
	Total	50	
	TAP	13	24.27
	ELIP	4	27.50
	TAP & ELIP	28	26.27
	TAP & FrLIP	1	15.50
	ELIP & FrLIP	1	47.50
	TAP & ELIP & FrLIP	3	17.00
(9.3) The library services (metaphor methods, number and quality of books, ...)	Total	50	
	TAP	13	25.62
	ELIP	4	19.25
	TAP & ELIP	28	24.80
	TAP & FrLIP	1	15.50
	ELIP & FrLIP	1	39.00
	TAP & ELIP & FrLIP	3	38.67
	Total	50	
	TAP	13	28.77
	ELIP	4	16.63
	TAP & ELIP	28	24.66
(9.4) The availability of new references in the library	TAP & FrLIP	1	2.50
	ELIP & FrLIP	1	27.50
	TAP & ELIP & FrLIP	3	38.00
	Total	50	
	TAP	13	20.85
	ELIP	4	27.75
	TAP & ELIP	28	28.32
	TAP & FrLIP	1	6.50
	ELIP & FrLIP	1	39.00
	TAP & ELIP & FrLIP	3	18.17
	Total	50	
(9.5) The extra-curricular activities (political, social, artistic....)	TAP	13	20.85
	ELIP	4	27.75
	TAP & ELIP	28	28.32
	TAP & FrLIP	1	6.50
	ELIP & FrLIP	1	39.00
	TAP & ELIP & FrLIP	3	18.17
	Total	50	

Table A6- 2: Kruskal-Wallis Test

Questions tested in Hypothesis	Chi-Square	df	Asymp. Sig.
(5.1) To what extent is there homogeneity of the scientific material/ subject between the three divisions in the school.	7.851	5	.165
(5.2.1) To what extent are the textbooks available to the Arabic division students	13.407	5	.020
(5.2.2) To what extent are the textbooks available to the English division students	24.570	5	.000
(5.2.3) To what extent are the textbooks available to the French division students	22.228	5	.000
(5.3.1) To what extent are the curriculum contents obvious in the textbooks provided for the Arabic students' division	14.540	5	.013
(5.3.2) To what extent are the curriculum contents obvious in the textbooks provided for the English students' division	22.328	5	.000
(5.3.3) To what extent are the curriculum contents obvious in the textbooks provided for the French students' division	0.000	4	1.000
(5.4.1) To what extent do the textbooks meet the core subjects of the scientific study taught to the Arabic students' division	5.273	3	.153
(5.4.2) To what extent do the textbooks meet the core subjects of the scientific study taught to the English students' division	6.426	5	.267
(5.4.3) To what extent do the textbooks meet the core subjects of the scientific study taught to the French students' division	5.407	4	.248
(5.5.1) To what extent do the textbooks easily present the themes of the scientific study taught to the Arabic students' division	3.207	3	.361
(5.5.2) To what extent do the textbooks easily present the themes of the scientific study taught to the English students' division	6.074	5	.299
(5.5.3) To what extent do the textbooks easily present the themes of the scientific study taught to the French students' division	4.983	4	.289
(5.6) To what extent do the scientific study's exams' are homogenous among the various FEPS language taught programmes and the uniform programme (Arabic, English and French Divisions)	5.767	5	.330
(5.7.1) To what extent do the school's study qualify the Arabic students' division to join the labor market	1.365	5	.928
(5.7.2) To what extent do the school's study qualify the English students' division to join the labor market	2.602	5	.761
(5.7.3) To what extent do the school's study qualify the French students' division to join the labor market	6.385	5	.271
(5.8.1) Students' density within lecture halls in the Arabic Division	3.599	3	.308
(5.8.2) Students' density within lecture halls in the English Division	4.664	4	.324
(5.8.3) Students' density within lecture halls in the French Division	4.921	4	.296
(5.9.1) Students' density within TA sessions in the Arabic Division	3.865	3	.276
(5.9.2) Students' density within TA sessions in the English Division	7.513	4	.111
(5.9.3) Students' density within TA sessions in the French Division	2.272	4	.686
(5.10.1) Arabic Students' division attendance at the lectures	1.345	3	.719
(5.10.2) English Students' division attendance at the lectures	6.089	4	.193
(5.10.3) French Students' division attendance at the lectures	3.343	3	.342
(5.11.1) Arabic students' division engagement with the lectures	.651	3	.885
(5.11.2) English students' division engagement with the lectures	5.388	4	.250
(5.11.3) French students' division engagement with the lectures	2.755	3	.431
(5.12.1) Arabic students' division performance in the tasks assigned to them	2.423	3	.489

Questions tested in Hypothesis	Chi-Square	df	Asymp. Sig.
(5.12.2) English students' division performance in the tasks assigned to them	3.705	4	.447
(5.12.3) French students' division performance in the tasks assigned to them	3.667	3	.300
(5.13.1) Arabic students' division performance in the final exams	4.177	3	.243
(5.13.2) English students' division performance in the final exams	3.146	4	.534
(5.13.3) French students' division performance in the final exams	3.667	3	.300
(6.1) Identify the overall goal/ aim of the academic course you are teaching	2.961	5	.706
(6.2) Identify the overall aim with regard to the available time schedule	8.623	5	.125
(6.3) Defining the course requirements before the semester begins (Reading, Working Papers, Assignments, ...)	2.158	5	.827
(6.4) Choosing the academic topics that meets students' level in your course	6.829	5	.234
(6.5) Distributing the syllabus through the semester's schedule logically	4.722	5	.451
(6.6) Identifying the expected teaching methods to be used matching the curriculum objectives	7.115	5	.212
(6.7) Selecting the interesting educational activities (Data Show, Simulation, ...) that motivate students to think	9.415	5	.094
(6.8) Reviewing the course plan constantly and refining it if needed each period of time (Modification taking place doesn't require the same year)	7.415	5	.192
(6.9) Modifying the course during the semester due to unforeseen circumstances in the short term.	2.909	5	.714
(6.10) Compiling the scientific article on the lecture topic from multiple references.	13.027	5	.023
(6.11) Preparing for the lecture well in advance.	6.343	5	.274
(6.12) Identifying the appropriate teaching strategy for the lecture.	8.453	5	.133
(6.13) Redeveloping the course to include the current and recent events examples and developments.	8.006	5	.156
(6.14) Abide by the quality standards in determining the scientific substances in charge of teaching	4.039	5	.544
(6.15) Using new and modern educational sources which contributes to the lecture contents	3.275	5	.658
(6.16) Preparing a summary for the most important keys in the lecture	4.337	5	.502
(6.17) Developing the thinking abilities for students in the lecture	10.281	5	.068
(6.18) Inform students with the course plan (Objectives, contents, activities, references and evaluation terms)	.792	5	.978
(6.19) Monitoring the performance of TA in practical applications	1.908	5	.862
(6.20) Holding regular meetings with TA to coordinate and follow up the course objectives set	8.802	5	.117
(6.21) Interest in the practical applications of the scientific material	9.460	5	.092
(6.22) Developing the applied research for the academic course and to be linked to the labor market orientations	2.526	5	.773
(6.23) Strengthening the ties with the productive firms and services in the labor market	5.430	5	.366
(7.1) The use of modern technologies means in teaching (visual, audio or both)	11.714	5	.039
(7.2) The use of computer for making presentations in the academic course you teach	12.255	5	.031
(7.3) Training students to use computers and the internet in the tasks you assign	7.127	5	.211
(7.4) Depending on electronic contents (Computer Programs, CDs, ...) in teaching your academic course	10.632	5	.059
(7.5) Advising students to use the computer in making reports and research projects	3.904	5	.563
(7.6) The use of e-communication tools to follow up students during their research projects	8.131	5	.149
(7.7) Training students to use the internet to get the needed information from the internet/ web.	8.360	5	.137
(7.8) Encouraging students to innovate and to think logically.	8.603	5	.126
(7.9) Encouraging students to debate and build a constructive dialogue.	16.972	5	.005

Questions tested in Hypothesis	Chi-Square	df	Asymp. Sig.
(7.10) Encouraging students to think based on evidence	9.669	5	.085
(7.11) Encouraging students to think independently	5.494	5	.359
(7.12) Adorning students to the academic thinking when discussing scientific issues in the class	2.090	5	.837
(7.13) Encouraging students to join the community programmes such as participating in community services, in awareness programmes in rural areas, slums, ... extra.	7.509	5	.185
(7.14) Discovering the young talents and guiding it through unions, and student activities.	12.106	5	.033
(7.15) Broadcasting the team spirit, teamwork and volunteerism among students.	6.417	5	.268
(8.1) Training students to assign/ solve various types of questions	6.309	5	.277
(8.2) Follow up the students and evaluate them continuously	6.743	5	.240
(8.3) Laying the rules of assessing the students' performance	1.821	5	.873
(8.4) Displaying the assessment results with the students	12.046	5	.034
(8.5) Adhering to the scientific standards in writing the exams	9.249	5	.100
(8.6) Setting appropriate exams to cover the contents taught which meet the course objectives	5.470	5	.361
(8.7) Writing Exams that measure the true students' capabilities and explore the variations between them	7.906	5	.162
(9.1) The school's infrastructure (lecture halls, toilets,)	3.284	5	.656
(9.2) The labs (computer, language, accessing the internet,....)	4.320	5	.504
(9.3) The library services (metaphor methods, number and quality of books, ...)	5.067	5	.408
(9.4) The availability of new references in the library	7.431	5	.190
(9.5) The extra-curricular activities (political, social, artistic....)	6.539	5	.257

The desired significance level is 0.05.