

**COMPARATIVE ANALYSIS OF PhD DISSERTATIONS ON
EDUCATION IN PAKISTAN**



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(JANUARY, 2013)

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IN PAKISTAN**



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In Partial Fulfillment of the Requirements for the Degree of

Doctor of philosophy in education

Institute of Education & Research

University of Peshawar, Pakistan

(January, 2013)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

DEDICATION

This Research Is Dedicated to my loving
Parents

SULTAN MUHAMMAD



APPROVAL SHEET

This dissertation titled “Comparative Analysis of PhD Dissertations on Education in Pakistan” submitted by Mr. Sultan Muhammad, in partial fulfillment of requirement for award of Degree of Doctor of Philosophy in Education, is hereby approved.

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August 16, 2013

Abstract

The study focused on the evaluation of PhD dissertations on education in Pakistan and the comparison of dissertations conducted under HEC and UGC. The objectives of the research were; to explore the quality of research in Pakistan, to compare the quality of research of HEC and UGC, and to design instrument for the evaluation of research dissertations.

All the PhD dissertations of social sciences identified the target population and from that population the researcher selected education discipline. Total PhD dissertations of education consist of 308, the researcher further delimited the study to all those dissertations that were downloadable with required permissions and fulfilled the evaluation criteria of the rubric. After the exclusion of dissertations, a total 178 dissertation were left for evaluation on the rubric. The researcher adapted and developed the rubric from different rubrics developed for evaluation of dissertations. The researcher collected data using 20 points instrument sheet with five point's categorical scale, namely Excellent, Good, Satisfactory, Unsatisfactory, and Not included scale. For every dissertation one sheet was used, of the 178 dissertations, 131 were from HEC and 47 were from UGC. For the analysis of data the researcher used two methods, one was percentage while the other was statistical software to test the hypothesis which posed in the introduction section.

The result of the study showed that in general the performance of HEC dissertation is slightly better than UGC; but statistically the result is not significant. The item wise result shows that there is significant difference on the majority items that prove the hypothesis that the research quality improved after the establishment of HEC in a

short span of time of 10 Years whereas the number of dissertations increased by more than doubled in just 10 years. Before the establishment of HEC, only one dissertation touched the level of excellent whereas after the establishment of HEC, 10 dissertations were placed in excellent category while a substantial number of dissertations were in good category very close to excellent in a short span of time.

The researcher suggests that there should be anti-plagiarism section in every department to avert plagiarism. Every faculty member should be provided anti-plagiarism software to eliminate the chances of plagiarism. The researcher also suggests that HEC should make it compulsory for every research department to publish their research journal. The researcher also feels the need of research on the evaluation of research journals in Pakistan.

Keywords: research, dissertation evaluation, HEC, UGC, rubric

Acknowledgements

With all praises to Allah Almighty for enabling me to be what I am today;

I would like to express the deepest appreciation to my Supervisor Prof. Dr. Muhammad Neman, who has the attitude and the substance of a genius: he continually and convincingly conveyed a spirit of adventure in regards to research and scholarship, and an excitement in regard to teaching. Without his guidance and persistent help this dissertation would not have been possible.

I would like to thank my honorable Teachers; Prof. Dr. Hafiz Muhammad Inamullah, Dr. Arshad Ali, and Dr. Syed Munir Ahmad, whose work demonstrated to me that Comparative literature and modern technology should always transcend academia and provide a quest for our times. In addition, thanks to Prof. Dr. Syed Muhammad Asim of department of statistics and Mr. Raja Zarif for helping me in the process of data analysis.

I thank Mr. Ishaq Ali Shah and my other colleagues in WWF-Peshawar, Pakistan, Mr. Shekeel, Mr. Abrar Nadeem, Jalal-ud-Din, and other staff members of IER for their help and support in my research.

In the last I also take the opportunity to thank Syed Wajid for his valuable guidance and proof reading of my research.

Sultan Muhammad

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This study focused on evaluating the quality of PhD dissertations in education written by the research scholars in Pakistan. The researcher felt the need to evaluate the quality of research done before and after the establishment of Higher Education Commission (HEC) in Pakistan so as to ascertain how far the quality of dissertations has improved. This is all the more important given the fact that after the establishment of HEC, the number of PhDs has tremendously increased. Consequently, most universities in Pakistan are producing far more PhDs now than ever before.

1.2 Background and Justification

After 65 years, Pakistan is still far behind in the field of education, although numerous efforts were made by different governments to overcome this deficiency. Unfortunately, most of the attempts have not produced the desired results, partly due to the lack of interest on part of the administrators, supervisors and teachers. Moreover, no governments carry on the policy of its predecessor government, but introduce their own education policy. In this way, Pakistan became an experimental lab for educational policies. Although, some of these policies were good with only minor shortcomings, these too could not achieve the desired results due to halfhearted efforts for implementation. A country like Pakistan where the majority of the population is illiterate,

the system of education puts barrier on spreading education in the name of quality and system of examination using outdated traditional methods.

Today the world is in new mode; new technologies are emerging on daily basis and countries compete for their survival and progress. Developed countries even offer citizenship to highly skilled educated people from underdeveloped countries to boost their economies, increasing the existing scarcity of skilled & educated people in under developed/developing countries. In order to cope with such a grave situation, it is high time to give due importance to higher education for enabling the country to develop and prosper.

Special attention had to be given to research in education for ensuring that students at the master level are well equipped to conduct research. Like other disciplines, higher education was also ignored in Pakistan for the last 56 years. In 1974, the Government of Pakistan established University Grants Commission (UGC) (Government of Pakistan, 1974) for the improvement of higher education. However, this very vital initiative was not backed by the required funds. Without proper funding, UGC could not perform its due role in the improvement of higher education in Pakistan.

After the independence of Pakistan in 56 years, all the Pakistani universities and degree awarding institutions produced only 3,279 PhDs collectively, But after the establishment of Higher Education Commission (HEC) in 2002, in just nine years Pakistani universities produced more than 3902 PhDs in all disciplines of education (Annual Report-2010-11, 2012). Concurrently, student enrollments surged from 276,274 in 2002 to 868,641 in 2011 while the number of degree-awarding institutions and

universities reached from 59 to a total of 132 in eight years (Annual Report-2010-11, 2012).

With the increase in number of degree awarding institutions and PhD degrees questions were raised by different people on the quality of PhD dissertations. Pervaiz and Azad answered the questions that have been raised regarding the quality of research due to rapid increase in the number of PhDs. HEC is, therefore, strengthening the rule and regulations for PhD to enhance the quality of research in Pakistani Universities (Pervaiz & Azad, 2008). To achieve this objective, The HEC sends research works for evaluation to examiners in universities of technological advanced countries. According to the new policy, the approval and granting of PhD degree is subject to the research work being sent and approved by two external examiners of technologically advanced countries and one internal examiner from Pakistan. After their approval, a PhD researcher will go through public defense, which would be live broadcast through the internet.

1.3 Objectives of the Study

The objectives of the study were to;

1. Explore the quality of research in Pakistan
2. Compare the quality of research before and after the establishment of HEC
3. Suggest measures for improvement in the quality of research in Pakistan
4. Design instrument for the evaluation of research dissertations

1.4 Significance of the Study

Evaluative study on PhD dissertations is very rare and in Pakistan no study is available on the evaluation of PhD dissertations. Therefore, the significance of the current

study is increased many fold. It is hoped that, the current study will bring positive change in the quality of research and will also provide effective guidelines for future researchers.

The most important outcomes of the study will be;

1. It will give a bird-eye-view about the quality of research in Pakistan
2. It will also provide an instrument for evaluation of research in social sciences
3. It will provide a step-by-step self-evaluation procedure for the future researchers

1.5 Research Questions

The following research questions guided the study:

1. What was the research culture before the establishment of UGC in Pakistan?
2. What was the role of UGC in improving higher education and research?
3. What is the impact of HEC on the quality of research and higher education in Pakistan?
4. What methods do renowned universities adopt for evaluating PhD dissertations?

1.6 Hypothesis of the Study

1. HEC dissertations are better in quality than UGC dissertations

1.7 Research Design

A qualitative research design was used for the research. A self-created instrument was used to evaluate the dissertations in the field of education. The researcher examined dissertations in light of the instrument specially developed for this purpose and tested during a pilot study on Master Level theses.

1.8 Population

All PhD dissertations in education in Pakistan are the part of this study

1.9 Samples

All available PhD dissertations in education in Pakistan constituted the sample of this study.

1.10 Methods and Tools of Data Collection

The researcher has constructed evaluation instrument keeping in view the evaluation criteria adopted by renowned research institutions around the world, which included:

- Duquesne University.
- Institute of Education University of London.
- IR University of Japan.
- Rice University.
- Texas Tech University.
- University of Peshawar.
- University of Victoria.

The researcher collected those guidelines that universities send to examiners to evaluate dissertation. Moreover, the researcher developed/prepared and tested his own fourteen point instrument from detailed study of relevant literature (Boote & Beile, 2005), during a pilot study conducted in the Institute of Education and Research, University of Peshawar, fifty theses were evaluated at Master level and the instrument upgraded for this study (Muhammad & Inamullah, 2013). In this instrument, the

researcher further incorporated six points and improved the extant instrument and developed 20 points instrument that is been used for evaluation of PhD dissertations. The Instrument is five-point scale: “excellent”, “good”, “satisfactory”, “unsatisfactory”, and “not included”. In the “not included” column the researcher put the missing data from these 20 points which were not included in the dissertation. Some points are essential for a dissertation according to APA style. If found missing, it had a negative effect on the quality of the dissertation. .

1.11 Limitations

All available dissertations on HEC website (HEC repository) in education formed part of this study.

1.12 Delimitation

The study has delimited to all those research that fulfilled the criteria of the instrumental tool prepared for this study and the researcher will not look for plagiarism in dissertations because it required a separated study.

1.13 Ethical Considerations

The researcher will ensure not to harm anyone feeling or status by this study and strictly conform to ethical guidelines (Hammersley & Traianou, 2011).

CHAPTER 2

REVIEW OF LITERATURE

In this chapter the researcher reviewed literature related to the current study, the historical background of university education in Pakistan, the structure and work of UGC and HEC. A systematic review of the evaluative studies, least related first and most related last and in the end compared them to the present study.

2.1 University Education in Pakistan

At the time of independence of Pakistan in 1947, Pakistan inherited three higher education institutions. One was the University of Punjab, Lahore, the oldest university in Pakistan that was established by the British government in 1882 (Ali, 2005). The second oldest university was the University of Dhaka established by the British government in 1921. The third was the University of Sindh that was constituted under an Act on the 3rd April 1947, first published in Sindh government Gazette. The University of Sindh as the third oldest university of Pakistan initially was given the power of examining body; later in 1951-52 it started its first department, institute of education to enhance teacher training programme in Pakistan (Ali, 2005).

After its independence, Pakistan paid special attention to education, especially higher education, and established the University of Peshawar, and it was the third university of West Pakistan, established in 1950, followed by University of Karachi. University of Karachi is the second university that was established after independence in 1951 and the fourth University in West Pakistan. For the purpose of collaboration between universities an inter-university board was established in 1952 but its role was fruitless due to financial constraints (HEC report 2002-2008).

After the establishment of the University of Karachi no new university was established for a decade due to lack of interest on the part of the government during the period concerned coupled with financial constraints; however, the number of universities increased to 17 during the period of 1958-1977 (Ali, 2005).

Due to the lack of determination of different governments and financial constraints the number of higher education institutes rose to only 22 during 1978 to 1988. Later, after the participation of private sector in education, the number of degree awarding institutions rose to 70 in 2003; fifty universities were working in both public and private sector (Imran, 2003). According to HEC statistical information unit, in November 2012 the number of HEC recognized higher education institutions increased to 132 in 2012.

2.2 University Grant Commission

University grants commission (UGC) was established in July, 1973 and given the powers on April 27th 1974 by an act of parliament.

Structure of UGC

Chairman of UGC was the administrative head of the commission (Imran, 2003). The members of the commission consisted of chairman, vice chancellors committee, chairman Pakistan science foundation and two educationists. The chairman UGC coordinated and supervised the work of UGC and exercised the power. The commission established its regional centers in Lahore, Peshawar, Karachi and Quetta to facilitate scholars, teachers and students.

The purpose of the Commission was to improve the administration of the universities, link them and to help them in achieving their objectives. The functions of the Commission was further strengthened and enhanced in the Education Policy 1979

whereby it was also given the responsibilities of curriculum development, staff development, promotion of research work in the universities, maintain the standard of research work, system of examination and quality of teaching in the universities of Pakistan (Khan, 1997).

The role of UGC was to work as a bridge between government and the universities, and played a very important role in the development of the universities. UGC secured funds for the development of universities from the government and other stakeholders. It reviewed the proposals of universities for different projects and send recommendation to federal or provincial governments for the approval of funds to finance these projects. After the approval of grants from the stakeholders it was the responsibility of UGC to monitor the proper utilization of funds on the respective projects (Imran, 2003). UGC monitored not only academic programs of universities but also co-curricular activities and intra universities activities. It was also the responsibility of UGC to give recommendation to government for the establishment of new universities to minimize the burden on existing universities.

UGC established many new institutions; Pakistan study centers, centers of excellence, area study centers, regional centers and centers for advanced studies and research. UGC published useful publications for students and scholars of higher education (Imran, 2003). UGC identified the following factors that affected the standard of research and academic performance of the universities in Pakistan (1994):

- Lack of decision making powers on the part of university administration.
- Failure to enhance the teaching and research skills of the teaching staff and bringing accountability in the system.

- Wearing away the autonomy of the universities at various levels, political interference in university administration, faculty and students community (Imran, 2003).

2.3 Higher Education Commission

Federal cabinet approved an ordinance on 8th August 2002 for the establishment of HEC and on 10 August 2002, the President of Pakistan announced the formation of HEC (Imran, 2003). According to the ordinance UGC was restructured and changed to Higher Education Commission for the promotion of higher education in Pakistan. The purpose of the establishment of HEC was to enhance the quality of education at university level and to develop the culture of research in the country. The economic status depends on the quality of higher education of a country, and a country like Pakistan needs quality of higher education to improve the socio-economic condition of the country. The role of HEC is to deal with universities. The chairman of HEC enjoys the status of federal minister. The HEC have 16 members, from which four educationists are nominated by the governor of each province.

The functions of HEC include the establishment of national testing service, criteria for the appointment and promotion of the faculty members. Setting up committees; including international and national experts from various disciplines. HEC develops policies for improving the quality of higher education in Pakistan and creates linkages between universities and respective industries.

2.3.1 Structure of Higher Education Commission of Pakistan:

Following are the main divisions of HEC;

- Human Resource Management Division.
- Human Resource Development Division.
- Curriculum Division.
- Research & Development Division.
- Academics Division.
- Quality Assurance Division.
- Administration and Coordination Division.
- Planning Division.
- Attestation & Accreditation Division.
- Legal Cell.
- Services Division.
- Learning & Innovation Division.

2.3.2 Objectives of HEC:

Objectives of HEC as provided in the education Policy 1998-2010;

- To inculcate Islamic moral values, religious values and cultural heritage in the students (Rehman, 2008).
- To equip students with new technologies and knowledge.
- To train and prepare skilled workforce to contribute in the development of Pakistan.
- To provide access to higher education and advance learning environment.

- To enhance the strength of institutions to achieve quality in research and teaching.

2.3.3 The Role of HEC in Development of Higher Education in Pakistan:

To improve quality of higher education in universities the government established HEC in August 2002. The aim of HEC was to raise the standard of higher education in Pakistan which was not satisfactory. HEC achieved many of its goals to improve the quality and quantity of higher education in Pakistan. HEC increased the number of universities from 60 to more than 132, it recognized 132 (Annual Report-2010-11, 2012), and more than doubled the enrollment of students in the universities.

To enhance the quality of higher education, HEC took some bold steps; GRE general and GRE subject were made compulsory for admission in MPhil and PhD programmes respectively, evaluation of PhD research by three evaluators one from Pakistan and two from technological advanced countries. HEC made necessary for PhD scholars to publish a research paper in a HEC recognized local or international journal before they go through their Public defense.

The primary objective of the HEC was to promote the research culture in Pakistani universities and to improve the research skills of faculty members of universities, for this purpose HEC started PhD scholarships program and more than 9859 scholarships were awarded in last 10 years (Annual Report-2010-11, 2012).

2.3.4 Faculty Development Programme:

For Faculty development HEC started foreign and indigenous scholarship programme and since 2003 HEC has sent 4985 MS, PhD and Post doctorate scholars for advance studies to technological advance countries according to HEC 2010-11 Annual

report, out of these 2375 has returned after successful completion of their studies. HEC has also awarded 4874 indigenous scholarships to scholars in Pakistani universities out of these 695 scholars have completed their PhDs (Annual Report-2010-11, 2012). more over for promotion of universities faculty members, the candidates need PhD degree and research publications in international journals or local HEC Recognized journals (Mansoor, 2010). Along with basic pay scale promotion system in the universities, the HEC also introduced Tenure Track System (TTS), which awards higher salaries to the faculty. However, to qualify for TTS the HEC set stringent rules.

2.3.5 Higher Education Commission Programs and Reforms:

- Foreign scholarships Program.
- Indigenous scholarships Program.
- Faculty Development program.
- Curriculum Revision.
- NTS Testing Program.
- HEC Infrastructure Development Program.
- Open Access Digital library.
- Travel grant for international conferences or presentation of papers.
- Develop research repository of Pakistan.
- Video Conference and e-learning facility.
- Increase collaboration between industry and universities.
- Establishment of quality enhancement cell to improve the quality of research in Pakistani universities and to eradicate plagiarism.
- Developing new technology parks.

- Higher education infrastructure development.
- Under the national research programme, 153 research projects were approved for the universities in the year 2010-11.

2.3.6 Achievements of Higher Education Commission:

Enrolments of students in the universities in 2002 were 2, 76,274 and in 2011 it reached to 8, 68,641 according to HEC Annual Report (Annual Report-2010-11, 2012).

- Increased research culture in Pakistani Universities, increased the number of research papers in international journals. Promoted research Publication from 600 per year to 6,200 in international research journals, talking on a TV show Chairman HEC said that last year Pakistan produced 6,200 research Publications (Awam ki Adalat, Geo TV, 5 Aug 2012).
- HEC recognized Pakistani journals increased to 174, (Annual Report-2010-11, 2012).
- Five Pakistani universities ranked in top 300 Universities of the world.
- HEC increased the Number of recognized universities to 132 (Annual Report-2010-11, 2012).
- Under interim placement programme 415 Fresh PhD are placed in 2010-11, (Annual Report-2010-11, 2012).
- HEC Established Digital Library for Pakistani students where every student of Pakistani public sector university has access to more than 45,000 textbooks research monographs and 25,000 international research journals around the world. One of the best and finest Digital Library of the world (Annual Report-2010-11, 2012).

- Under the chairmanship of Prof. Atta-ur-Rahman (Federal Minister), Pakistan has won four international awards for the innovative changes in the HEC.
- Sent more than 1000 students to study medicine in Cuba.
- Today more than 65 sites have operational video conference facility for conducting lectures, meetings and broadcast PhD dissertation defense.

Behind the success stories of higher education commission are;

- Financial support from the government and international donors.
- Provision of a starting budget of 150 million dollar, Current budget of HEC is Rs.18, 416 million (Mansoor , 2010).

For the last sixty five years after the independence of Pakistan more than a dozen educational reports and major education policies were introduced. The aim of these policies and reports were:

- Character building of the individual.
- The ideological basis.
- Unity of the nation.
- Social and economic development.
- Emphasis on vocational education.
- To improve the quality of education.

2.4 Evaluation

Evaluation is the name of inform judgment of a systematic acquisition of information and assessment of these information to provide useful feedback about some

object. Evaluation is to find the worth of a thing by judging it on some pre-determined value; validity, goodness, appropriateness and reliability.

The British authors revised the definition for the field of educational institutions: To make judgment about the worth and effectiveness of educational intentions; processes and outcomes related to education (Silver, 2004).

Evaluation is used in social sciences to test the effectiveness of a programme, policy or curriculum of a course. More over programme administrators and legislators use evaluation research to find the effectiveness of the current and new programme. In education institutions evaluation has been applied to evaluate major programmes; curriculum of school, evaluation of students achievements and the effectiveness of teachers. The purpose of evaluation research in educational institutions is to evaluate the quality of teaching, the quality of education institutions and the quality of research conducted by the educational institutions. It is mostly conducted by individual research evaluators or small teams of evaluators and in some cases it is conducted by national agencies to maintain quality assurance in educational institutions.

2.5 Review of Related Studies

The study conducted by Beile, Boote and Killingsworth (2004) “A Microscope or a Mirror? : A Question of Study Validity Regarding the Use of Dissertation Citation Analysis for Evaluating Research Collections”; the purpose of the study was to develop and collect scholarly research collection by using dissertation citations. Research scholars heavily depend on citation to find journals collection related to their study. Another purpose to conduct this study was because no study was conducted on

dissertation citation in the field of education or associated with the field of education.

Few studies have been conducted but in other disciplines. All the education intuitions of the United States were the population of this study. The researchers searched dissertation's abstracts and institutional library database for the dissertations awarded in the year 2000 in the field of teacher education, educational psychology, educational leadership, and instructional or learning theory. The researchers used stratified sample method and selected 30 dissertations from three institutions, ten dissertations from each institute and a representative sample from each group. The researchers extracted citations from all 30 dissertations including the name of the granting institution, the number of total citations was coded by date and publication, and type of material cited.

The researcher purposely chose two institutions for their similarities in enrollment of students in the year 2000, with a total number of students enrolled 43,000. Both were established in mid 1850s and ranked among the top rank educational institutions of United States. While the third institution was selected for the purpose of contrast, established in mid 1850s with 31,500 enrolled students and not listed in the top ranked institutions. Thirty dissertations were selected from these three institutions, awarded in the year 2000. These three institutions offer PhD Programme in education and have comparable number of faculty members. The researchers made assumption that doctoral students have the expertise to locate scholarly information from dissertation citations. The assumption of the study was examined by evaluating various characteristics of citations of the dissertation of these three institutions. The study was channeled by three questions:

- What are the characteristics of dissertation citations recently awarded in the field of education?
- How to compare a list of journals from single institution to a list that is the outcome of multiple institutions?
- What is the comparative quality of PhD dissertation citations as determined by their scholarliness, currency, and appropriateness to the development of the topic?

For data analysis dissertations were distributed in three evaluators; one from education department and two from library. Ten dissertations were assigned to each evaluator for the purpose of multiple scoring methods. To determine the consistency of the evaluation one dissertation was rated by all three evaluators independently then the results were examined by two-way mixed effects model of the correlation coefficient using SPSS. The results showed that evaluators were consistent and reliable with a difference of 5 percent and 95 percent confidence. The evaluators used four points scale of scholarliness and three points for currency and appropriateness. The same criteria were used for all formats. The criteria were established on the basis of the earlier scholarly work of Kohl and Wilson;

Scholarliness:

- How was the source of the topic.
- Students used peer reviewed and empirical journals.
- The students use sources from scholarly or popular publishers.

Currency:

- The students used sources from the recent research publications in journal instead of books.

Appropriateness:

- The collected material was appropriate and relevant for the treatment of the topic?

The researchers draw the following conclusion from the study:

- The total number of citations included in this study was 1842.
- The maximum number of citations per dissertation were 159 and minimum 25 (M=87.70, SD=32.54).
- The study was delimited to literature review section, maximum number of citations coded in this section 137 and minimum 18 (M = 61.40, SD = 32.01).
- The analysis revealed that 45 percent citations were cited from journal's articles.
- Monographs was the second most cited source with 33.9 Percent.
- Variation found among institutions in the type of material citation.
- Institution 1 cited journals and monographs equal 43.8 percent each while other institutions heavily relied on journal's articles.
- Top seventeen journals were cited 290 times which is 33.8 percent, other midtier journals were cited 309 times which is 36 percent.
- The researchers found that institutions differ on the quality of scholarliness of citations in dissertations.

A PhD study conducted by Randolph (2007) on "Computer Science Education Research at the Crossroads: A Methodological Review of Computer Science Education Research: 2000-2005" at Utah State University:

- Gave a comprehensive and comparatively better representative coverage to the computer science education than any other reviews conducted in the field of computer science education.
- Did in depth analytical review of the articles than any other previous studies.
- The purpose of the study was to extend the breadth, depth and consistency of the previous studies.
- The overall purpose of this study was to have effective and substantial base on which to give suggestions for the improvement of computer science research.

To achieve these objectives the researcher also framed some research questions in the study. The total population of the study was 1306 articles from computer science education, published during 2000 to 2005 in the eight major peer reviewed journals of computer science education. A sample of 352 articles was selected using stratified random sampling. Each article was evaluated for; research design, report elements, dependent, independent, variables and statistical practices. A second rater was assigned to evaluate a subsample of 53 articles for testing the reliability of the study.

The researcher concluded that;

- There were no differences in the quality of articles published in research journals or presented in conference and published in conference proceedings.
- The researcher further concluded that there is a decreasing trend in the

publication of articles that has circumstantial evidence and article using descriptive research method. In addition the researcher identified several differences in the research practices in the different fields of studies; educational technology, education, and education research.

- Questionnaires were the frequently used tools in the process of data collection and measurement instrument.
- The amount of statistical information was inadequate to use inferential statistics on them.
- In Computer science research, the researchers often used quantitative research method.

The review work conducted by Poticell & Olivarez (1997) on the “Dissertation Quality and Kerlinger's Methods Myth” in Texas Tech University. The purpose of the study was to review the work of Kerlinger on methods Myth to improve the quality of research work in the field of education. Kerlinger (1960) proposed that educational research have methods which are legends in educational research, especially the components of the research; research rationale, purpose of the research, and methods of research. In this research study the researchers explored the perception of Kerlinger on mythology in educational research and the significance of the methods myth in educational research. The researchers also include two other myths; scholarship and quality with the Kerlinger’s method myth.

The researchers analyzed the documents and draw results about the methods of Kerlinger education research. Kerlinger wants from students' and professors' practicality

in educational research. He wants that students and professors should address the real challenges that schools and the community face in the learning process of the students. They should apply their skills in real situations and to do this, they must go outside of the classroom and absorb the real problems in real schools.

The researchers also include six indicators of dissertation quality from the research study of Adams and White (1994) and examined the indicators from the perspectives of Kerlinger's methods myth; which are as following:

- The Research topic is workable and has some significance in the field of the research.
- The Research has clear theoretical or conceptual framework.
- The Research is relevant to theory and contributes new knowledge to the field.
- The Research has practical importance and improve the research setting.
- The Research has practical relevance and lesson learned could be applied in other settings.
- There are no serious mistakes and errors in the research.

The researchers draw conclusion that, the dissertation should be viewed as a gateway or training process of the scholar not the end. They also give following recommendations for the research student;

- Graduate students should have theoretical, conceptual and technical skills.
- Courses in research methods, research design, theory and theory building should be offered to the students.

- They should also be offered courses in other areas of education e.g. educational leadership, educational foundations, curriculum and instruction, and public policy analysis.
- The institutions should engage students in the development of theoretical frameworks, the statement of research and the identification of suitable methodology to explore the nature of the problem.
- The institutions should educate the students in all aspects of the research; methods, content area of courses, changing educational thinking, the role of theory and the call for practical implications of education practice required in research dissertation or research-paper.
- The dissertation should be an essential part of doctorate in education rather than to fulfill requirements for the degree.
- The institutions should develop their own criteria and indicators for the quality of dissertation. the indicator should be clearly understood by the students.
- Institutions should develop and arrange seminars to help doctoral students in the process of transition from beginner to expert scholar.

The study conducted by Ruiying and Allison (2003) on “Research articles in applied linguistics: moving from results to conclusions” the purpose of the study was to evaluate results and conclusion section of the research articles published in research journals. The population of the study consists of 40 research articles (RAs). The 40 RAs were selected using stratified random sampling from four established journals of applied linguistics, 10 RAs were selected randomly per journal. The sample is further delimited to empirical research report which limits the sample to 20 RAs. The journals were

related to English language, TESOL Quarterly (TESOL), English for Specific Purposes (ESP), Applied Linguistics (APP), education and English Language Teaching Journal (ELT), published in 1996 and 1997.

For data collection two-level account (Moves and Steps) were used by the researchers. For the result section the researchers used 6 moves and For Discussion section the researcher used 7 moves.

The researcher found that both moves ‘Reporting results’, and ‘Commenting on results’, are compulsory moves. Reporting results are the core element; highest occurrence of 7.9 per section. Comparing results with literature is the second most frequent Step with an average of 1.75 per section, followed by ‘Interpreting results’ (1.65 per section).

The researcher concluded that it is a systematic type of analysis of results, discussion, conclusion and they relate to each other. The results section of the research generally not only report results but also the researchers comment on results and it is general practice in RAs across different disciplines. Discussion section provides full insight into the distinctive communicative purposes of the discussion section with comparison to the results section.

Randolph (2009), conducted a study on the topic “A Guide to Writing the Dissertation Literature Review” the purpose of the study was to draw outlines for writing literature review for PhD dissertation. The research exposes some vital information to write a high quality literature review for dissertation. The research gives detailed information on the importance of the review of literature and the basic steps of writing

review. The researcher used the review method to collect data from already conducted research in the field of computer education. At the end the researcher has drawn his own conclusion and identifies necessary steps on how to write a high quality literature review.

In first step the researcher explains the purpose of writing literature review, in his view it gives author a chance to demonstrate his expertise in his field of research.

Literature review also provide information about the research done in the field of study and what need to be done in future, it gives information to the future scholars what to look for and where to look for. In this regards he gives the example from the study of Gall, Borg, and Gall (1996) who argued that the literature review plays a vital role in research as it;

- Delimit research problem and focus on specific point.
- Gives new lines of investigation.
- Avoids futile methods.
- Avails skills of methodologies.
- Finds new area of research.
- Finds support for your theory.

The researcher also gives some detail from the study of Hart (1998), who added reasons for reviewing literature;

- Differentiating between works already carried out in the field and what area need attention.
- Identifying relevant vital variables to the study.
- Synthesize the studies and gain new perceptions about the study.
- Justify the significance of study and the problem.

The researcher gives another purpose for writing a literature review;

- It provides the researcher a framework to relate the findings of his new study in the discussion section with the previous research.

The researcher further explains the Taxonomy of Literature Reviews, in this regards he gives the reference of Cooper's (1988), who suggested six characteristics for literature review: goal, focus, perspective, coverage, organization and audience. The researcher identified and agreed with Gall, Borg, and Gall on commonly made mistakes in reviewing literature:

- The researchers do not relate the findings of his own research study to the literature he cited in the literature review section.
- The researchers do not select the best sources and related studies to use in review of literature.
- Cited mostly secondary sources instead of primary sources in review of literature.
- Accept the finding of others without any criticism and interpretations.
- The researchers do not report search procedures that were used in the process of literature review.
- The researchers do not synthesize the studies and the finding of the studies to his own study.

The study conducted by de-Miguel and Mario (2010) on the topic of "The Evaluation of Doctoral Thesis. A model Proposal" the main aim of the study was to develop a model to use it as framework for evaluation to assess dissertation. The researchers analyze research documents on this topic and review all the related literature

on the evaluation of theses in order to establish quality guidelines that define the quality of research theses. The purpose of the researchers was to get objective judgments in the evaluation process. For analysis the researchers explored various research studies and identified the following process used in the evaluation of these studies:

1. Assessment linked to research group or team: some universities used team base strategy to supervise the research candidate and to achieve quality in research, for this purpose the university appoints a team of supervisors to supervise and guide research student mutually.
2. Assessment linked to a pre-reading session of the thesis: In well established institute or groups, the research students will give presentation the specialists in the field and the staff members of the institute, to get positive feedback and to incorporate it in the research. The researcher will also need mandatory positive reports of two external examiners.
3. Assessments by means of external experts: Some universities established the criteria to share the research with two or more external research evaluators and on their positive report the researcher is awarded doctorate degree. According to the researchers there are flaws in this procedure. Just establishing an external evaluation system cannot solve the problems and drawbacks in the process of the research.
4. Assessment linked to specific criteria of Quality: Some universities have established prerequisite criteria to grant a satisfactory report; the candidate has to publish reports in international journals related to his research and give

presentation in seminar in the institution or present paper in international level conferences.

The researchers draw conclusions from the study and prepare a model proposal to evaluate theses. The model can help the evaluators to make their judgment about theses. They developed a theoretical framework and procedure to evaluate PhD dissertations. In the model they pose the following questions which help the evaluators in the process of evaluation:

- The problem under investigation: the problem under investigation fulfills the required characteristics of a scientific investigation, the problem is clear, hypothesis and objectives are related to the topic. The problem under investigation could produce new knowledge. The problem is significant and need to be investigated. The criteria for this question are clarity, originality and relevance.
- Research Methodology used: What methodology the researcher used, the methodology is relevant to the objectives and related to the study. Does the methodology explains all the steps of the research? What is the selection procedure of sample and instrument of data analysis? The reliability and validity of the research is tested and replicable.
- Analysis of the Results: The results are related to the problem and justified from the finding of the study. They are clear without any biasness. It contributes a significant amount of new knowledge in the field of the study.
- Formal aspects of the report: Thesis fulfills the requirement of a scientific research, all the questions presented thoroughly and clearly in the study. The

report is well written with the rules of research and easy to understand. Well cited with latest and standard sources.

- Presentation and defense of thesis: The defense presentation was clear and understandable for the attendees. The researcher answered all the questions that related to his research. The researcher was open to criticism and suggestions. The researcher presented all the required aspects of the dissertation in the presentation.
- Relative criteria about the impact of the thesis: The research work has significant importance and creates new knowledge which can benefit community. The research creates interest for further research in the field.

The researchers recommended that at the final session the members of the panel should exchange views about the thesis to determine to pass it or not, and in what grade the thesis should be placed: fail, pass, good and excellent or distinction, in case of most excellent work.

Reid and Gough (2000), Conducted a study on “Guidelines for reporting and evaluating Qualitative research: what are the Alternatives?” The purpose of the study was to explore alternative for evaluation of qualitative research instead of using guidelines for the evaluation and reporting qualitative research in environmental education. The study is descriptive in nature and the data are collected from the variety of guidelines studies available on the evaluation of theses. The researchers analyze the literature and tested different options; in one instance they took the research of Smith-Sebasto’s and applied evaluation guidelines and criteria to the research report. The researchers identified the

strengths and shortcoming of the research; furthermore they identify alternative sources for the evaluation of theses. The researchers adopted the rubric from other research on evaluation and test the elements of the rubric, to prepare their own model for evaluation.

The researchers identified the following elements in a research to look for:

- Rationale for Methodology: Qualitative methods are the most appropriate method to address a research question.
- Multiple Methods: Used more than one method to study the problem.
- Respondent: the respondents.
- Interview practices: The detail procedure of interviews.
- Procedures for analysis: How the data analysis done.
- Verification by respondents: Respondents were contacted for the purpose of verification of meanings of vague information.

What to look for when reading and evaluating qualitative research studies:

- The question of the study.
- The research approach is applicable to the initial study question.
- The design of the study.
- The participants and how are they chosen?
- The procedure of data collection.
- The procedure of data analysis.
- Is investigator in contact with the participants?
- The investigators cross-check the data and rule out other theories.
- Is it parsimonious?
- Is it consistent and clear?

- The study contribute to the field of study.

The researchers adopted the following criteria for the evaluation of qualitative research papers:

- Are the methods applied suitable for the question being asked?
- Are there sufficient references to the literature review?

Methods

- Are the researchers used clear criteria for the selection of subjects, method of data collection and analysis?
- The sample of the study is enough for generalization.
- Are the limitations of the study considered?
- Are the researchers used systematic method of data collection and record keeping?
- Any evidence for independent examination?

Analysis

- What methods were used for data analysis.
- Has the reliability and validity of the analysis been tested?
- The procedure of the analysis is systematic and clear.
- The opinion of all participant in group research taken into account.
- There are adequate discussion and arguments for and against the researcher's one's.
- Is the study linked to the review of literature by giving references.

Presentation

- The research is systemically formulated.
- Is the research clearly contextualised?
- Are the data presented with clarity and systematically?
- The conclusions are drawn from the data.
- Do the results address the research question and they are credible.

Ethics

- The researcher consider ethical issues adequately.
- The researchers also incorporate threats to the quality of research.
- The clarity in description.
- The Lack of reliability of description.
- Reluctance to disclose oneself in written material.
- Poor observational skills.
- Lack of depth in thinking.

The study conducted by Pathirage, Haigh, Amaratunga, and Green (2004), on “Improving Dissertation Assessment”. The purpose of the study was to synthesize the early literature finding on the practice of dissertation evaluation. The study was based on a research project conducted at the University of Salford; examining assessment practices for undergraduate thesis modules. The study focused on the assessment practices in the Uk higher education system, quality and criteria of assessment. The paper also focused on existing practices of dissertation evaluation in different universities and draw outline for the evaluation of dissertations. The researchers used focus group methods to conduct

the study; a 12 month project funded by Salford University under the programme of teaching and learning quality improvement scheme (TLQIS). The research was divided into four work packages; WP1, WP2, WP3 and WP4. A series of workshops were conducted as pilot study to identify different assessment approaches and criteria to improve the assessment consistency in the programme. In the sample of the study the researchers also included current final year undergraduates and ex-graduates students, they were interviewed to determine students understanding about the assessment criteria of dissertation.

The researchers analyzed 30 dissertation practices from different universities around the world in different disciplines; Business and Management, Languages, Economics, Social Work Studies, Environmental & life Science, Geography, History and Art & Design. These dissertation practices were selected from Australia, England, Sri Lanka and United States.

About 70% participants had clear criteria for assessment practices and 30% provided manual for assessment with no specific assessment criteria for the student. The researchers found that the impressionistic method was the most common method in these universities for the purpose of assessment.

The researchers revealed several different methods of dissertations assessment by different universities during the analysis, but they give weight to four common methods; written dissertation 60%-100%, research/dissertation proposal 10%-25%, oral presentation 20%-30% and performance of the student 20%-35%. In all these methods focus was on the written outcome of the module; how the dissertation was written or reported. Some universities assessed the performance record of the students when they

are grading dissertation of the student. Criteria of the performance assessment include; time management, motivation of the student, communication and record keeping.

Following is the percentage wise scale of importance:

- Introduction which include Abstract, Background, Objectives, Context 10 to 25%.
- Knowledge section include Sources, Analysis of Literature and Theories 20 to 30%.
- Methodology include Research design, Experimental methods, Ethical dilemmas 20-25%.
- Analysis & Discussion of result section include Clarity, Presentation, Logical arguments 20-40%.
- Conclusion & Recommendations 5-10%.
- Presentation & Communication section include Structure, Language, Organization and Referencing 10%.
- Others include Relevance, Contribution, Future work, Originality, Scope & Difficulty 10-20%.

The researchers found that most of the universities appointed one supervisor for each student while some operated double supervisory mechanism and the written dissertation double mark by the supervisor and one other staff member. The practice of double marking is very common in some universities and they further add the system of blind markers to eliminate the biasness on the part of the supervisor. In case of disagreements between two markers, the dissertation is referred to a third examiner. In some cases they used viva mechanism to solve the disagreement.

Fitt, Walker, and Leary (2009) conducted a study on “Assessing the Quality of Doctoral Dissertation Literature Reviews in Instructional Technology” in Utah state university. Purpose of this research was to use Boote & Beile rubric in the field of instructional technologies. The researcher selected 333 dissertations on the basis of their abstracts and from these dissertations the researcher selected 30 dissertations using random sampling. For evaluation the researcher trained four doctoral students and one faculty member on the rubric of Boote & Beile using one dissertation. First they evaluated the dissertation and then they met and discuss of it to reach a consensus for scoring the items. After the initial stage each dissertation was evaluated by two evaluators and after the first pass the pair’s evaluators discussed it to reach unanimity on scoring rubric. For first time they used Boote & Beile rubric on literature review and on the second pass they selected other portion of dissertation; introduction and methods. After the evaluation descriptive statistics were used to compute the data which collected through rubric score and were analyzed using factorial ANOVA. Three studies were dropped; one which was used for training and the other due to some methodology reasons. When compared the mean score of both studies there was enormous difference between the two. The mean score of the study ($N=27$) dissertations was 19.96 ($SD=3.16$) while the mean score of Boote and Beile was ($N=12$) 24.08 ($SD=6.05$). The factor behind this could be different fields of study, using of different evaluators and different criteria. The researcher also wanted to include the size of the sample which was different from the Boote and Beile. Fitt, walker and Leary (2009) used 30 dissertations as sample which was more representative sample than Boote and Beile (2004, 2005) who selected only 12 research studies for their study which is a poor sample by comparison.

Fitt et al., concluded that there were little difference in both the results, this could be due to the combination of different factors and due to some inherent shortcoming in the rubric itself. To improve the internal reliability of the rubric, some improvisations are needed, including creating a level four criteria scale

Bunton (2005) conducted a study on the structure of conclusion chapters in PhD dissertations. The main purpose of this study was to discover common generic structure of the PhD conclusion chapter in different disciplines. Target population consist of 45 PhD theses from a wide range of disciplines; Arts (3), Architecture (1), Dental (1), Education (3), Engineering (10), Medicine (6), Social Sciences (7), Science (12), plus the School of Business (1) and the Centre for Urban Planning & Environmental Management (1). One was rejected due to non-availability of conclusion section. The researcher identified steps to analyzed dissertations; Titles of concluding chapters, Status of concluding chapters , the length, number of references, section headings, Implications, Reference to previous studies and recommendations.

Result of the study:

- Humanities and Social Sciences (HSS) Conclusions have more section and longer than Science and Technology (ST) ones.
- A few conclusions focused more on the field then on theses.

Suggestions

- The researcher suggested future study in the field of oriented Conclusions.

Researcher did not follow his own identified steps in the conclusion section of this study. The conclusion section of the study should be a model for the scholars. No references were given to the previous studies in review of literature.

The study conducted by Samraj (2008) on the theses of master level titled “A discourse analysis of master’s theses across disciplines with a focus on introductions”. The objective of the study was to evaluate the theses of master level at US universities. The population of the study was master level theses at a large public university in United States of America. Sample of twenty four theses were selected from three different departments; eight from Philosophy, eight from biology and eight from linguistics. These were representatives of social sciences, sciences and humanities.

All the theses were analyzed first for general features; their Organization and then the introduction section was examined for detailed evaluation using the “Create-a-Research-Space” (CARS) model which was developed by Swales (1990, 2004). The introduction was analyzed for citation that how much citations the researcher used and how much are they relevant to the study under evaluation. The researcher used the APA rules during citations process.

The use of the first person pronoun; subject, possessive, reflexive was examined. For data collection semi-structured interviews were conducted with the professors of each discipline, a set of questions were prepared in advance that comprised of general issues of research,

Structure of research and structure of introduction:

The result of biology theses shows the micro structure which included introduction, method, result and discussion (IMRD) (Swales, 1990). Dudley-Evans (1999) labels this

type of theses traditional format. On the other hand philosophy theses have introductory and concluding chapters, and strong relevant superseding chapters. None of these research studies have literature reviews chapters which is an essential part of the Linguistics theses.

A very good study, gives detail of the introduction chapter. Importance is given to citation and structure of introduction. Researcher should also include objectives, significance, research question and limitation and delimitation of the study

The study conducted by Soler-Monreal and Gil-Salom (2011) “A cross-language study on citation practice in PhD theses” in the university Politecnica de Valencia, Spain. The purpose of the study was to compare and contrast between PhD dissertations of English language and Spanish language on the practice of citation. The population of the study consisted of 20 dissertations; 10 from English and 10 from Spanish language from the University of Glasgow UK, and the University of Politecnica de Valencia (UPV) Spain.

The researchers adopted the research design of swales and Thompson for their study. The researchers searched for reference which was cited in the studies with focus on reporting verbs. After collection of data the researchers compared the data of English dissertations and Spanish dissertations to determine the variation between English and Spanish dissertations. The researchers concluded that the English Language research show the trend to duplicate the author’s original wordings while the Spanish writers prefer to use their own words to present the idea of the author with reference.

Study conducted by Boote and Beile (2005) on “Scholars before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation” to evaluate PhD dissertation, particularly on the review of related literature. The objective of the research was to evaluate review literature of PhD dissertation, for this purpose the researchers selected population from three colleges that offer doctoral programme , one was ranked among 15, one was among top 30 and one was with no ranking. The researchers used stratified random sample and chose 12 dissertations from educational psychology, education leadership, teacher education and theories of learning. Boote and Beile created their own rubric for the evaluation of research dissertation; they incorporated Hart criteria into their 12 item scoring rubric, initially the researcher trained three examiners on one research using 12 items rubric to evaluate. Later on they evaluated 12 selected dissertations using the rubric of Boote and Beile, and awarded marks.

The finding of the study showed that the mean score of all colleges were low and the researchers admit that it could be due to the size of the sample which was very small. The researchers develop assumption that reviewing literature for the research is a very dull job. The researchers concluded that their assumption that all PhDs have complete authority on their field of specialization was not supported by this study nor they have achieved the ability to evaluate and synthesize the research in their own field. The researchers admitted that this type of critical synthesis is very difficult on the part of doctoral faculty.

Pervaiz and Azad (2008) conducted a study on the quality of PhD Program introduced by HEC under the article of “Ph.D. Program quality assurance – a comparative study”. The target population selected for the study was composed of 1448 indigenous PhD scholars of Pakistan. The researcher used email facility to collect data from the target Population. According to the researcher 700 e-mail addresses were not operational therefore the researcher collected data from the remaining Population which was 748. From 748 scholars the researcher selected a sample size of 200 using random sample technique which comprised as 26.7% of the Sample Population and 13.8% of total Target Population.

1. The researcher presented in this study; historical background, research process and ethics of the research, creativity techniques, research opportunities and Quality Assurance of PhD program in the world renowned universities.
2. Provided detail of HEC Indigenous Ph.D. program with reference to objectives and eligibility criteria with the requirements for the indigenous PhD program.
3. The researcher developed questionnaire for survey to investigate the perception of PhD scholars about different aspects of PhD Program; admission procedure, problem related to GRE international, research supervisor, course work, digital library, research material, research activities and synopsis. The questionnaire consisted of 11 questions and 37 indicators corresponding with question for quality of PhD program. The response rate of questionnaire was 64%.

SPSS 13 was used for data analysis. The researcher computed for each indicator average, Standard Deviation (SD), Interval Estimator (IE), Coefficient of Variation (CV) and Percentages of Evaluation Scores (ESPs).

Findings of the research;

- HEC should Provide guidelines to universities for uniform standard of curricula and comprehensive exam.
- Course work of 18 credit hours is sufficient for PhD program.
- GRE subject should remain compulsory.
- HEC should provide guidance for admission to desired scholars.
- HEC should develop strict criteria for selection of supervisor keeping in view the global standard.
- Improvement in the laboratory facilities, availability of relevant books in library and improvement in digital library.
- Scholars are happy with HEC policy of foreign evaluation of PhD dissertation.

Suggestions:

- Inclusion of Impact Factor journal for publishing paper in HEC approved journals, as part of admission criteria.
- Increase in HEC approved supervisors, particularly in the field of social sciences.
- The duration of the PhD Programs should be increased to five years.
- Accommodation to PhD scholars should be provided in the university or near the university.

The study under evaluation had some shortcomings:

- Inclusion of paper publication in impact factor journal for admission is not a very good suggestion because our master students are not aware of the research culture. The present HEC condition is suitable for our PhD scholars to publish their research paper prior to submitting their research dissertation.

- The researcher compared the criteria of quality enhancement of HEC Pakistan with other technologically advanced countries, which is not a proper tool for evaluating the quality of PhD program.

A research study conducted by Khatami, Tavangar, and Pour (2012), Investigated the quality of doctoral dissertations of Isfahan Faculty of Dentistry during 2005-2009. The purpose of the study was to determine and assess the quality of dissertations at Dental School. The population of the study consisted of hundreds of professionals and doctoral programs of Dental School. The sample of the population was comprised one hundred doctoral and MSc dissertations randomly selected from the Isfahan faculty of dentistry during the period of 2005-2009.

- For data collection survey method was used, a qualitative questionnaire was prepared for data collection which encompassed; evaluation of hypotheses of the study, sample of the study, population and sample size, statistical tests used for data analysis, materials and methods of the study, references and format of reference section, planning and writing of the “discussion” and “conclusion”, section separately. For data analysis a cross-sectional analytical method was used, chi-squared test was used for statistical data analysis with the help of SPSS software.
- A total of 78% to 80% of dissertations achieved their goals and hypotheses of the study, respectively 97%, 78% and 98% had achieved APA required population sizes, and used appropriate statistical tools for data analysis. Appropriate methods were used and well written discussions and conclusion were provided.

- Conclusion drawn from the study showed that the strengths of these dissertations were well written discussions, literature reviews and reference of the study. Some minors errors were found in the hypotheses, statistical analyses, aims and sample of sizes. The researchers suggested the school need to incorporate classes on research techniques and good writing skills to improve the quality of PhD dissertation.

The study titled “A study on the graduate students’ output regarding educational evaluations in Taiwan” conducted by Fen and Ju (2012) in Taiwan for the evaluation of master theses and PhD dissertations. The purpose of the study was to debate on the issues and trends in the evaluation of educational research in the master level and PhD dissertations in Taiwan. The main aim of the study was to explore the present day various academic styles of evaluation. The population of the study consisted of 466 master theses and PhD dissertations conducted in Taiwan. The researcher collected material related to evaluation from different sources; web pages, books, magazines, newspapers and degree level theses for the past 30 years. In the light of these, the researcher created his own data sheet and collected the data. The data were analyzed using Meta-analysis method and with the help of the Statistical Package for Social Sciences.

The conclusion and finding of the study shows that the most relevant theses were from Taiwan Normal University with 62 papers which are 13.3%, followed by National Taipei University of Education with 50 papers, 10.7%, and National Kaohsiung Normal University 9.4% with 44 papers. The department of education has the highest graduation

rate with 166 papers which is 35.6%, followed by the graduate school of educational administration, with 40 papers, 8.6%. The popular research method used in qualitative research with 165 papers 41.4% on its credit, compare to quantitative ones, with 115 papers, 25.1%, respectively. In 40.8% studies included 355 papers; the researchers used questionnaire method followed by literature analysis method on 128 papers 27.5% of the total while only in 2 papers, experimental method was used.

The study “How to Grade a Dissertation” conducted by Lovitts (2005). The purpose of the study was to evaluate dissertations in different research universities. The study focused on the evaluations of dissertations. The main aim of the study was to help universities to develop a standard for PhD dissertation on student level and on the educational effectiveness level of the programme.

The population of the study was 276 faculty members from 74 departments of 9 research universities, from 10 disciplines in 2003–04; the sample of the study further divided in the faculty members who had produced Maximum PhDs. Four from science disciplines; electrical and computer engineering, physics or astronomy, biology, and mathematics, and Three departments from humanities disciplines; history, philosophy and English. Three disciplines from social sciences; sociology, economics and psychology.

In a focus group study the faculty members were asked to make clear criteria for evaluating dissertations, the participants were asked to distinguish dissertations and their sub components; the statement of the problem, review of literature, theoretical framework, methods, analysis, discussion and conclusion. For data collection and

analysis the researchers used four points categorical scale to identify the quality of dissertation; outstanding, very good, acceptable, and unacceptable. The participants said that they give their judgments about the quality of PhD dissertation by reading it thoroughly without any checklist of items to assess a dissertation.

Outstanding

Characterizing the outstanding dissertations, the faculty members said that there are no specific criteria or features to define outstanding dissertation “You know it when you see it.” (Lovitts, 2005). According to the faculty member’s outstanding dissertations are produced very rarely; once or twice in a decade. They further discussed it by saying that outstanding dissertations are characterized by its high-quality writing, originality, richness of thoughts, add productive knowledge for the collective goodness of society, compelling consequences, interesting and pleasure to read, also called “page turners”, Such kind of dissertation’s each section is outstanding and connected to the other section of dissertation.

- Well organized, every component connected with each other.
- Creative, stylish and originality in writing.
- States the significance of problem clearly.
- Excellent research design and methodology.
- Comprehensive analysis of the data and convincing interpretation of the results.
- Solid, motivated and logical arguments.
- Created new tools and methods.
- Opened new dimensions for research.

- Outstanding, clear, thoughtful, insightful and coherent in all aspects.

Very Good

The focused group found most of the dissertations very good and indicated the features of a “very good,” dissertation. They are well written, solid and less original, less significant compare to outstanding. Display mastery of the researcher in his field, the focus group said about the skills of the students who produced them, that they have drive, ability and the skills, but sometime they can’t control all the elements it can be summarized as:

- Solid, organized and well written.
- Selected a good question.
- The research showed that the researcher has mastery over subject matter.
- The researcher executed the research very well and used suitable methods to get solid results with strong argument.
- Contributed new knowledge to the field of study.

Acceptable

Focused groups discussed and distinguished between acceptable and marginally acceptable dissertations. Participants enlightened the acceptable dissertations that adequately fulfill the criteria, while marginally acceptable dissertations are those which barely cross the threshold of acceptability or pass. The acceptable dissertations are not very original, significant and not very exciting, or interesting. The writing quality is

good, but the dissertations do not motivate the reader to read. Acceptable dissertations add little knowledge to the research field and lacks significance.

According to the participants of the study the producer of the acceptable dissertations are those students who are bright and functioning close to their abilities but they lack to think like researchers. They are hand holders and they look to their supervisor for step by step guidance. But some time it may be the circumstances that lay to that position and could not receive the guidance, student rush to complete or run out of funds or other family problems. Focused group identified the level of acceptability of research as following:

- The researchers show the ability and know-how of research.
- Less original work and less surprising.
- Lack of creativity and imagination in writing and research.
- Ordinary writing and weak structure of research with a narrow scope.
- A common question which show lack of vision of the researcher.
- No critical review of the literature.
- Weak argument to support the research.
- Used standard methods and simple theory.
- Modest analysis of the study and less explanation of the results.

Unacceptable

The participants emphasized that they rarely see any or failed dissertation on the basis of unacceptability. The reason behind this is that dissertations are evaluated by the

dissertation committee, before it is sent for the purpose of defense. Any such unacceptable dissertations would not pass out of the committee. The adviser would also prevent unacceptable dissertations from going forward to any public appearance because it will also affect his/her name since it is the responsibility of the supervisor. According to the participants of the study if they saw any unacceptable dissertation it was usually the failure of the adviser. Few of the focused group members who had been on a committee never failed a dissertation.

Unacceptable dissertations are full of mistakes and errors with poor quality of writing. They are scaled as not original, not well done and not thoughtful. Not clearly defined question or problem. The researcher used improper method, poor data analysis and explanation of results. The participants agreed that the reasons of production of unacceptable dissertations on part of the students are; no research skills or one should not be admitted in the PhD programme. The researcher explores the following dimensions of a research study for evaluation:

1. Introduction Include:

- Statement of the problem.
- Pose clear research questions to address the problem.
- Summarizes the findings of dissertation.
- Discusses the significance of the findings of the study.
- Present a roadmap of the research for the readers.

2. Literature Review:

- Include latest studies.

- Includes discussion of the literature that is selective, artificial, investigative, and thematic.

3: Theory

- The theory is applicable.
- The theory is logically interpretable and understandable.

4: Methods

- Use appropriate method for research.
- Provide detailed description of the methods.
- Know the advantages and disadvantages of the method for the study.

5: Results or Analysis

- Use appropriate tool for analysis.
- Support the questions and hypotheses rose in the study.
- Sufficient.
- The results are well presented and explained.
- The researcher gains new insights from the study.

6: Discussion or Conclusion

- The researcher summarizes the findings of the study.
- The researcher gives his perspective on them.
- The researcher link the section to the introduction by giving reference.
- The researcher discusses weakness and strengths of the study.

- The researcher discusses the implications and the applications of the research. for the field of study.
- The researcher also provides direction for future research work.

The study concluded that the use of rubrics should be taught to the students in the beginning of the course to improve the quality of the research. Any dissertation that comes for defense should be checked by the rubric by the adviser and committee members.

After recording the results of different students on the master rubric, different patterns of student and adviser performance will emerge. Some students will be good in data analysis while others may be good in methodology section. The result will also explain that some students who had good command on data analysis are in the supervision of professor “Z” and those students who took theory with professor “X” showed better performance in theoretical work compared to those students who took theory with Professor ”Y”. The pattern emerging from this practice will help the departments and the Universities to identify strengths and weaknesses of the faculty members and other areas of education: pedagogy, curricular, instructional design, support student learning and services, and particularly student advising programme. The researcher suggested that the supervisor should set the target “very good” for students instead of outstanding, because most of the supervisors expect that level from their students.

2.6 Critical Analysis of the Studies

The study conducted by Beile, Boote and Killingsworth (2004) “A Microscope or a Mirror?: A Question of Study Validity Regarding the Use of Dissertation Citation Analysis for Evaluating Research Collections” is an excellent study. The evaluation method is best and most reliable. It uses three evaluators; the only shortcoming of this study compared to my current research is that it only covers one section and one element of the research that is citation in the review of literature chapter.

The study conducted by Randolph (2009), on the topic of, “A Guide to Writing the Dissertation Literature Review”, is a good study but it also covers only the review of literature. The study is the review of other studies conducted on the review of literature and present guidelines for evaluation of review of literature.

The study conducted by De-Miguel and Mario (2010) on the topic of, “The Evaluation of Doctoral Thesis. A model Proposal”, is a very good research, although the research is based on others research, the researchers prepared their model by posing questions in every section-what to do and what not to do. The difference between my research and this research is that my research is practical in nature.

Reid and Gough (2000) conducted a study on “Guidelines for reporting and evaluating Qualitative research: what are the Alternatives?” they synthesized the best features of research guidelines of different studies and prepared their own model for evaluation of research. The above three studies are of same nature, developing a model for evaluation but without practical evaluation.

The study conducted by Pathirage, et al., (2004) on “Improving Dissertation Assessment” is a very good research. The researcher has examined the evaluation criteria

of different universities by evaluating 30 dissertations of different universities in different subjects around the world and explained their practices. He has also conducted group interviews with graduate and undergraduate students of Salford University to assess the approaches of different universities used for the assessment of dissertation. The approach of the study was very good and they collected very valuable information about the methods of assessment of dissertation. The study is comparative in nature about the assessment criteria of different universities and different disciplines. The study was about the assessment criteria of different Universities and not the evaluation of dissertation, which is the difference in this research and my research.

Fitt, et al., (2009) study on “Assessing the Quality of Doctoral Dissertation Literature Reviews in Instructional Technology” is based on the study of Boote and Beile. They used the rubric of Boote and Beile on the literature review on the first pass and on the second pass they used it on introduction and methods chapter. The researchers used four evaluators, the study was good but it only covered three chapters. The rubric was designed only for the evaluation of literature review section by Boote and Beile not for the other parts of the research.

Bunton (2005) conducted a study on the structure of conclusion chapters in PhD dissertations. The researcher developed steps to evaluate conclusion section but he did not follow his own evaluation steps in the conclusion section of this study. No references were given of the previous research. Again the study was limited to conclusion section only.

Samraj (2008) conducted study on the theses of master level. The researcher evaluated introduction chapter in detail for citations relevancy and English grammar. It

was a very good research with a few shortcomings; the researcher should have also included significance, objectives, research questions and limitation of the study.

The study of Boote and Beile (2005) on the topic of “Scholars before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation” is very good study about review of literature chapter. It gives a detailed rubric for evaluation of review of literature. It covers only literature review section not all the dissertation.

Pervaiz, (2008) conducted a study on the quality of PhD Program introduced by HEC under the article of “Ph.D. Program quality assurance – a comparative study”. The study addresses the issues faced by PhD scholars in Pakistan. The study also explores some hurdles in achieving quality in PhD programme. The study does not explore the level of quality of research in Pakistan.

A research study conducted by Khatami, et al., (2012) investigated the quality of doctoral dissertations of Isfahan Faculty of Dentistry. The study is very good and covers the evaluation of complete dissertation. The shortcomings of the study are;

- The researcher used questionnaire methods for data collection which is not a very reliable tools in this type of research because the chance of biasness on the part of participants of the study

The study conducted by Fen and Ju (2012) on the topic of “A study on the graduate students’ output regarding educational evaluations in Taiwan” is very good study. The researchers collected data about evaluation from all available sources and then prepared their own data collection sheet. The researchers used different methods on

different section due to that reason the consistency and reliability of the study could be questioned.

The study “How to Grade a Dissertation” conducted by Lovitts (2005), the purpose of the study was to evaluate and grade dissertation in different universities using focus group discussion and interviews. The researcher used four points categorical scale for the study, outstanding, very good, acceptable, and unacceptable. This study is most related to my proposed study “Comparative analysis of PhD Dissertations on education in Pakistan” the difference is that the researchers created rubric to grade dissertation by using focused group interviews with faculty members. While on the other hand my research focused on the comparative analysis of dissertations in the field of education in Pakistan. Lovitts did not evaluate any dissertation with her rubric. The rubric is not practically tested on dissertations. It is all just expert opinion on how to grade a dissertation. In my research I will actually put my own created rubric in practice, created with the help of research cited in the literature review. My rubric cover the whole dissertation not some parts. It is a model rubric and a model research for the scholars in future.

The importance of this research is that, it does not judge the research on the basis of English for the quality, English is one of the components of evaluation of this study, and detailed guideline for every section of the research is available in the methodology section which will help the evaluators and PhD Scholars.

CHAPTER 3

METHODS AND PROCEDURE

The study under investigation is qualitative in nature. The purpose of the research was to evaluate the quality of dissertations in Pakistan and perform a comparative analysis of dissertations between UGC and HEC. In this chapter the researcher explains the methods and procedure used to investigate the problem under study. This chapter explains the population of the study and selection process of the sample, criteria of inclusion and exclusion, research instrument and detail guidelines for the rubric, and further more pilot testing of the rubric, examine the validity reliability, and scoring procedure of the study are the part of this chapter.

3.1 Population of the Study

The population of the study consisted of all PhD dissertations in education in Pakistan since the independence of Pakistan in 1947 till 2011. The total numbers of dissertations were 308 according to Pakistan Research Repository (HEC, 2011).

3.2 Sample of the Study

Total population of the study consisted of 308 PhD dissertations in education, of these 217 were available for download. The researcher developed a benchmark for inclusion and exclusion of dissertations.

3.3 Criteria for Inclusion and Exclusion

- All online available dissertations were part of this study.
- The dissertations that were written in English were included in the study.

- The dissertations that fulfilled the criteria of the rubric prepared for this study were part of this study.
- Duplicated or plagiarized dissertation were not included in the study.

As a first step, the target dissertations were identified and downloaded from the Pakistan Research Repository website. The total listed dissertations were 308. During the downloading, the researcher found that some dissertations were uploaded multiple times on different names while some were blank links. At the end 217 dissertations were downloaded. After downloading the dissertations, they were examined on the criteria for inclusion and exclusion, 39 dissertations were excluded from the study; of these 11 were not from education, 11 were written in Urdu language, 17 did not fulfill the criteria of the rubric created for the evaluation of dissertations. A total of 178 dissertations were identified for evaluation, of these 131 dissertations were from HEC and 47 were from UGC.

3.4 Research Instruments

The main purpose of the study was to evaluate the quality of PhD dissertations in Pakistan and to perform a comparative analysis of dissertations of HEC and UGC. For the evaluation of dissertations the researcher looked for a suitable model of evaluation. During the review of research studies on dissertations evaluation, the researcher found different instruments of evaluation. Some researchers used rubric with multiple raters, some researchers used the rubric on few theses that is not enough for generalization on the whole population. The researcher adopted all those rubrics mentioned in the review of literature and developed a new rubric for the evaluation of dissertations. The

researcher used five point's categorical scale for evaluation; “excellent”, “good”, “satisfactory”, “unsatisfactory”, and “not included”. In the “not included column” the researcher placed the missing data. The researcher developed a 20 points fillable rubric and detail guidelines for the twenty points.

3.5 Guidelines for Evaluation

Scale for Marking:

1 Excellent; 2 Good; 3 Satisfactory; 4 Unsatisfactory; 5 Not included

1. Research Topic

Excellent:

- ☒ The topic is researchable (Poticell & Olivarez 1997).
- ☒ Appropriateness of the research topic (University of Peshawar, 2012).
- ☒ The topic is indispensable part of the education (Gay, 2000).
- ☒ Topic is clear and self-explanatory (Creswell, 1994).
- ☒ Topic is challengeable (Lovitts, 2005).
- ☒ The outcomes of the topic are productive for the well-being of society (Lovitts, 2005).
- ☒ Topic fulfills the criteria of APA manual (APA, 2010).

Good:

- ☒ The topic is workable (Creswell, 1994).

- ☒ The topic is related to the field of Education (University of Peshawar, 2012).
- ☒ The topic will be a good inclusion of knowledge in the field of Education (Creswell, 1994).
- ☒ The topic fulfills the rules of APA manual (APA, 2010).

Satisfactory:

- ☒ The topic is relevant to the field of study.
- ☒ The study will incorporate new knowledge to the field of study or one of its subcomponents (Creswell, 1994).
- ☒ The topic fulfills the rules of APA manual to some extent (APA, 2010).

Unsatisfactory:

- ☒ The topic is irrelevant to the field of study.
- ☒ Too many research studies already available on the same topic.
- ☒ The topic violates the rules of APA manual (APA, 2010).

2. Abstract

Excellent:

- ☒ A very precise abstract of the study.
- ☒ Give clear idea to the reader about the research.

- ☒ Give clear introduction, objectives, method and conclusion of the study (Dirks, 2012).
- ☒ Incorporate sample of the study and how the sample was chosen (Creswell, 1994).
- ☒ Discuss the procedure of data collection (Gay, 2000).
- ☒ Analyze data and how the conclusion is drawn from the study (Gay, 2000).
- ☒ Present finding and conclusion of the study (Creswell, 1994).
- ☒ Critically analyze research.
- ☒ Abstract fulfill the rules of APA Manual (APA, 2010).

Good:

- ☒ A good summary of the study, gives reader the basic idea what the research is about.
- ☒ Identify major components of the study; objectives of the study, Sample of the study and how the sample was selected (Dirks, 2012).
- ☒ Present result of the study (Creswell, 1994).
- ☒ Abstract fulfill the rules of APA Manual to Maximum level (APA, 2010).

Satisfactory:

- ☒ Give reader a basic summary of the research.

- ☒ Abstract fulfills the rules of APA Manual to some extent (APA, 2010).
- ☒ Cannot motivate the reader to go through to the whole research.

Unsatisfactory:

- ☒ Abstract is unable to provide a good summary of the research.
- ☒ Ambiguous, unmotivated and unrelated information.
- ☒ Do not follow the rules of APA Manual (APA, 2010).

3. Introduction

Excellent:

- ☒ A very detail objectives and impressive Introduction of the topic (Yount, 2006).
- ☒ Gives clear justification for every component of the topic and its subtopics, with clear definitions and references (Gay, 2000).
- ☒ Clearly state the problem of the study and that problem are testable through research (Gay, 2000).
- ☒ Provided the purpose of the investigation (Yount, 2006).
- ☒ Explain the significance of the study and why the study is so important (Gay, 2000).
- ☒ Hypotheses are testable and answerable (Gay, 2000).
- ☒ Limitations and delimitation of the study are clearly stated which could affect the study (Gay, 2000).

- ☒ The researcher followed the guideline of APA Manual (APA, 2010).

Good:

- ☒ Clear introduction of the selected topic with explanation of subtopics (Gay, 2000).
- ☒ Clear statement of the problem (Lovitts, 2005).
- ☒ Significance of the study (Lovitts, 2005).
- ☒ Gives limitations and delimitation of the study, which could affect the study (Gay, 2000).
- ☒ The researcher followed the guideline of APA Manual (APA, 2010).

Satisfactory:

- ☒ Introduction and statement of the problem with justification and significance of the problem, in very simple and acceptable words (Lovitts, 2005).
- ☒ The researcher followed the guideline of APA Manual (APA, 2010).

Unsatisfactory:

- ☒ Vague introduction of the topic (Lovitts, 2005).
- ☒ Poor statement of the problem and justification of the study (Lovitts, 2005).

☒ Introduction and its subtopics were loosely formulated (Lovitts, 2005).

☒ Ignored the major rules of APA Manual (APA, 2010).

4. Objectives

Excellent:

☒ Convincing statement of objectives that determines the challenge of the research and its applications (Rice University, 2008).

☒ Objectives strongly support the topic (De-Miguel & Mario, 2010).

☒ Objectives are helpful in the process of research.

☒ Objectives lead to the solution of the research problem.

Good:

☒ Objectives and applications are clearly stated, motivated and challenging (Rice University, 2008).

☒ Objectives support the topic ultimately or one of its subtopics (De-Miguel & Mario, 2010).

Satisfactory:

☒ Objectives or applications are partly clear and related to the study (Rice University, 2008).

Unsatisfactory:

- ☒ Objectives and applications are unclear, and not related to the study.

5. Research Questions

Excellent:

- ☒ Research questions are clearly stated (Creswell, 1994).
- ☒ Questions are focused and relevant to the study and followed by hypothesis (Duquesne University, 2006).
- ☒ Questions have the direct relationship to the study and concept of the study (Duquesne University, 2006).
- ☒ The research questions have the direct relationship to the objectives or to achieve the objectives of the study (Duquesne University, 2006).

Good:

- ☒ Research questions are clear (Creswell, 1994).
- ☒ Research questions have a direct relationship to the study or one of its sub-fields (Duquesne University, 2006).

Satisfactory:

- ☒ Research questions have a direct relationship to some extent to the study or one of its subfields (Duquesne University, 2006).

Unsatisfactory:

- ☒ Research questions are irrelevant and have no relationship to the study or its subfields.

6. Literature review

Excellent:

- ☒ Historical background of the study and background of all relevant variables (Gay, 2000).
- ☒ Identifies all relevant major studies (Rice University, 2008).
- ☒ Gives complete abstracts of the studies with critical analysis and their shortcoming, incorporate discussion about the strengths and weaknesses of the previous studies with respect to current study (Gay, 2000).
- ☒ Synthesized and compare the result of different studies (Gay, 2000).
- ☒ Organized least related study first and most related last (Gay, 2000).
- ☒ Latest studies are included in the research (Lovitts, 2005; UoP, 2012).
- ☒ Most sources cited are primary (Lovitts, 2005).
- ☒ Gives a brief summary at the end and discusses the possible implication of the current study (Gay, 2000).
- ☒ The researcher followed the guideline of APA Manual (APA, 2010).

Good:

- ☒ Has reference to latest major studies (Lovitts, 2005; University of Peshawar, 2012).
- ☒ Discusses them and places them accordingly (Creswell, 1994).
- ☒ Gives complete abstracts of the studies with critical analysis and their shortcoming (Gay, 2000).
- ☒ Follows researcher guideline of APA Manual.

Satisfactory:

- ☒ Cite only few major works or more relevant literature required (Rice University, 2008).
- ☒ Place the research with the context.
- ☒ Provides basic summary of the research.

Unsatisfactory:

- ☒ Fails to cite major relevant studies or incorporation of previous work needed.
- ☒ Provides vague summary of the research.

7. Methodology/ R-design

Excellent:

- ☒ Research design was carefully selected that is best suited for the study (Gay, 2000).

- ☑ Research design was applicable to address hypotheses and research questions (Creswell, 1994; De-Miguel & Mario, 2010).
- ☑ Provides detail procedure of method used for data collection and data analysis (Dirks, 2012).
- ☑ Provides description of the subjects and variables (Lovitts, 2005).
- ☑ Describes population, sample, instrument, design and procedure (Gay, 2000).
- ☑ Procedure of sample selection is clearly described (Gay, 2000).
- ☑ Appropriate tools were used to conduct the study (Gay, 2000).
- ☑ The researcher used valid, reliable and verifiable research methods (Lovitts, 2005; De-Miguel & Mario, 2010).
- ☑ The researcher followed the guideline of APA manual in methodology section (APA, 2010).

Good:

- ☑ Research design was good (Lovitts, 2005).
- ☑ Appropriate tools were used to conduct the study (Gay, 2000).
- ☑ Procedure of sample selection is clearly described (Gay, 2000).
- ☑ The researcher used a valid method for the study (Lovitts, 2005; De-Miguel & Mario, 2010).
- ☑ The researcher understands the need and requirement of his topic and research question (Lovitts, 2005).

- ☒ The researcher followed the guideline of APA manual in methodology section (APA, 2010).

Satisfactory:

- ☒ The researcher used a satisfactory research design (Lovitts, 2005).
- ☒ Lot of space available for improvement.
- ☒ Better tools could have been used to achieve better result (Lovitts, 2005).

Unsatisfactory:

- ☒ Research design is not suitable for this study, with lot of flaws and errors and out of context.

8. Samples

Excellent:

- ☒ The researcher gives the description of the entire population (Yount, 2006).
- ☒ The researcher uses representative sample of the target population (Gay, 2000).
- ☒ Samples are randomly selected according to the requirements of the desired study (APA, 2012; Yount, 2006).
- ☒ Gives detail step by step description how the sample is selected (Yount, 2006).

- ☒ The researcher followed the APA guideline during sample selection (APA, 2010).

Good:

- ☒ Used appropriate sample for the study (Creswell, 1994).
- ☒ Sample was selected randomly according to the desired study (Yount, 2006).
- ☒ The researcher followed the APA guideline during sample selection (APA, 2010).

Satisfactory:

- ☒ Selected sample was up to the APA's acceptable level and representative of the required target Population.

Unsatisfactory:

- ☒ Selected sample size did not fulfill the criteria of APA's manual 6th edition and nor is it a representative sample of the population.

9. Tools of Data Collection

Excellent:

- ☒ Researcher selected the best appropriate tool for data collection that fulfills the requirements of the study to optimum level (Yount, 2006).

- ☒ The researcher explained the procedure of data collection and the tool and selected how he will collect data with that tool (Yount, 2006).
- ☒ The researcher followed the APA manual guidelines for data collection and the tool of data collection (APA, 2010).

Good:

- ☒ The researcher used good tool for data collection (Creswell, 1994).
- ☒ The researcher explains the procedure of data collection (Creswell, 1994).

Satisfactory:

- ☒ The researcher used acceptable tool for data collection (Creswell, 1994).

Unsatisfactory:

- ☒ The researcher used improper tool for data collection.

10. Focus on Research Problem

Excellent:

- ☒ Focus on the research problem and its arguments (IR University of Japan, 2002).

- ☒ Arguments are clear and related to the study problem (IR University of Japan, 2002).
- ☒ Establish clear relationship between research questions and results of the study (IR University of Japan, 2002).
- ☒ For every statement in the study there is an argument and answer to the question (IR University of Japan, 2002).

Good:

- ☒ The researcher kept focus on the research problem (IR University of Japan, 2002).
- ☒ Gave good arguments and counter arguments during his research (IR University of Japan, 2002).

Satisfactory:

- ☒ The researcher kept focus on the research problem but some time the researcher lost his focus and incorporated material which was not necessary for the study.

Unsatisfactory:

- ☒ The researcher never focused on his research problem and discussed irrelevant questions in his research.

11. Data Analysis & Result

Excellent:

- ☑ The researcher gave a comprehensive summary of the collected data (Creswell, 1994).
- ☑ Result calculated, executed carefully and presented comprehensively with clarity (Gay, 2000; University of Peshawar, 2012).
- ☑ Used Statistical analyses to answer research questions and hypotheses (Yount, 2006; Lovitts, 2005).
- ☑ All necessary groups and tables were taken into consideration (Gay, 2000; Lovitts, 2005).
- ☑ All possible concept and themes were derived from the data (Lovitts, 2005).
- ☑ The researcher clearly analyzed the data and linked it to the overt hypotheses and the questions asked in statement of the problem (University of Victoria, 2002).

Good:

- ☑ Provides a comprehensive summary of the collected data (Creswell, 1994).
- ☑ Result calculated and presented clearly (Lovitts, 2005).
- ☑ Used required tools for data analysis (Lovitts, 2005; Creswell, 1994).
- ☑ All necessary groups and tables were taken into consideration (Gay, 2000; Lovitts, 2005).

- ☒ Maximum concept and themes were derived from the data (Rice University, 2008).

Satisfactory:

- ☒ Minimum result calculated and presented with some slight oversight during presentation (Rice University, 2008).
- ☒ Used required tools for data analysis (Lovitts, 2005; Creswell, 1994).
- ☒ Necessary groups and tables were taken into consideration (Gay, 2000; Lovitts, 2005).

Unsatisfactory:

- ☒ Minimal results calculated and presented with major errors in analysis and interpretation.
- ☒ Poor selection of tools for data collection.
- ☒ All the tables were not taken into consideration. Presented Poor explanation of the tables and poor arguments.

12. Response to Questions

Excellent:

- ☒ Comprehensive answers that demonstrates deep knowledge of the research scholar in his field (Rice University, 2008; Lovitts, 2005).
- ☒ Used statistical analyses to answer research questions and hypotheses in Discussion section (Duquesne University, 2006; Lovitts, 2005).

- ☑ Every question and hypothesis was answered in the light of results and data analyses (Rice University, 2008; Lovitts, 2005).
- ☑ In discussion section the researcher provided comprehensive answers to the questions which were raised in the introduction section (Duquesne University, 2006; Lovitts, 2005).

Good:

- ☑ Knowledgeable answers that demonstrate deep knowledge of the research scholar in his field (Rice University, 2008).
- ☑ In discussion section the researcher answered the questions which were raised in introduction section demonstrating understanding of the issues, which were directly relevant to study (Rice University, 2008; Lovitts, 2005).

Satisfactory:

- ☑ Some questions were answered during the study (Creswell, 1994).
- ☑ Answers exposed tiny gaps in understanding of the study (Rice University, 2008).

Unsatisfactory:

- ☑ Answers exposed substantial gaps in understanding thesis work.

13. Discussion

Excellent:

- ☒ Gives a comprehensive overview of the finding of the study (Dirks, 2012).
- ☒ Explains and interprets result clearly for the reader, with arguments by testing hypotheses (Gay, 2000).
- ☒ The researcher evaluated and interpreted the possible implication with respect to his research hypotheses and drew conclusion (APA, 2010; Gay, 2000).
- ☒ Provides enough information about the result and possible alternative explanation for the outcome of the analyses which are beyond the expectation of the researcher (Lovitts, 2005; Creswell, 1994).
- ☒ The researcher linked his own work and the work of other researchers reviewed in the literature review process by agreement or disagreement with the result of test of hypotheses (Gay, 2000; Lovitts, 2005).
- ☒ The researcher provided comprehensive answers to the questions which were raised in the introduction section (Duquesne University, 2006; Lovitts, 2005).
- ☒ The researcher critically analyzed his own work and explains the limitation of his study (APA, 2010; Lovitts, 2005).

- ☑ The researcher takes possible threats and biasness into account during the study (APA, 2010; Dirks, 2012).
- ☑ Provides suggestion for future research (Dirks, 2012; Lovitts, 2005).

Good:

- ☑ Interpret all the result clearly with arguments link to review of literature (Lovitts, 2005).
- ☑ The researcher linked his own work and the work of other researchers reviewed in the literature review process by agreement or disagreement with the result of test of hypotheses (Lovitts, 2005).
- ☑ The researcher identified the short coming in his own research (Lovitts, 2005).
- ☑ The researcher takes possible threats and biasness into account during the study.
- ☑ Suggested future work area (Lovitts, 2005).

Satisfactory:

- ☑ The researchers explained maximum result with relation to other studies and interpret with some minor arguments (Lovitts, 2005).
- ☑ The researcher identified the short coming in his own research (Lovitts, 2005).
- ☑ Suggested future work area (Lovitts, 2005).

Unsatisfactory:

- ☒ The researchers explained very few results without any link and interpretation of those results.

14. Conclusion**Excellent:**

- ☒ Summarized the major finding of the study (Ruiying & Allison, 2003; Lovitts, 2005).
- ☒ In the conclusion section the researcher gives answer to the experiment, clearly state the hypothesis of the study i.e. wrong or right and relate to the research studies in literature review (Duquesne University, 2006; Lovitts, 2005).
- ☒ Conclusions were clearly based on the result of the study (Creswell, 1994; Lovitts, 2005).
- ☒ Major conclusions were drawn from the study which is an excellent inclusion in the knowledge in the field of study (Creswell, 1994; Lovitts, 2005).
- ☒ All the possible implications of the study discussed, bringing out not only the advantages arising from the study but also gives limitations of the work (Ruiying & Allison 2003; Duquesne University, 2006).

- ☑ Discuss and compare the implications of current research with the research studies which were most related in the literature review findings (Duquesne University, 2006).

Good:

- ☑ Summarized the major finding of the study (Ruiying & Allison, 2003; Lovitts, 2005).
- ☑ Major conclusions were drawn from the results; conclusions were linked to hypothesis and also provide the limitation of the study (Creswell, 1994; Lovitts, 2005).
- ☑ Conclusions were clearly based on the result of the study (Creswell, 1994; Lovitts, 2005).
- ☑ All the possible implications of the study discussed, bringing out not only the advantages arising from the study but also given limitations of the work (Creswell, 1994; Lovitts, 2005).

Satisfactory:

- ☑ Summarized some findings of the study (Ruiying & Allison, 2003; Lovitts, 2005).
- ☑ Conclusions were clearly based on the result of the study (Creswell, 1994; Lovitts, 2005).
- ☑ Major conclusions were drawn from the result (Creswell, 1994; Lovitts, 2005).

Unsatisfactory:

- ☒ Gives an unstructured, poor and loosely formulated Summary of the finding.
- ☒ The researcher ignores all major conclusions and did not provide any discussion about his hypothesis or statement of the study.

15. Suggestions**Excellent:**

- ☒ The researcher gives suggestions in the light of the conclusion drawn from the study (Duquesne University, 2006).
- ☒ The researcher incorporated necessary suggestions that have a direct relationship to the study and could help in the improvement and suggest remedies to the problem (Creswell, 1994).
- ☒ The researcher explained what area need future work and what are the issues (Creswell, 1994).
- ☒ Also suggested what area required further research (Lovitts, 2005).

Good:

- ☒ Suggestion were good and if act upon, it would be helpful to the solution toward the problem (Creswell, 1994).
- ☒ The researcher gives recommendations in the light of finding of the study (Creswell, 1994).
- ☒ The researcher suggested what area required further research (Lovitts, 2005).

Satisfactory:

- ☒ The researcher gives recommendation which could help in the solving of the problem (Lovitts, 2005).

Unsatisfactory:

- ☒ No recommendations given or the recommendations which presented are not related to the existing problem.

16. Ethics of Research**Excellent:**

- ☒ The researcher considered ethical issues seriously, protected confidentiality and human rights of the respondents and target population (Gay, 2000; Hammersley & Traianou, 2011).
- ☒ The researcher contributed accurate scientific knowledge and protected the copyrights of others (used citation for others work) (Gay, 2000; Hammersley & Traianou, 2011).
- ☒ Avoided unnecessary material to save the time of the reader (Hammersley & Traianou, 2011).
- ☒ The researcher followed the APA guideline (APA, 2010).

Good:

- ☒ The researcher carefully handled ethical issues in his research (Hammersley & Traianou, 2011).

- ☑ Tried to contribute accurate knowledge to the field of study (Gay, 2000; Hammersley & Traianou, 2011).
- ☑ Used citation for every work he incorporated in his research (Gay, 2000; Hammersley & Traianou, 2011).

Satisfactory:

- ☑ The researcher protected the confidentiality of the respondents (Gay, 2000; Hammersley & Traianou, 2011).
- ☑ The researcher incorporated new knowledge through his research to some extent (Gay, 2000; Hammersley & Traianou, 2011).
- ☑ Incorporated material which could be avoided to save the time of the reader.

Unsatisfactory:

- ☑ The researcher ignored ethical consideration in his research.
- ☑ Did not acknowledge the work of others, minimum citation was used.
- ☑ Unnecessary data were incorporated in the research which wasted the time of the reader.

17. Proposed Research:

Excellent:

- ☑ Well thought out study to achieve innovative results and objectives (Rice University, 2008).
- ☑ Presented original research work (University of Peshawar, 2012).
- ☑ The study is helpful in the developments of that particular field (Rice University, 2008).
- ☑ The study presented a clear theoretical or conceptual framework that impels the focus of the study (Duquesne University, 2006).
- ☑ Good overall plan, with good objectives and area of the study, provided a clear theoretical concept related to the study (Rice University, 2008; Duquesne University, 2006).
- ☑ The researcher has a clear and strong point of view (Lovitts, 2005).

Good:

- ☑ Good overall plan, with good objectives and area of the study, provided a clear theoretical concept related to the study (Rice University, 2008; Duquesne University, 2006).
- ☑ The study is helpful in the developments of that particular field (Rice University, 2008).
- ☑ The researcher has a clear and strong point of view (Lovitts, 2005).

Satisfactory:

- ☑ Research provides a substantial amount of knowledge to the proposed problem but needs some further development (Rice University, 2008).

- ☒ Acceptable study with good objectives, area of the study, and provides a clear theoretical concept related to the study (Rice University, 2008; Duquesne University, 2006).

Unsatisfactory:

- ☒ Vague outline of present and future work, with major flaws and ambiguity in the overall research (Rice University, 2008).

18. Written Report Organization

Excellent:

- ☒ Systematic progression of thought in each section (Yount, 2006).
- ☒ Organization of figures and illustration of main points, topic clearly explained in introduction (Rice University, 2008).
- ☒ Presentation of chapter titles, headings, and subheading of dissertation (University of Peshawar, 2012).
- ☒ All sections systemically arranged and placed on their right place (Rice University, 2008).
- ☒ The researcher used APA Format for the entire document.

Good:

- ☒ Well-arranged research with some minor adjustments (Rice University, 2008).

- ☒ Maximum sections of the research are arranged and presented with systematic order (Rice University, 2008).
- ☒ Presentation of chapter titles, headings, and subheading of dissertation (University of Peshawar, 2012).

Satisfactory:

- ☒ Presentation of some material was not in systematic order (Rice University, 2008).
- ☒ Some statements were not presented adequately (Rice University, 2008).
- ☒ Overall research was organized and acceptable according to APA (APA, 2010).

Unsatisfactory:

- ☒ Repetition of material.
- ☒ Poor tabulation and presentation of tables and figures, difficult to understand for the reader.

19. Quality of Report Writing

Excellent:

- ☒ Ideas stated clearly, straightforward and fluently (Gay, 2000; Rice university, 2008).

- ☑ The rules of grammar, spelling and style were applied suitably (Yount, 2006; Rice University, 2008).
- ☑ Correctness of language (University of Peshawar, 2012).
- ☑ Well organized arguments and counter arguments (Gay, 2000).
- ☑ The researcher was objective during report writing (Gay, 2000).
- ☑ The researcher followed the guideline of APA Manual in entire report writing (APA, 2010).

Good:

- ☑ Ideas presented fluently (Gay, 2000; Rice university, 2008).
- ☑ The rules of grammar followed, Minimum spelling mistakes (Yount, 2006; Rice University, 2008).
- ☑ The researcher was objective during report writing (Gay, 2000).
- ☑ The researcher followed the guidelines of APA Manual in entire report writing (APA, 2010).

Satisfactory:

- ☑ The dissertation is readable and used acceptable language to present the study (University of Peshawar, 2012).
- ☑ Some parts are difficult to understand, limited typing and grammatical errors (Yount, 2006; Rice University, 2008).
- ☑ The researcher followed the guidelines of APA Manual with some minor mistakes.

Unsatisfactory:

- ☒ No sequence in thoughts, maximum parts are difficult to understand.
- ☒ Full of grammatical and spelling errors.
- ☒ Research is ambiguous and scribbled.

20. Citation:**Excellent:**

- ☒ Excellent citations used in all section of the report (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ The researcher followed the guidelines of APA manual in entire report writing.
- ☒ The researcher has full command over the APA manual (APA, 2010).
- ☒ The researcher reported all sources alphabetically by authors' last name (Gay, 2000; Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Sources reported in text also reported in the reference section (Gay, 2000; Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Primary sources reported in reference section (Gay, 2000; Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Latest studies were cited (University of Peshawar, 2012).

Good:

- ☒ The researcher used good citation skill during his report writing (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Primary sources reported in reference section (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Sources reported in text also reported in the reference section (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).

Satisfactory:

- ☒ The researcher used citation to acceptable level with some minor mistakes (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).
- ☒ Sources reported in text are also reported in the reference section (Beile, et al, 2004; Soler-Monreal & Gil-Salom, 2011).

Unsatisfactory:

- ☒ The researcher made major mistakes during citation in text and in the end in the reference section.

3.6 Pilot Testing

The Researcher adapted the rubric of different researchers and prepared and tested his own fourteen point instrument during a pilot study conducted at the Institute of Education and Research, University of Peshawar. The instrument was tested for Master level theses which was evaluated, and improved for this study. The researcher further

incorporated 6 points and enhanced the instrument to 20 points rubric that was used for evaluation of PhD dissertations.

3.7 Validity and Reliability

Guidelines were prepared under the supervision and guidance of supervisor and three other faculty members:

Dr. Muhammad Neman (Supervisor)

Dr. Hafiz Muhammad Inamullah

Dr. Syed Munir Ahmad

Dr. Arshad Ali

Before administration of the rubric to the actual data, five dissertations were randomly selected from last fifty years and evaluated on the rubric to check the reliability of the instrument; one research was selected from every decade after 1960. The researcher found that the rules of the APA manual were almost the same for the last fifty years.

3.8 Validity and Reliability Post Data Collection Test

After the actual data collection the researcher again tested the validity and reliability of the instrument by randomly selecting 10 dissertations for reevaluation. The researcher first created 10 groups each comprises of 19 dissertations, then randomly selected one dissertation from group one which happened to be number 19, then researcher selected every 19th dissertation from 10 groups. The researcher reevaluated these 10 dissertations by using rubric and filling the data sheet. One dissertation failed

the test which was previously marked good. In the second pass it was marked satisfactory the remaining 9 dissertations produced the same result as previously marked in first pass.

3.9 Collection of Data

For data collection the researcher used the rubric which was created for this purpose. The data were collected in a separate data sheet for every dissertation. The data sheet consisted of five column, namely excellent, good, satisfactory, unsatisfactory and not included column. The researcher evaluated 20 components of the research in the light of evaluation guidelines presented in the instrument section.

3.10 Scoring Procedure

3.10.1 Scoring the Components of Dissertation

For scoring of the 20 components of dissertation, the following methods were used during data collection.

Excellent:

- ☒ In the guidelines section (Excellent) if all the elements of a component were present then it was marked as excellent

Good:

- ☒ In the guidelines section (Good) if all the elements of a component were present then it was marked as good

Satisfactory:

- ☒ In the guideline section (Satisfactory) if all the elements of a component were present then it was marked as satisfactory

Unsatisfactory:

- ☒ in the guidelines section (Unsatisfactory) if some of the elements of a component were stated as suggested then it was marked as unsatisfactory

3.10.2 Scoring the Dissertations

The following methods were used for scoring dissertations after the data collection.

Excellent:

- ☒ The dissertation was placed Excellent if it got 7 out of 20 components excellent while the remaining majority components were placed in Good.

Good:

- ☒ The dissertation was placed Good if 9 out of 20 components were good (some may be in excellent) and the remaining majority were placed in satisfactory

Satisfactory:

- ☒ The dissertation was placed satisfactory if less than 9 components were placed in excellent and good section combine and less than 5 in unsatisfactory section

Unsatisfactory

- ☒ The dissertation was placed unsatisfactory if more than five components were placed unsatisfactory or the research not matched with the topic.

CHAPTER 4

DATA ANALYSIS

This chapter includes data analysis of collected data, after the evaluation of PhD dissertations conducted under UGC and HEC, the procedure, and software used in the data analysis process, and furthermore explanation of the results of data analysis.

4.1 Data Analysis Methods

For the analysis of data, three methods were used;

- Percentage
- Z score of two proportions using MedCalc Software
- Chi Square test using Minitab.

The purpose of this study was to evaluate the quality of research in Pakistan and compare the quality of dissertations conducted under HEC with the quality of research under UGC. Every dissertation was evaluated on a separate sheet using evaluation rubric constructed for this research. For analysis the data was arranged in two patterns, one for the comparison of quality between HEC and UGC and the other for evaluating overall quality of dissertations in Pakistan. For the former, the researcher used two methods to interpret the data, one was percentage and the other was two proportions comparison Z-Test. The percentage calculation of the data was also an essential step to calculate two proportions Z-test. The researcher used MedCalc version 12.3.0.0 statistical software for the analyses of data. The reason for the selection of MedCalc software was the availability of the required test and ease of use. The level of probability for the test was 0.05.

4.2 Comparative Analysis of HEC and UGC Dissertations

Table 4.1 Research Topic

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Research Topic	21	7	91	36	18	2	1	2	0	0
Percentage	16.03%	14.89%	69.50%	76.59%	13.74%	4.25%	0.76%	4.25%	0%	0%

The results show that on the component of research topic 16.03 % of the HEC scholars scored excellent as compared to 14.89% of the UGC. While 69.50% of the HEC scholars scored good as compared to 76.59% of the UGC scholars. On the scale of satisfactory 13.74% of the HEC scholars scored satisfactory as compared to 4.25% of the UGC scholars.

The research topic of 3 research studies were found unsatisfactory; two from UGC and one from HEC. The overall result shows that there is a minor difference in the selection of research topic between HEC and UGC. A majority of the research topics were workable and formed an essential part of existing body of research knowledge in education (Gay, 2000).

	Excellent	
	HEC	UGC
Research Topic	21	7
Percentage	16.03%	14.89%

Difference 1.140%

95% CI -13.482% to 12.568%

Chi-square 0.00244

DF 1

Significance level P = 0.9606

Comment: Table 4.1 Item Research Topic, Category Excellent
The result is not significant

Fig 4.1.1 Excellent

For statistical analysis and comparison, the researcher used MedCalc statistical software. The researcher used two proportions Z-Test. The result shows that there is no significant difference at 0.05 level on the category of excellent with 0.9606 P Value, Chi-square score is 0.00244 (with *Yates' correction for continuity*) and P value: which is greater than 0.05, hence there is no significant difference in the two proportions. Difference between two proportions is 1.140%.

Good		Difference	7.090%
HEC	UGC	95% CI	-9.454% to 21.161%
91	36	Chi-square	0.539
69.50%	76.59%	DF	1
		Significance level	P = 0.4627
		Comment: Table 4.1 Item Research Topic, Category Good The result is not significant	

Fig 4.1.2 Good

The Statistics of the result shows that there is no significant difference in the selection and quality of research topic on the category of good in HEC and UGC dissertations. P value is 0.4652 which is greater than 0.05. The difference in two proportions is 7.090%, with 95% confidence interval.

Table 4.2 Abstract

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Abstract	2	3	101	33	28	9	0	0	0	2
Percentage	1.52%	6.38%	77.10%	70.21%	21.37%	19.14%	0%	0%	0%	4.25%

The result of the study shows that the abstract of majority HEC and UGC dissertations were found good. The abstracts of 77.10% HEC dissertations and 70.21%

UGC dissertations were found good. Only a handful of dissertations achieved the level of excellent for both HEC and UGC. On the scale of satisfactory HEC researchers scored 21.37% whereas UGC researchers scored 19.14%. Both HEC and UGC compete neck to neck on the component of abstract. Majority of the abstracts provide a clear introduction of the study, objectives, method and conclusion of the study as Dirks (2012) explained in his study.

Abstract		
	Excellent	
	HEC	UGC
Abstract	2	3
Percentage	1.52%	6.38%

Difference	4.860%
95% CI	-1.502% to 16.095%
Chi-square	1.480
DF	1
Significance level	P = 0.2238

Comment: Table 4.2 Item Abstract, Category Excellent
The result is not significant

Fig 4.2.1 Excellent

The Statistical analysis of the result shows that there is no significant difference in the quality of abstract on the category of excellent in the five point categorical scale in HEC and UGC dissertations. The difference between two proportions is 4.860% and the confidence interval for this difference is 95%.The chi-square is 1.480, with 0.2238 P value which is greater than 0.05 therefore the result is not significant

Abstract		
	Good	
	HEC	UGC
	101	33
	77.10%	70.21%

Difference	6.890%
95% CI	-7.989% to 23.491%
Chi-square	0.551
DF	1
Significance level	P = 0.4579

Comment: Table 4.2 Item Abstract, Category Good
The result is not significant

Fig 4.2.2 Good

The Statistical analysis of the study shows that on the category of good there is no significant difference between HEC and UGC because the P value is 0.4579 which is greater than 0.05%. The difference between two proportions is 6.890% and the confidence interval for this difference is 95%.

Table 4.3 Introduction

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Introduction	33	7	45	14	53	26	0	0	0	0
Percentage	25.19%	14.89%	34.40%	29.78%	40.45%	55.32%	0%	0%	0%	0%

The introduction section of HEC dissertations scored 25.19% in comparison with UGC 14.89% on the scale of excellent. On the scale of good HEC scored 34.40% and UGC 29.78%. On the level of satisfactory HEC scored 40.45% and UGC 55.32%, which shows that HEC has lesser number of dissertations in the satisfactory level then UGC and higher number in the excellent and good scale. They gave clear introduction and justification for every component of the research and its subtopics, and explained the significance of the study as Gay (2000) mentioned.

Table 4.3

	Excellent	
	HEC	UGC
Introduction	33	7
Percentage	25.19%	14.89%

Difference	10.300%
95% CI	-4.909% to 22.335%
Chi-square	1.557
DF	1
Significance level	P = 0.2122
Comment: Table 4.3 Item Introduction, Category Excellent The result is not significant	

Fig 4.3.1 Excellent

The Statistical analysis shows that the quality of introduction on the category of excellent in HEC and UGC dissertations had no significant difference because the P value is 0.2122 which is greater than 0.05%. The difference between two proportions is 10.300% and the confidence interval for this difference is 95%.

Table 4.3

Satisfactory	
HEC	UGC
53	26
40.45%	55.32%

Difference	14.870%
95% CI	-2.759% to 31.676%
Chi-square	2.525
DF	1
Significance level	P = 0.1120

Comment: Table 4.3 Item Introduction, Category Satisfactory
The result is not significant

Fig 4.3.2 Satisfactory

On the scale of satisfactory the Statistical analysis shows that there is no significant difference in the quality of introduction, the P value is 0.1120 which is greater than 0.05% and the difference between two proportions is 14.870% and the confidence interval for this difference is 95%.

Table 4.4 Objectives

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Objectives	44	7	74	22	13	14	0	1	0	3
Percentage	33.59%	14.89%	56.50%	46.81%	9.92%	29.79%	0%	2.13%	0%	6.38%

Objective is one of the important components of a research. HEC scored 33.59% whereas UGC scored 14.89% on the scale of excellent. On the scale of good HEC scored 56.50% while UGC scored 46.81%. In both excellent and good scale HEC dissertations

are better than UGC while on the lower scale satisfactory UGC scored higher than HEC and on the scale of unsatisfactory UGC scored 2.13% whereas HEC's score was 0%. The other most important factor is that in three UGC dissertations objectives were not included which comes to 6.38%. The overall quality of the objectives was found good, the majority objectives supported the topic of the study as de-Miguel and Mario, (2010) discussed in their study.

Table 4.4

	Excellent	
	HEC	UGC
Objectives	44	7
Percentage	33.59%	14.89%

Difference	18.700%
95% CI	3.078% to 31.046%
Chi-square	5.037
DF	1
Significance level	P = 0.0248

Comment: Table 4.4 Item Objectives, Category Excellent
The Result is Significant at 0.05 Level

Fig 4.4.1 Excellent

Statistical analysis of the quality of objectives on the scale of excellent shows significant difference. The P value is 0.0248, which is less than 0.05; this shows that there is significant difference in the objectives framed in the dissertations of HEC and UGC. The difference between two proportions is 18.700% and the confidence interval for this difference is 95%.

Objectives	
Good	
HEC	UGC
74	22
56.50%	46.81%

Difference	9.690%
95% CI	-7.868% to 26.736%
Chi-square	0.946
DF	1
Significance level	P = 0.3307

Comment: Table 4.4 Item Objectives, Category Good
The Result is not Significant at 0.05 Level

Fig 4.4.2 Good

On the category of good the P value is 0.3307 which shows that there is no significant difference in the objectives of HEC and UGC. The difference between the two proportions is 9.690%.

Objectives		Difference		19.870%
Satisfactory		95% CI		5.851% to 35.642%
HEC	UGC	Chi-square		9.126
13	14	DF		1
9.92%	29.79%	Significance level		P = 0.0025
		Comment:		Table 4.4 Item Objectives, Category Satisfactory The Result is Significant at 0.05 Level

Fig 4.4.3 Satisfactory

The statistical result shows that in the satisfactory category there is significant difference in the quality of objectives framed in the dissertations of HEC and UGC. The difference between two proportions is 19.870%.

Table 4.5 Research Questions

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Research Questions	15	6	29	5	8	0	0	3	79	33
Percentage	11.45%	12.76%	22.10%	10.64%	6.11%	0.00%	0.00%	6.38%	60.30%	70.21%

On the research questions 11.45% HEC and 12.76% UGC dissertations scored excellent. On the scale of good 22.10% of the HEC and 10.64% of the UGC dissertations scored good. Majority of researchers did not include research questions in their dissertation i.e. 70.21% of UGC and 60.30% of HEC. The researchers took research

questions optional while conducting their research. On the basis of the data provided, it is found that the research questions presented in the HEC dissertations are better in quality than UGC.

Unsatisfactory		Difference	6.380%
HEC	UGC	95% CI	0.621% to 17.535%
0	3	Chi-square	5.085
0%	6.38%	DF	1
		Significance level	P = 0.0241
		Comment:	Table 4.5 Item Research Questions, Category Unsatisfactory The Result is Significant at 0.05 Level

Fig 4.5.1 Unsatisfactory

The statistical result shows that there is significant difference in the quality of research questions framed in the dissertations of HEC and UGC. The P value is 0.241 on the scale of unsatisfactory. A significant number of UGC dissertations were found unsatisfactory compare to HEC dissertations.

Table 4.6 Literature Review

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Literature Review	6	1	55	10	70	33	0	2	0	1
Percentage	4.58%	2.12%	42.00%	21.28%	53.43%	70.21%	0%	4.25%	0%	2.12%

Literature review is also an important part of the research report. In this section on the scale of excellent HEC scored 4.58% whereas UGC scored 2.12%, and on the

scale of good HEC scored 42% while UGC scored 21.43%. On the scale of satisfactory HEC scored 53.43% whereas UGC scored 70.21%. UGC scored 4.25% on the scale of unsatisfactory HEC scored zero. Literature review was not included in one dissertation conducted under UGC. On the basis of the result, it is obvious that HEC scores higher on the scale of excellent and good and scored low on the lower scale.

Good		Difference	20.720%
HEC	UGC	95% CI	3.977% to 34.563%
55	10	Chi-square	5.542
42.00%	21.28%	DF	1
		Significance level	P = 0.0186
		Comment: Table 4.6 Item Literature Review, Category Good The Result is Significant at 0.05 Level	

Fig 4.6.1 Good

The result of the analysis shows that there is significant difference between the score of HEC and UGC on the scale of good. The Literature review of the dissertations conducted under HEC performed better than UGC. The P value is 0.0186 and the difference between two proportions is 20.720%.

Table 4.7 Methodology / Research Design

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Methodology/ R-Design	28	8	80	29	23	10	0	0	0	0
Percentage	21.37%	17.02%	61.10%	61.70%	17.56%	21.28%	0%	0%	0%	0%

On the five points categorical scale the results shows that on the component of methodology and research design both the dissertations of HEC and UGC go head to head. On the scale of excellent HEC dissertations scored 21.37% while UGC dissertations scored 17.02%. On the scale of good both scored 61%. On the lower quality scale of satisfactory HEC scored 17.56% which is better than UGC's 21.28%.

	Excellent	
	HEC	UGC
Methodology / R-design	28	8
Percentage	21.37%	17.02%

Difference	4.350%
95% CI	-10.969% to 16.683%
Chi-square	0.181
DF	1
Significance level	P = 0.6706

Comment: Table 4.7 Item Methodology/ R-design, Category Excellent
The Result is not Significant at 0.05 Level

Fig 4.7.1 Excellent

The statistical result shows that there is no significant difference in the quality of research design and methodology of HEC and UGC dissertation, the P value is 0.6706%. The difference between the two proportions is 4.350% and the confidence interval for this score is 95%.

Table 4.8 Sample

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Sample	35	4	74	31	22	11	0	1	0	0
Percentage	26.72%	8.51%	56.50%	65.96%	16.79%	23.40%	0%	2.13%	0%	0%

In the sample section of the dissertation, HEC scored 26.72% on the scale of excellent while UGC scored 8.51%. On the scale of good HEC scored 56.50% whereas

UGC scored 65.96%. On the scale of satisfactory HEC scored 16.79% and UGC scored 23.40%. The sample of one UGC dissertation was found unsatisfactory. Comparison shows that HEC did better than UGC in this section too.

Sample		Difference		18.210%
Excellent		95% CI		4.25% to 28.643%
HEC		Chi-square		5.682
UGC		DF		1
35		Significance level		P = 0.0171
26.72%		Comment:		Table 4.8 Item Samples, Category
8.51%				Excellent
				The Result is Significant at 0.05 Level

Fig 4.8.1 Excellent

The result of statistical analysis shows that there is significant difference in the selection of sample in HEC and UGC dissertation, the chi-square value is 5.682 and the P value is 0.0171 which is less than 0.05%. The difference between two proportions is 18.210%.

Table 4.9 Tools of Data Collection

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Tools of Data Collection	51	10	59	28	20	7	0	2	1	0
Percentage	38.93%	21.28%	45.00%	59.57%	15.27%	14.89%	0%	4.25%	0.76%	0%

On the component of tools of data collection on the scale of excellent HEC scored 38.98% and UGC scored 21.28%. On the scale of good HEC scored 45% whereas UGC

scored 59.57% and on the scale of satisfactory HEC scored 15.27% and UGC scored 14.89%. Two dissertations of UGC were found unsatisfactory whereas one dissertation of HEC did not include tools of data collection.

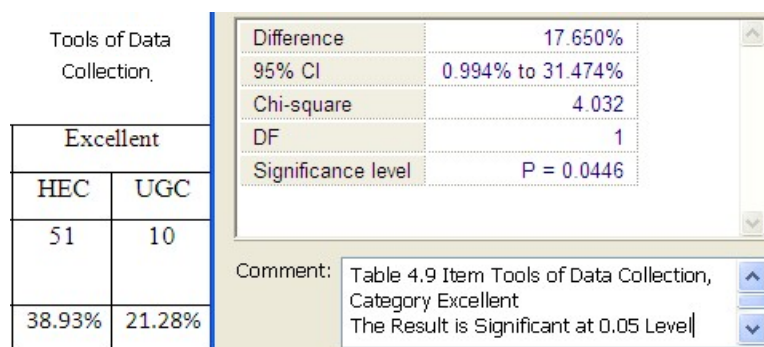


Fig 4.9.1 Excellent

The statistical analysis shows result for tools of data collection; the P value is 0.0446 which is less than 0.05, showing that there is significant difference on the scale of excellent in the dissertations of HEC and UGC. The HEC dissertations did better on the tools of data collection than UGC. The difference between two proportions is 17.650% with a confidence level of 95%

Table 4.10 Focus on Research Problem

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Focus on R-problem	6	1	80	26	45	19	0	1	0	0
Percentage	4.58%	2.13%	61.10%	55.32%	34.35%	40.42%	0%	2.13%	0%	0%

On the component of focus on research problem on the scale of excellent HEC scored 4.58% and UGC scored 2.13% while on good HEC scored 61.10% as compared to UGC that scored 55.32%. On the lower scale on “satisfactory” HEC scored 34.35% while UGC scored 40.42%. On the unsatisfactory level UGC scored 2.13% compared to HEC zero percent. The overall result shows that the quality of HEC is slightly better than UGC.

Focus on R-problem		Difference	5.780%
Good		95% CI	-11.243% to 23.145%
HEC	UGC	Chi-square	0.270
80	26	DF	1
61.10%	55.32%	Significance level	P = 0.6034
		Comment: Table 4.10 Item Focus on R-problem, Category Good The Result is not Significant at 0.05 Leve	

Fig 4.10.1 Good

The analysis for focus on research problem shows that there is no significant difference on the scale of good between the dissertations of HEC and UGC because the P Level is greater than 0.05 and there is not enough difference in two proportions.

Table 4.11 Data Analysis & Results

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Data analysis & Results	12	3	58	12	61	30	0	2	0	0
Percentage	9.16%	6.38%	44.30%	25.53%	46.56%	63.83%	0%	4.25%	0%	0%

Data analysis and result is the most important part of any research. The table shows that on the scale of excellent HEC scored 9.16% and UGC scored 6.38% whereas on the scale of good HEC scored 44.30% compared to UGC 25.53%. HEC performed well on the higher level compared to UGC. On the lower scale of satisfactory HEC scored 46.56% verses UGC 63.83%. On the lesser scale UGC achieved higher percentage. On the unsatisfactory scale UGC scored 4.25%. Data analysis of both research studies was found unsatisfactory.

Data Analysis & Results,			
Good			
HEC	UGC		
58	12		
44.30%	25.53%		

Difference	18.770%
95% CI	1.602% to 33.401%
Chi-square	4.350
DF	1
Significance level	P = 0.0370

Comment: Table 4.11 Item Data Analysis & Results, Category Good
The Result is Significant at 0.05 Level

Fig 4.11.1 Good

The P value is 0.0370 which is less than 0.05 shows a significant difference in the dissertations of HEC and UGC on the scale of good. The difference between the two proportions is 18.770%.

Table 4.12 Response to Questions

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Response to Questions	4	1	51	6	58	40	2	0	16	0
Percentage	3.05%	2.13%	38.90%	12.76%	44.27%	85.11%	1.53%	0.00%	12.21%	0.00%

On the option of response to questions on the scale of excellent HEC Scored 3.05% while UGC scored 2.13%. On the scale of good HEC scored 38.90% compare to UGC 12.76%. On the scale of satisfactory UGC scored 85.11% and HEC scored 4.27% while on the scale of unsatisfactory HEC scored 1.53%.

Response to Questions		Difference		26.140%
		95% CI		10.689% to 38.064%
		Chi-square		9.694
		DF		1
		Significance level		P = 0.0018
Good		Comment: Table 4.12 Item Response to Questions, Category Good The Result is Significant at 0.05 Level		
HEC	UGC			
51	6			
38.90%	12.76%			

Fig 4.12.1 Good

The statistical analysis shows that there is significant difference at 0.05 level, the P value on the category of good is 0.0018 which is less than 0.05. The difference between two proportions is 26.140% and the confidence for this difference is 95%.

Response to Questions		Difference		40.840%
		95% CI		24.725% to 53.113%
		Chi-square		21.694
		DF		1
		Significance level		P < 0.0001
Satisfactory		Comment: Table 4.12 Item Response to Questions, Category Satisfactory The Result is Significant at 0.05 Level		
HEC	UGC			
58	40			
44.27%	85.11%			

Fig 4.12.2 Satisfactory

On the scale of satisfactory the P value is 0.0001 which is less than 0.05 which shows that there is significant difference in the dissertations of HEC and UGC. The

difference between two proportions is 40.840%. Majority of UGC dissertations scored satisfactory compared to HEC.

Response to Questions		Difference		12.210%
		95% CI		3.118% to 19.071%
		Chi-square		4.901
		DF		1
		Significance level		P = 0.0268
Not included		Comment: Table 4.12 Item Response to Questions, Category Not included The Result is Significant at 0.05 Level		
HEC	UGC			
16	0			
12.21%	0.00%			

Fig 4.12.3 Not Included

The analysis shows that as compared to UGC significant number of HEC dissertations did not include responses to questions framed in the introduction as well as in the review of literature section. The P value is 0.0268 which is less than 0.05 and the difference between the two proportions is 12.210%

Table 4.13 Discussion

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Discussion	12	1	53	6	42	11	0	1	24	28
Percentage	9.16%	2.13%	40.50%	12.76%	32.06%	23.40%	0%	2.13%	18.32%	59.57%

The result shows that on the scale of excellent HEC dissertations scored 9.16% and UGC dissertations scored 2.13%, and HEC's dissertation scored 40.50% on the scale of good compared to 12.76% of the UGC dissertations. On satisfactory HEC scored

32.06% whereas 23.40% of UGC dissertations scored satisfactory. In the discussion section one dissertation of UGC was found unsatisfactory. Majority of 59.57% UGC dissertations did not include discussion section in their research while 18.32% of the HEC dissertations did not include discussion in their research.

Discussion		<table><tr><td>Difference</td><td>27.740%</td></tr><tr><td>95% CI</td><td>12.238% to 39.679%</td></tr><tr><td>Chi-square</td><td>10.788</td></tr><tr><td>DF</td><td>1</td></tr><tr><td>Significance level</td><td>P = 0.0010</td></tr></table>		Difference	27.740%	95% CI	12.238% to 39.679%	Chi-square	10.788	DF	1	Significance level	P = 0.0010
Difference	27.740%												
95% CI	12.238% to 39.679%												
Chi-square	10.788												
DF	1												
Significance level	P = 0.0010												
Good													
HEC	UGC												
53	6												
40.50%	12.76%												

Comment:	Table 4.13 Item Discussion, Category Good The Result is Significant at 0.05 Level
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Fig 4.13.1 Good

The analysis of the data shows that there is significant difference in the quality of discussion section of HEC and UGC. The P value is 0.0010 which is less than 0.05 and the difference between the proportions is 27.740% on the scale of good. The quality of discussion section of HEC dissertation is better than UGC dissertation.

Discussion		<table><tr><td>Difference</td><td>41.250%</td></tr><tr><td>95% CI</td><td>24.114% to 56.62%</td></tr><tr><td>Chi-square</td><td>26.503</td></tr><tr><td>DF</td><td>1</td></tr><tr><td>Significance level</td><td>P < 0.0001</td></tr></table>		Difference	41.250%	95% CI	24.114% to 56.62%	Chi-square	26.503	DF	1	Significance level	P < 0.0001
Difference	41.250%												
95% CI	24.114% to 56.62%												
Chi-square	26.503												
DF	1												
Significance level	P < 0.0001												
Not included		Comment: Table 4.13 Item Discussion, Category Not included The Result is Significant at 0.05 Level											
HEC	UGC												
24	28												
18.32%	59.57%												

Fig 4.13.2 Not Included

The result of the statistical analysis shows that there is significant difference on the component of discussion in the dissertations of HEC and UGC on the category of not included. The P value is 0.0001 less than 0.05 and the difference is 41.250%. Majority of UGC dissertations did not include discussion section in their dissertation.

Table 4.14 Conclusion

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Conclusion	5	1	33	10	90	33	0	1	3	2
Percentage	3.82%	2.13%	25.20%	21.28%	68.70%	70.21%	0.00%	2.13%	2.29%	4.25%

The result shows that 3.82% HEC and 2.13% UGC dissertations were excellent on the five point categorical scale while on the scale of good 25.20% HEC and 21.28% UGC dissertations scored good. Majority dissertations of HEC and UGC categorically scored high on the satisfactory scale i.e. 68.70% and 70.21% respectively. The conclusion of one UGC dissertation was found unsatisfactory while 3.29% dissertations of HEC and 4.25% dissertations of UGC did not include conclusion in their dissertations.

Conclusion		Difference		3.920%
		95% CI		-12.157% to 17.381%
		Chi-square		0.116
		DF		1
		Significance level		P = 0.7339
HEC	UGC			
33	10			
25.20%	21.28%			

Comment:	Table 4.14 Item Conclusion, Category Good
	The Result is not Significant at 0.05 Level

Fig 4.14.1 Good

The result of the analysis shows that there is no significant difference in the quality of conclusion section of HEC and UGC dissertations on the scale of good because the P value is 0.7339 which is greater than 0.05 and the chi square value is lower from the expected value.

Table 4.15 Suggestions

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Suggestions	19	10	83	24	26	10	0	1	3	2
Percentage	14.50%	21.28%	63.40%	51.06%	19.85%	21.28%	0.00%	2.13%	2.29%	4.25%

The result of the study shows that 14.50% of HEC and 21.28% of UGC dissertations scored excellent on the five point categorical scale. On the scale of good HEC scored 63.40% while UGC dissertations scored 51.06%. The suggestions section found 19.85% dissertations of the HEC satisfactory as compared to 21.28% of the UGC dissertations, while the suggestion of one dissertation was unsatisfactory. A minor portion of HEC and UGC dissertations did not include suggestion in their dissertation.

Suggestions		<table><tr><td>Difference</td><td>6.780%</td></tr><tr><td>95% CI</td><td>-6.021% to 22.197%</td></tr><tr><td>Chi-square</td><td>0.722</td></tr><tr><td>DF</td><td>1</td></tr><tr><td>Significance level</td><td>P = 0.3955</td></tr></table>		Difference	6.780%	95% CI	-6.021% to 22.197%	Chi-square	0.722	DF	1	Significance level	P = 0.3955
Difference	6.780%												
95% CI	-6.021% to 22.197%												
Chi-square	0.722												
DF	1												
Significance level	P = 0.3955												
Excellent		Comment: Table 4.15 Item Suggestions, Category Excellent The Result is not Significant at 0.05 Level											
HEC	UGC												
19	10												
14.50%	21.28%												

Fig 4.15.1 Excellent

On the component of suggestions the analysis shows no significant difference because the P value is 0.3955 which is higher than 0.05 and the chi square value is 0.722 which is less than expected value, and the difference between proportions is 6.780%.

Suggestions		Difference		12.340%
Good		95% CI		-4.961% to 29.453%
HEC	UGC	Chi-square		1.713
83	24	DF		1
63.40%	51.06%	Significance level		P = 0.1906
		Comment: Table 4.15 Item Suggestions, Category Good The Result is not Significant at 0.05 Level		

Fig 4.15.2 Good

The analysis shows that on the category of good there is no significant difference in the quality of suggestions in HEC and UGC dissertations because the P value is higher than 0.05 and the difference between the proportions is 12.340%. The MedCalc result shows no significant difference in the quality of suggestions in HEC and UGC dissertations.

Table 4.16 Ethics of Research

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Ethics of Research	7	1	77	34	47	11	0	1	0	0
Percentage	5.34%	2.13%	58.80%	72.34%	35.88%	23.40%	0.00%	2.13%	0.00%	0.00%

On the component of ethics of the research on the five point categorical scale HEC scored 5.34% while UGC scored 2.13% on the scale of excellent. On the scale of

good HEC scored 58.80% while UGC scored 72.34%. On the scale of satisfactory HEC scored 35.88% whereas UGC scored 23.40%. One dissertation of UGC was found unsatisfactory.

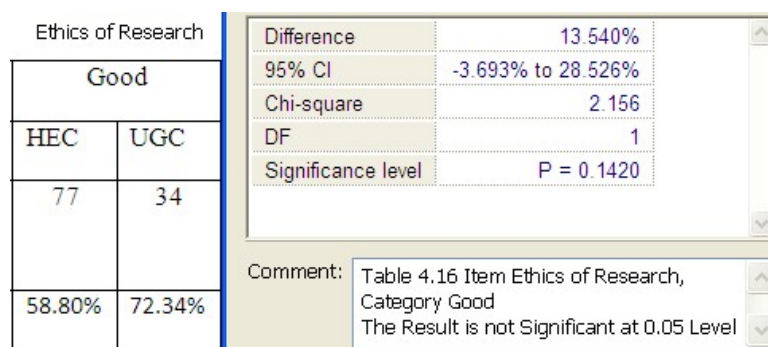


Fig 4.16.1 Good

The result of the statistical analysis shows that there is no significant difference on the scale of good in the HEC and UGC dissertations. The difference in the proportions is 13.540% and the P value is 0.1420 which is greater than 0.05.

Table 4.17 Proposed Research

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Proposed Research	10	1	78	38	42	6	1	2	0	0
Percentage	7.63%	2.13%	59.50%	80.85%	32.06%	12.76%	0.76%	4.25%	0.00%	0.00%

On the component of proposed research HEC dissertations scored 7.63% and UGC dissertations scored 2.13% on the scale of excellent while on the scale of good HEC dissertations scored 59.50% and UGC dissertations scored 80.85%. HEC dissertations scored 32.06 and UGC dissertations scored 12.76% on the scale of satisfactory. One dissertation of HEC and two dissertations of UGC were found unsatisfactory.

Proposed Research			
Good			
HEC	UGC		
78	38		
59.50%	80.85%		

Difference	21.350%
95% CI	4.885% to 34.753%
Chi-square	6.035
DF	1
Significance level	P = 0.0140

Comment:	Table 4.17 Item Proposed Research, Category Good The Result is Significant at 0.05 Level
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Fig 4.17.1 Good

The statistical analysis of the proposed research shows that UGC dissertations are better than HEC and there is a significant difference in the dissertations of HEC and UGC on the category of good. The P value is 0.0140 which is less than 0.05 and the difference in the proportions of HEC and UGC is 21.350%. The confidence interval for the difference is 95%.

Proposed Research			
Satisfactory			
HEC	UGC		
42	6		
32.06%	12.76%		

Difference	19.300%
95% CI	4.119% to 31.083%
Chi-square	5.599
DF	1
Significance level	P = 0.0180

Comment:	Table 4.17 Item Proposed Research, Category Satisfactory The Result is Significant at 0.05 Level
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Fig 4.17.2 Satisfactory

The analysis shows that there is significant difference on the scale of satisfactory in HEC and UGC dissertations. The P value is 0.0180 which is less than 0.05 and the difference in the proportions is 19.300%. On the lower scale HEC scored higher than UGC.

Table 4.18 Written Report Organization

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Written Report Organization	4	1	71	31	53	14	3	1	0	0
Percentage	3.05%	2.12%	54.20%	65.96%	40.46%	29.79%	2.29%	2.13%	0.00%	0.00%

The written report organization of HEC dissertations scored better than UGC on the Scale of excellent, HEC scored 3.05% and UGC scored 2.12%. On the scale of good HEC scored 54.20% and UGC 65.96%, while on the satisfactory scale HEC dissertations scored 40.46% and UGC dissertations scored 29.79%. On the scale of unsatisfactory 2.29% HEC and 2.13% UGC dissertations were found unsatisfactory.

Written Report Organization		Good	
HEC	UGC		
71	31		
54.20%	65.96%		

Difference	11.760%
95% CI	-5.83% to 27.676%
Chi-square	1.504
DF	1
Significance level	P = 0.2200

Comment:	Table 4.18 Item Written Report Organization, Category Good The Result is not Significant at 0.05 Level
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Fig 4.18.1 Good

The result of the analysis shows that there is no significant difference in written report organization in the HEC and UGC dissertations. The P value is 0.2200 which is higher than 0.05 and the difference between two is 11.760%.

Table 4.19 Quality of Report Writing

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Quality of Report Writing	9	1	103	41	19	5	0	0	0	0
Percentage	6.87%	2.13%	78.60%	87.23%	14.50%	10.64%	0.00%	0.00%	0.00%	0.00%

The quality of the report writing is very important component of any research report. Comparing the result of HEC and UGC on five point categorical scale;

- HEC scored 6.87% and UGC scored 2.12% on the scale of excellent.
- HEC scored 78.60% and UGC scored 87.23% on the scale of good.
- HEC scored 14.50% and UGC scored 10.64% on the scale of satisfactory

Quality of Report Writing		Difference		4.740%
		95% CI		-5.139% to 10.873%
		Chi-square		0.708
		DF		1
		Significance level		P = 0.4001
Excellent		Comment: Table 4.19 Item Quality of Report Writing, Category Excellent The Result is not Significant at 0.05 Level		
HEC	UGC			
9	1			
6.87%	2.13%			

Fig 4.19.1 Excellent

There is no significant difference at 0.05 Level in two proportions. The P value is 0.4001 which is greater than 0.05. The difference in the proportions is 4.740%.

Quality of Report Writing		Difference		8.630%
Good		95% CI		-5.965% to 19.91%
HEC	UGC	Chi-square		1.154
103	41	DF		1
78.60%	87.23%	Significance level		P = 0.2826
		Comment: Table 4.19 Item Quality of Report Writing, Category Good The Result is not Significant at 0.05 Level		

Fig 4.19.2 Good

The result of the analysis showed that on the scale of good there is no significant difference in the quality of writing of the HEC and UGC dissertations.

Table 4.20 Citation

	Excellent		Good		Satisfactory		Unsatisfactory		Not included	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Citation	5	0	44	16	77	31	3	0	2	0
Percentage	3.82%	0.00%	33.60%	34.04%	58.78%	65.96%	2.29%	0.00%	1.53%	0.00%

On the component of citation

- HEC dissertations scored 3.82% on the scale of excellent.
- HEC dissertations scored 33.60% and UGC scored 34.04% on the scale of good.
- HEC dissertations scored 58.78% and UGC scored 65.96% on the scale of

satisfactory.

- The citations of three dissertations of HEC were found Unsatisfactory which is 2.29% of the HEC population. In the two HEC dissertations citation was not included which is 1.53% of the HEC population.

Citation		Difference	7.180%
Satisfactory		95% CI	-10.308% to 23.098%
HEC	UGC	Chi-square	0.477
77	31	DF	1
58.78%	65.96%	Significance level	P = 0.4899
		Comment: Table 4.20 Item Citation Category Satisfactory The Result is not Significant at 0.05 Level	

Fig 4.20.1 Satisfactory

The result of statistical analysis shows no significant difference in the citation of HEC and UGC dissertations because the P value is greater than 0.05.

Table 4.21 Total Result

	Excellent		Good		Satisfactory		Unsatisfactory	
	HEC	UGC	HEC	UGC	HEC	UGC	HEC	UGC
Total Result	10	1	99	37	21	7	1	2
Percentage	7.63%	2.13%	75.60%	78.72%	16.03%	14.89%	0.76%	4.25%

The result of the study shows that

- HEC scored higher than UGC on the scale of excellent. A reasonable number of HEC dissertations scored 7.63% on the scale of excellent while UGC scored 2.13%.

- On the five points categorical scale 75.60% HEC dissertations scored good and UGC scored 78.72% on the scale of good
- Only 16.03% of the HEC and 14.89% of the UGC dissertations scored satisfactory.
- One HEC dissertation and two UGC dissertations were found unsatisfactory. The compression shows that the quality of dissertation improved after the establishment of HEC. The difference between HEC and UGC dissertations is evident from 10 excellent HEC dissertations in ten years compare to 1 UGC dissertation in decades. The study supports the statement of Lovitts (2005) that outstanding research comes out in decade.

Total				
	Excellent			
	HEC	UGC		
Total Result	10	1		
Percentage	7.63%	2.13%		

Difference	5.500%
95% CI	-4.467% to 11.807%
Chi-square	0.981
DF	1
Significance level	P = 0.3219

Comment: Table 4.21 Total, Category Excellent
The Result is not Significant at 0.05 Level

Fig 4.21.1 Excellent

The analysis of the study shows that there is no significant difference in the quality of dissertations of HEC and UGC on the scale of Excellent. The P value is 0.3219 which is higher than 0.05 and the difference in the proportions of HEC and UGC is 5.500%.

Total		Difference		3.120%
		95% CI		-12.914% to 16.544%
		Chi-square		0.0538
		DF		1
		Significance level		P = 0.8165
Good		Comment:		Table 4.21 Total, Category Good The Result is not Significant at 0.05 Level
HEC	UGC			
99	37			
75.60%	78.72%			

Fig 4.21.2 Good

On the scale of good there is also no significant difference in the quality of HEC and UGC dissertations. There is slight difference in the two proportions which is not enough to call it significant in statistical term. The P value is 0.8165 and difference in proportions is 3.120%.

Total		Difference		1.140%
		95% CI		-13.482% to 12.568%
		Chi-square		0.00244
		DF		1
		Significance level		P = 0.9606
Satisfactory		Comment:		Table 4.21 Total, Category Satisfactory The Result is not Significant at 0.05 Level
HEC	UGC			
21	7			
16.03%	14.89%			

Fig 4.21.3 Satisfactory

The result of the analysis shows that on the scale of satisfactory there is no significant difference in the quality of dissertations of HEC and UGC. The P value is 0.9606 which is higher than 0.05.

4.3 Analysis of Quality of Education Dissertations in Pakistan

Table 4.22 Research Topic

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Research Topic	28	127	20	3	0	178
In Percentage	15.73	71.34	11.23	1.68	0.00	100

The result of the study shows that the research topic scored 15.73% excellent on the five point categorical scale while 71.30% were placed in good category. On the scale of satisfactory 11.23% were found satisfactory while 3 out of 178 dissertations were found unsatisfactory.

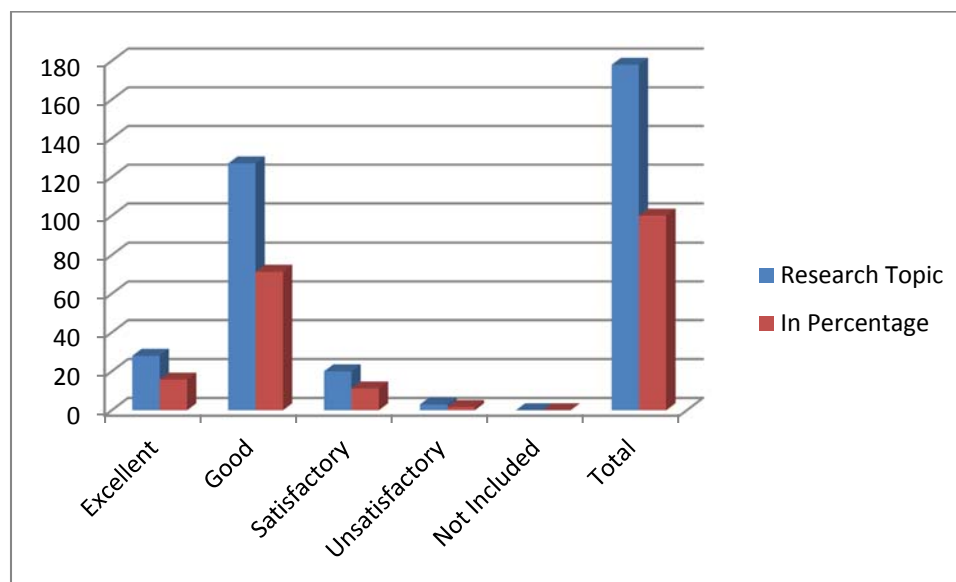


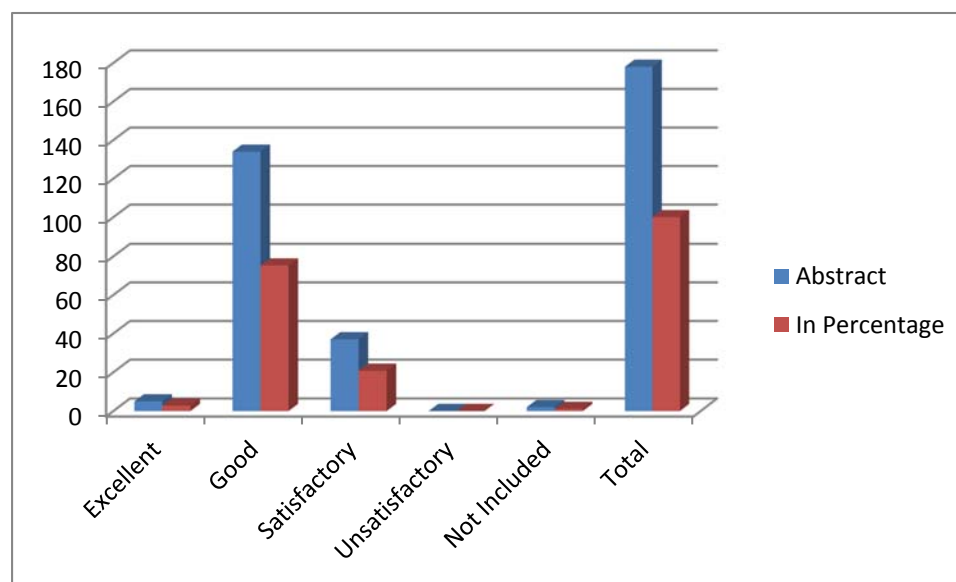
Fig 4.22.1 Research Topic

The overall result of the dissertations shows that the quality of research topic is good.

Table 4.23 Abstract

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Abstract	5	134	37	0	2	178
In Percentage	2.81	75.28	20.79	0.00	1.12	100

The abstract of dissertations was analyzed on the five point's categorical scale, 2.81% of abstracts were found excellent while 75.30% were found good. On the satisfactory scale 20.79% dissertation abstracts were found satisfactory while 1.12% did not include abstracts in their dissertations.

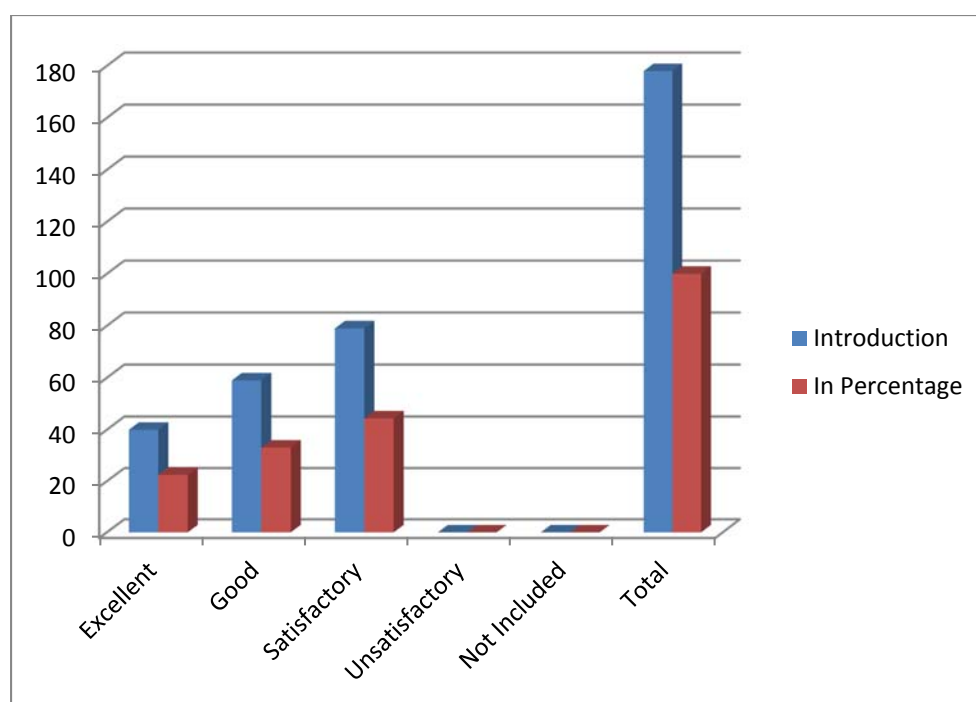
**Fig 4.23.1 Abstract**

The quality of abstracts of majority dissertations were found good which is clear from the figure 4.23.1

Table 4.24 Introduction

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Introduction	40	59	79	0	0	178
In Percentage	22.47	33.10	44.38	0.00	0.00	100

The result of the study shows that introduction section of dissertations were placed 22.47% excellent on the five point categorical scale while 33.10% were placed good and 44.38% were found satisfactory.

**Fig 4.24.1 Introduction**

The overall result shows that majority of dissertation fall under the category of good and excellent.

Table 4.25 Objectives

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Objectives	51	96	27	1	3	178
In Percentage	28.65	53.90	15.17	0.56	1.68	100

The result of the study shows that objectives of the dissertation scored 28.65% on the scale of excellent while 53.90% dissertations were found good on the five point categorical scale, 15.17% were found satisfactory and 0.56% unsatisfactory. Three researchers did not include objectives in their dissertations.

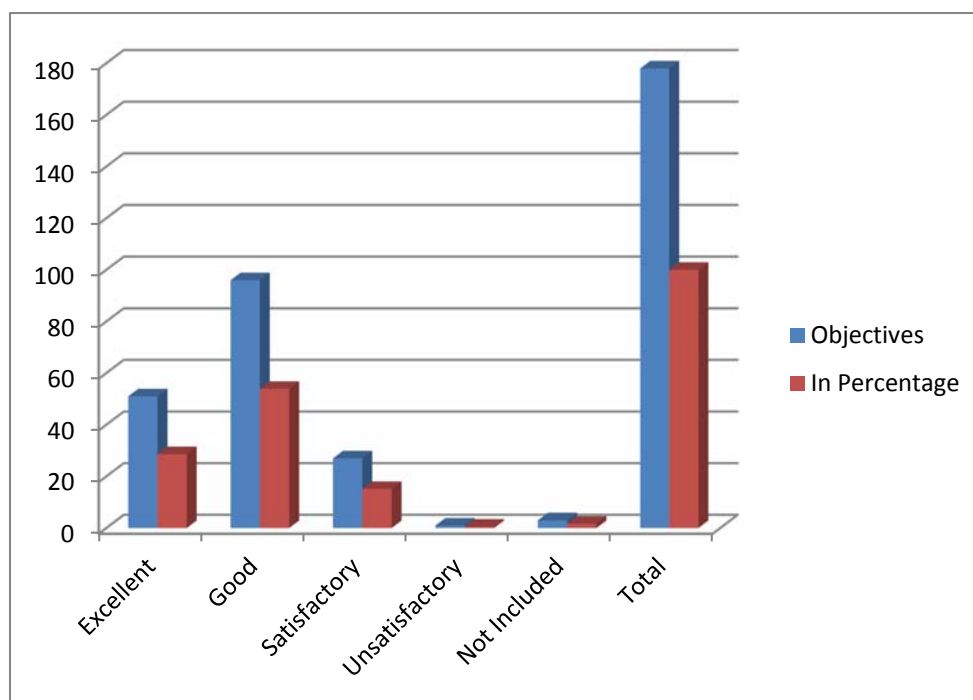
**Fig 4.25.1 Objectives**

Figure 4.25.1 showed that objectives of the majority dissertations were found good.

Table 4.26 Research Questions

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Research Questions	21	34	8	3	112	178
In Percentage	11.80	19.10	4.49	1.68	62.92	100

The result of the study shows that majority of dissertations 62.92% did not include research questions in their research. On the scale of excellent 11.80% research questions were found excellent while 19.10% were found good. The research questions of 3 out of 178 dissertations were found unsatisfactory.

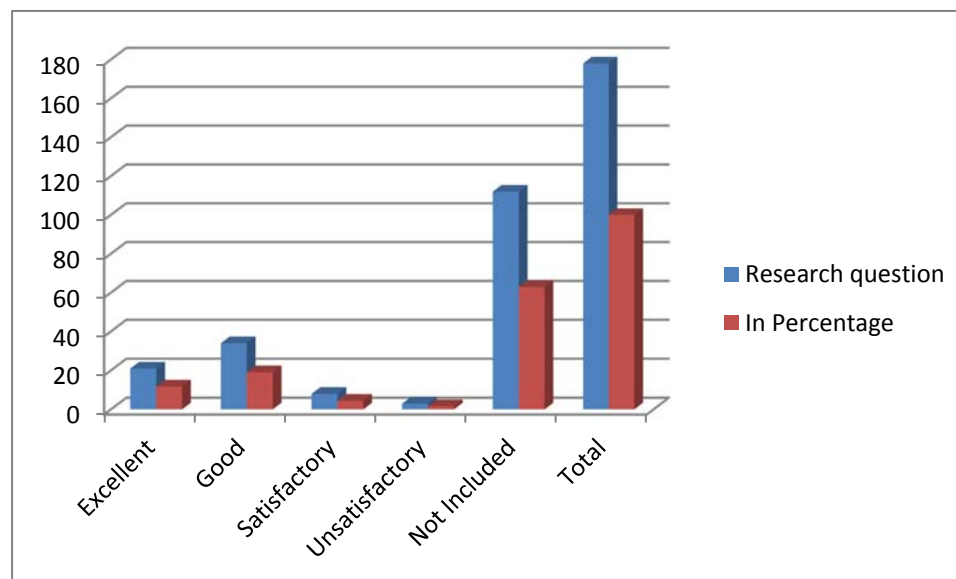
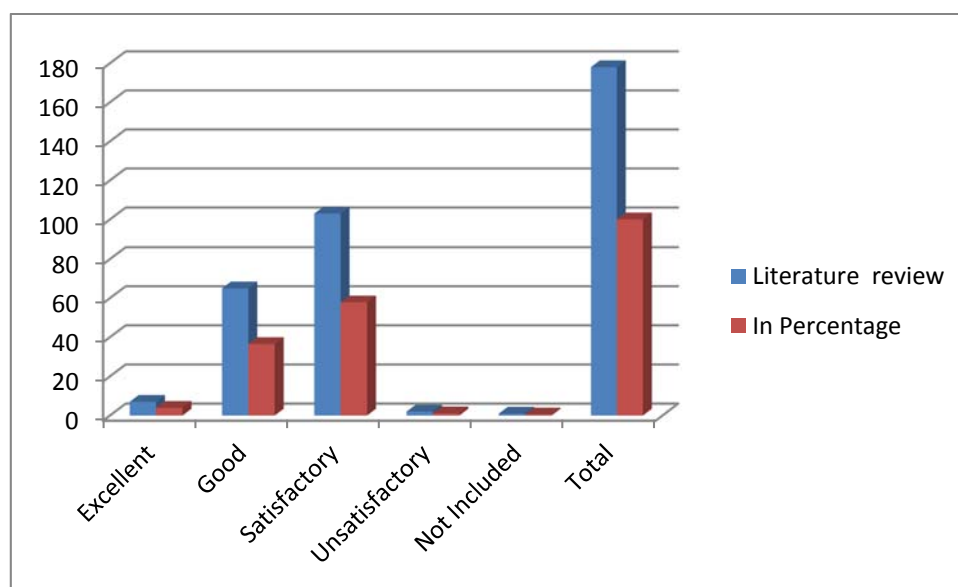
**Fig 4.26.1 Research Questions**

Figure 4.26.1 shows that majority of dissertations did not include research questions in their research.

Table 4.27 Literature Review

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included
Literature Review	7	65	103	2	1
In Percentage	3.93	36.50	57.86	1.12	0.56

The literature review of dissertations scored 3.93% Excellent and 36.50% scored Good, 57.86% dissertations were placed satisfactory while 1.12% were found unsatisfactory. One dissertation was found without literature review.

**Fig 4.27.1 Literature Review**

The quality of literature review of the majority dissertations was found satisfactory as evident from the Figure 4.27.1

Table 4.28 Samples

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Samples	39	105	33	1	0	178
In Percentage	21.91	59.00	18.53	0.56	0.00	100

The result of the study shows that 21.91% sample of the dissertations was found excellent and 59% dissertations were found good. On the five points categorical scale 18.53% were found satisfactory while the sample of 0.56 dissertations was found unsatisfactory.

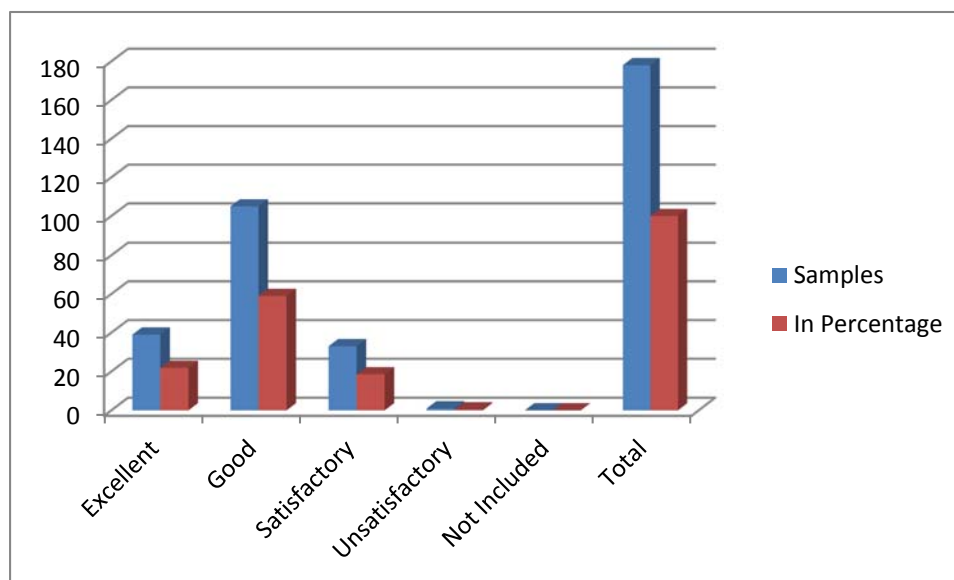
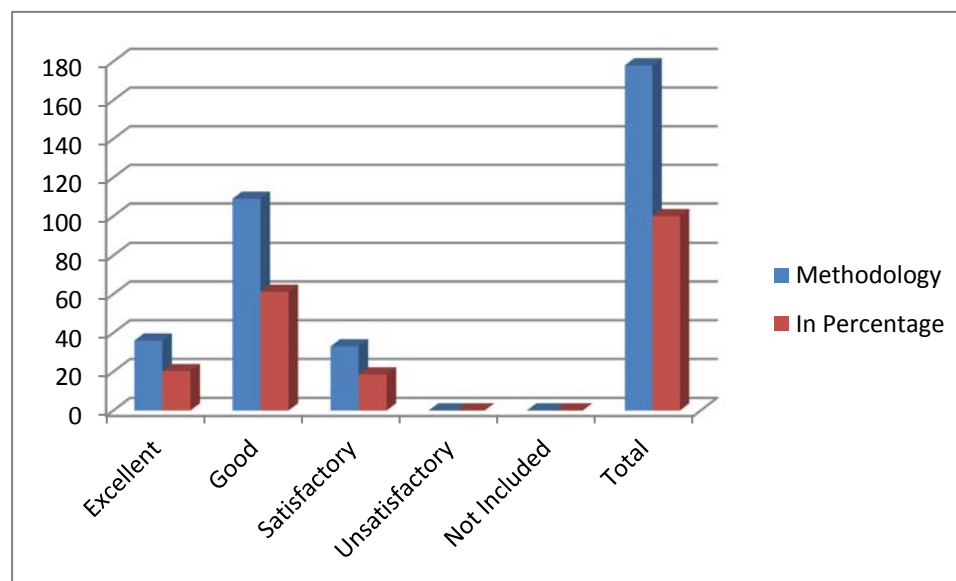
**Fig 4.28.1 Samples**

Figure 4.28.1 shows that sample of the majority of dissertations was found good.

Table 4.29 Methodology

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Methodology	36	109	33	0	0	178
In Percentage	20.22	61.20	18.54	0.00	0.00	100

The result shows that methodology of dissertations was found 20.22% excellent while a majority of 61.20% dissertations were placed good and 18.54 were placed in satisfactory category.

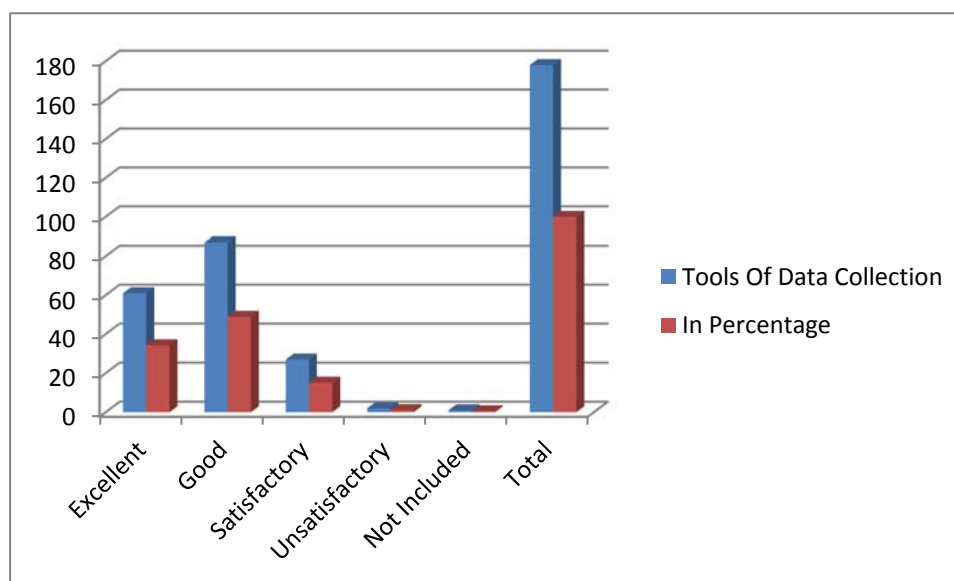
**Fig 4.29.1 Methodology**

The quality of methodology section of the majority dissertations was found good as evident from figure 4.29.1

Table 4.30 Tools of Data Collection

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Tools of Data Collection	61	87	27	2	1	178
In Percentage	34.26	48.90	15.17	1.12	0.56	100

The result shows that the tools of data collection of 34.26% dissertations were found excellent while 48.90% were found good, tools of data collection of two dissertations were found unsatisfactory while one dissertation was found without tools of data collection.

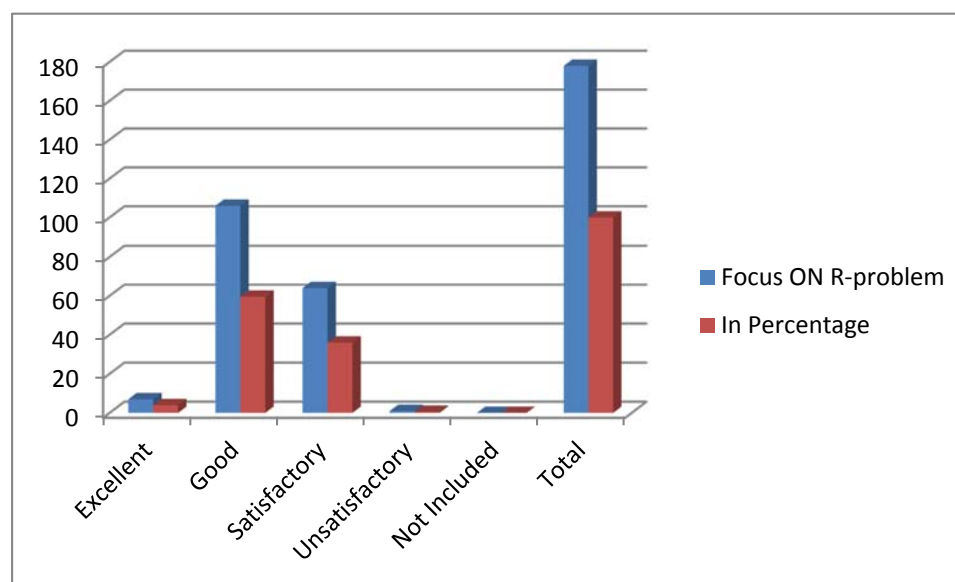
**Fig 4.30.1 Tools of Data Collection**

The figure 4.30 shows that tools of data collection section of majority dissertations were found good.

Table 4.31 Focus on Research Problem

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Focus on R-problem	7	106	64	1	0	178
In Percentage	3.93	59.60	35.95	0.56	0.00	100

Focus on research problem section of dissertation scored 3.93% under excellent category while majority 59.60% were placed in good category and 35.95% scored satisfactory on the five point's categorical scale. One dissertation was found unsatisfactory.

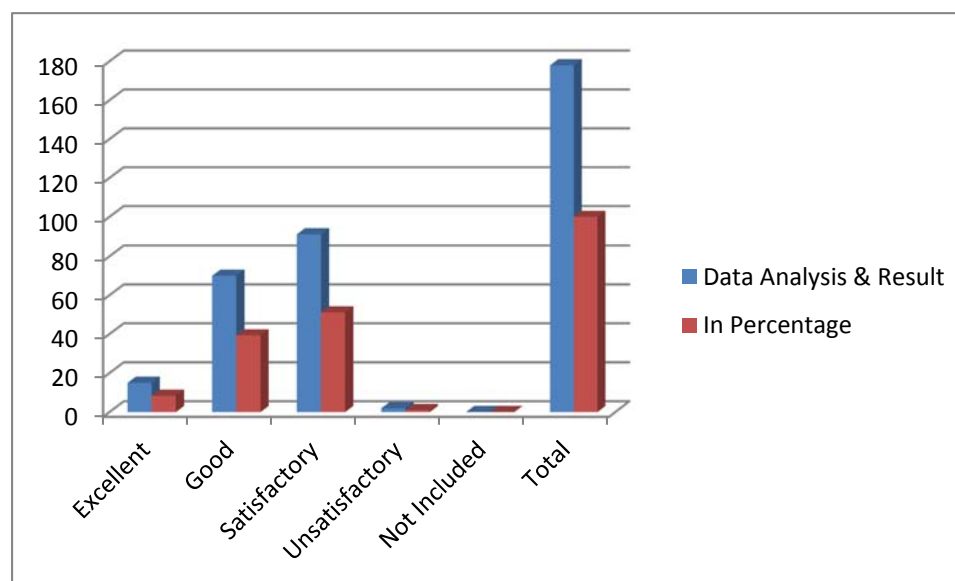
**Fig 4.31.1 Focus on Research Problem**

The figure 4.31.1 shows that focus on research problem of majority dissertations fall in good category.

Table 4.32 Data Analysis & Result

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Data Analysis & Result	15	70	91	2	0	178
In Percentage	8.42	39.30	51.12	1.12	0.00	100

On the five point's categorical scale data analysis of 8.42% dissertations was placed excellent while 39.30% was placed good and 51.12% was placed satisfactory. Data analysis & results of two dissertations were found unsatisfactory.

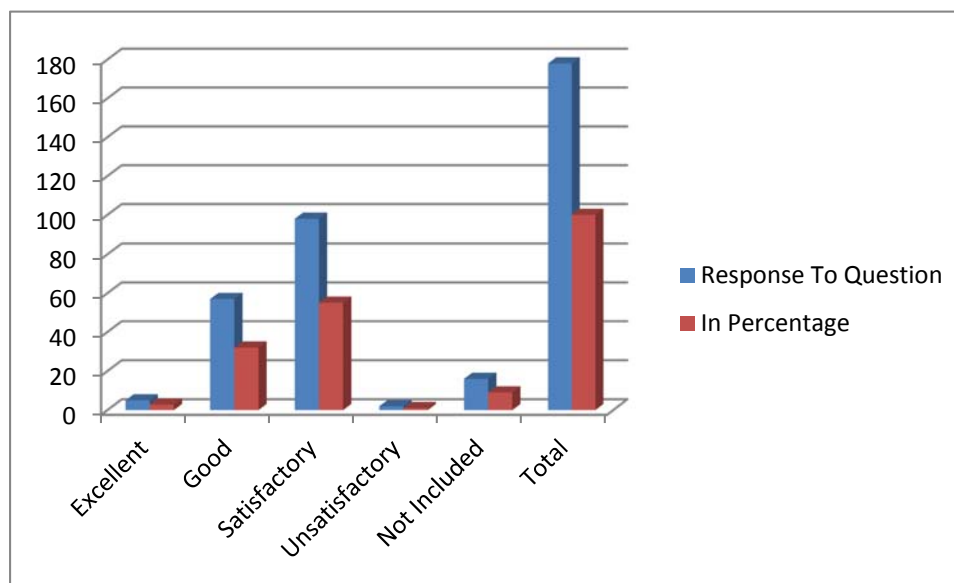
**Fig 4.32.1 Data Analysis & Result**

The quality of data analysis and result of the majority dissertation were found satisfactory as evident from the figure 4.32.1

Table 4.33 Response to Question

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Response To Question	5	57	98	2	16	178
In Percentage	2.81	32.00	55.05	1.12	8.99	100

The result shows that on the category of response to questions 2.18% scored excellent while 32% dissertations were found good and the majority 50.05% were placed satisfactory. Two dissertations were found unsatisfactory while 8.99% dissertations did not include response to questions.

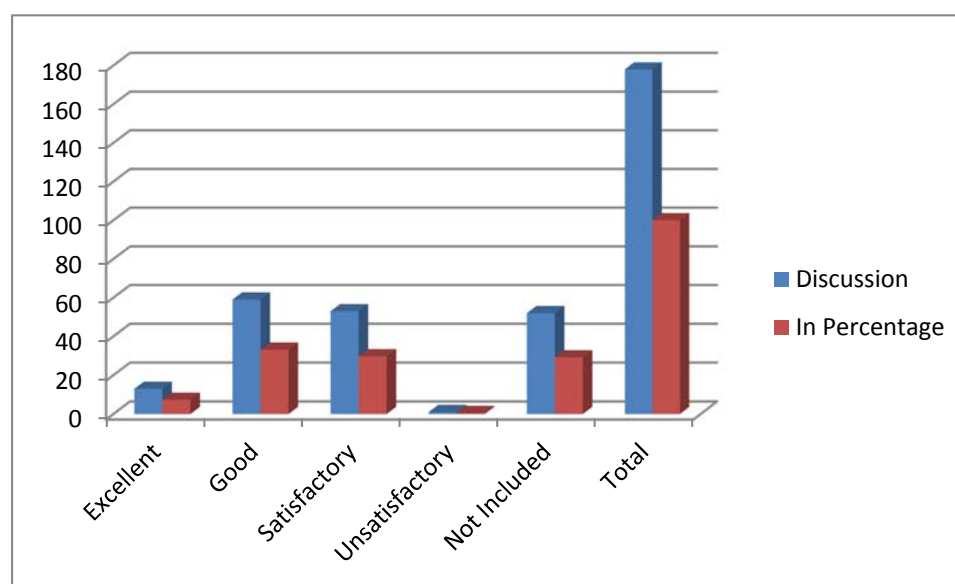
**Fig 4.33.1 Response to Question**

Responses to questions of majority dissertations were found satisfactory on the scale of satisfactory.

Table 4.34 Discussion

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Discussion	13	59	53	1	52	178
In Percentage	7.30	33.10	29.77	0.56	29.21	100

The result of the study shows that discussion section of dissertations scored 7.30% on the scale of excellent while 33.10% scored good and 29.70 scored satisfactory on the five point categorical scale. The discussion of one dissertation was found unsatisfactory while 29.12% did not include discussion section in their dissertations.

**Fig 4.34.1 Discussion**

The quality of discussion section was found good on the five points categorical scale.

Table 4.35 Conclusion

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Conclusion	6	43	123	1	5	178
In Percentage	3.37	24.20	69.10	0.56	2.81	100

The quality of conclusion of dissertations was found 3.37% excellent and 24.20% was found good. Majority of dissertations (69.10%) were found satisfactory while one dissertation was found unsatisfactory. Five dissertations were found without conclusion section.

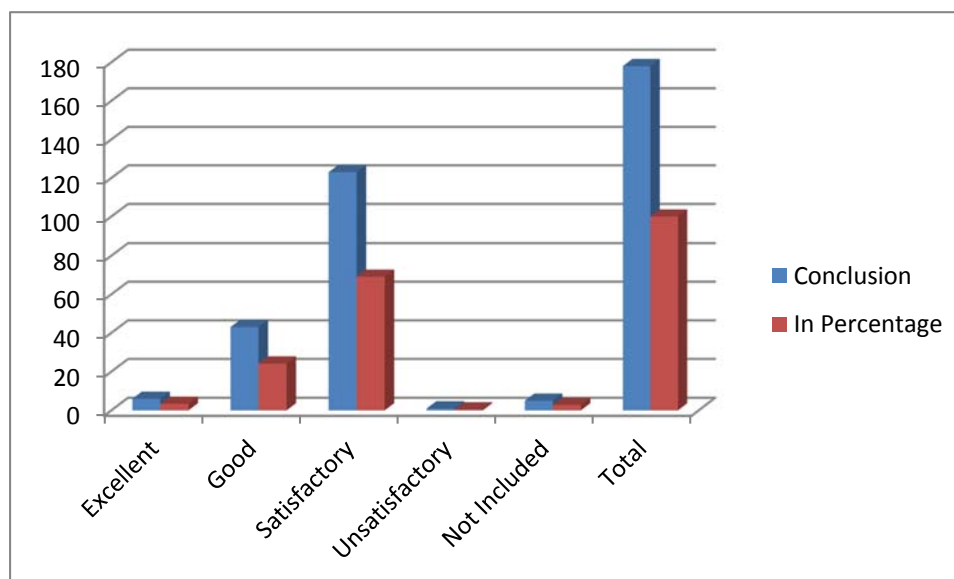
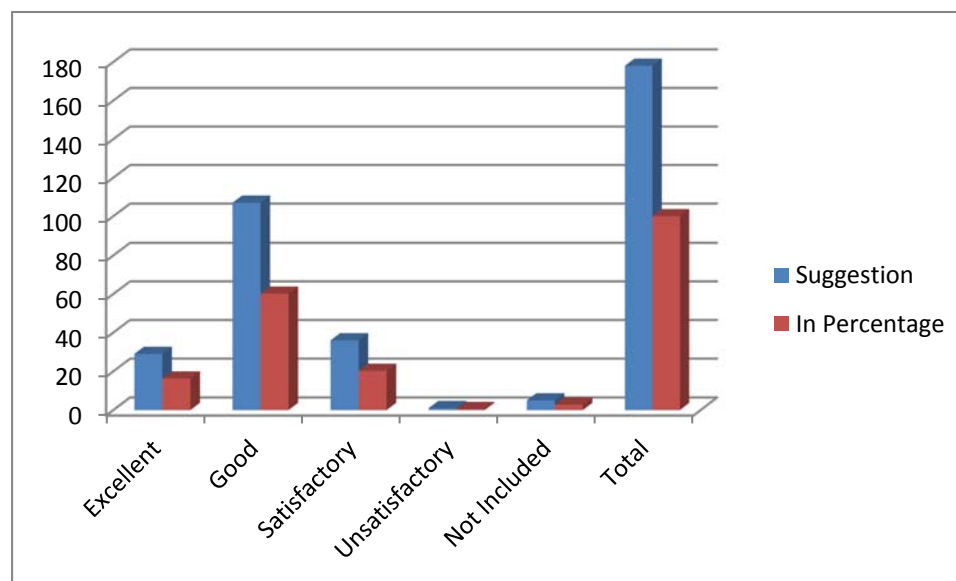
**Fig 4.35.1 Conclusion**

Figure 4.35.1 shows that the quality of conclusion of majority PhD dissertations was found satisfactory.

Table 4.36 Suggestions

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Suggestions	29	107	36	1	5	178
In Percentage	16.29	60.10	20.22	0.56	2.81	100

The quality of suggestions presented in the study, 16.29% were found excellent while 60.10% were found good and 20.22% were satisfactory. One dissertation suggestion section was found unsatisfactory and 2.81% did not include suggestions in their dissertations.

**Fig 4.36.1 Suggestions**

The suggestions of the majority dissertations were found good on the five point categorical scale (figure 4.36.1).

Table 4.37 Proposed Research

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Proposed Research	11	116	48	3	0	178
In Percentage	6.18	65.20	26.97	1.68	0.00	100

The result shows that majority of 65.20% dissertations were found good while 6.18% dissertations were placed excellent and 26.97% dissertations were found satisfactory. The proposed research component of the dissertations found 1.68% unsatisfactory.

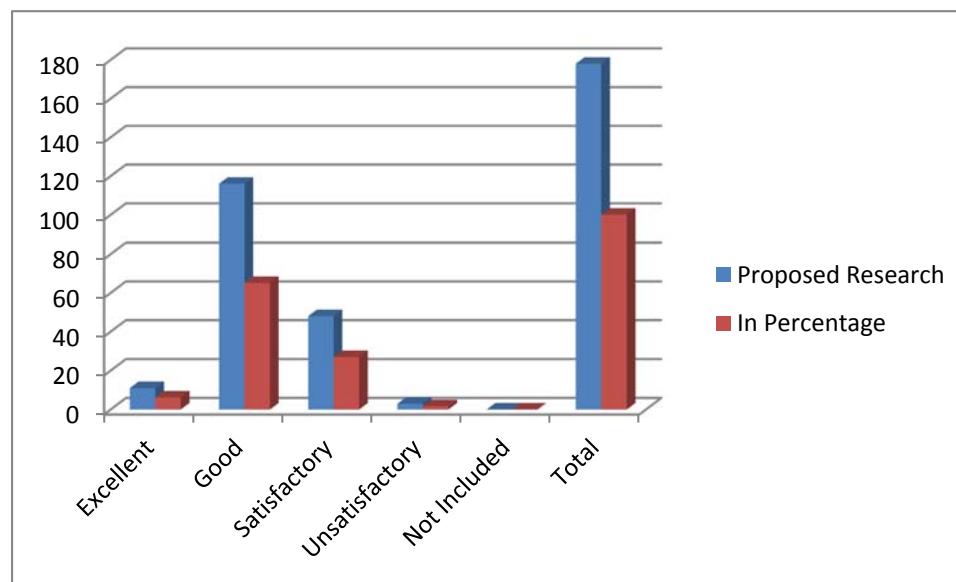
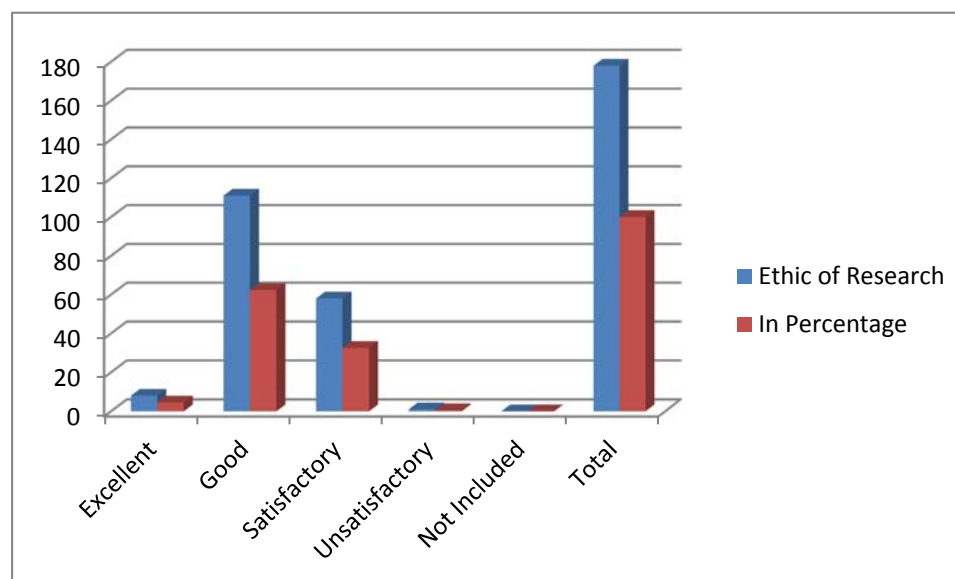
**Fig 4.37.1 Proposed Research**

Figure 4.37.1 shows that the proposed research of majority dissertations was found satisfactory on the five point categorical scale.

Table 4.38 Ethics of Research

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Ethics of Research	8	111	58	1	0	178
In Percentage	4.49	62.40	32.58	0.56	0.00	100

The majority of 62.40% dissertations' ethics of research were found good and 4.49% dissertations were placed in excellent category. The quality of 32.58% dissertations' ethics of research were found to be satisfactory on the component of ethics of the research while only one dissertation was found unsatisfactory.

**Fig 4.38.1 Ethics of Research**

The quality of ethics of the research was found good on five point categorical scale.

Table 4.39 Written Report Organization

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Written Report Organization	5	102	67	4	0	178
In Percentage	2.81	57.30	37.64	2.25	0.00	100

The written report organization of 57.30% dissertations was found satisfactory, 2.81% dissertations were found excellent. On the scale of satisfactory 37.64% dissertations were found satisfactory and 2.25% dissertations were found unsatisfactory.

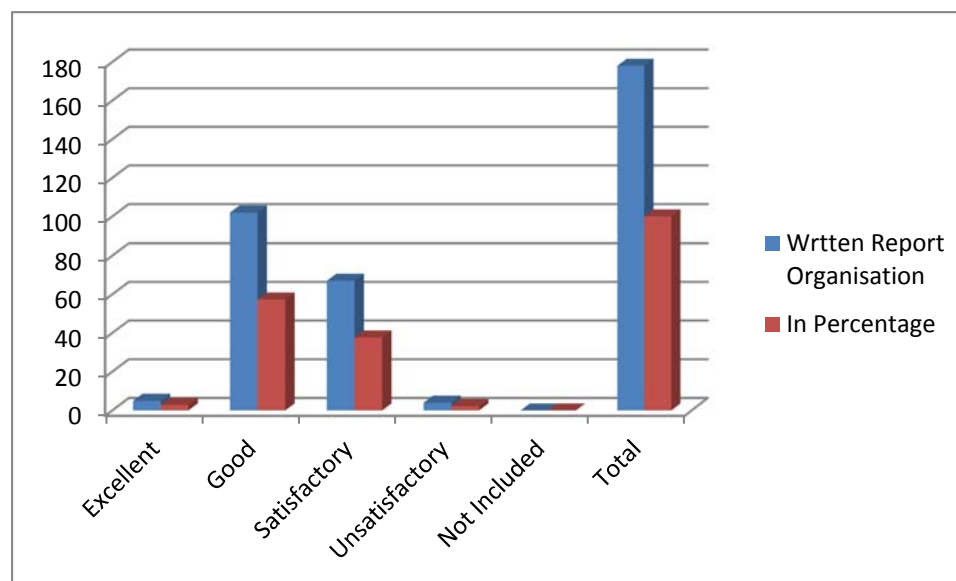
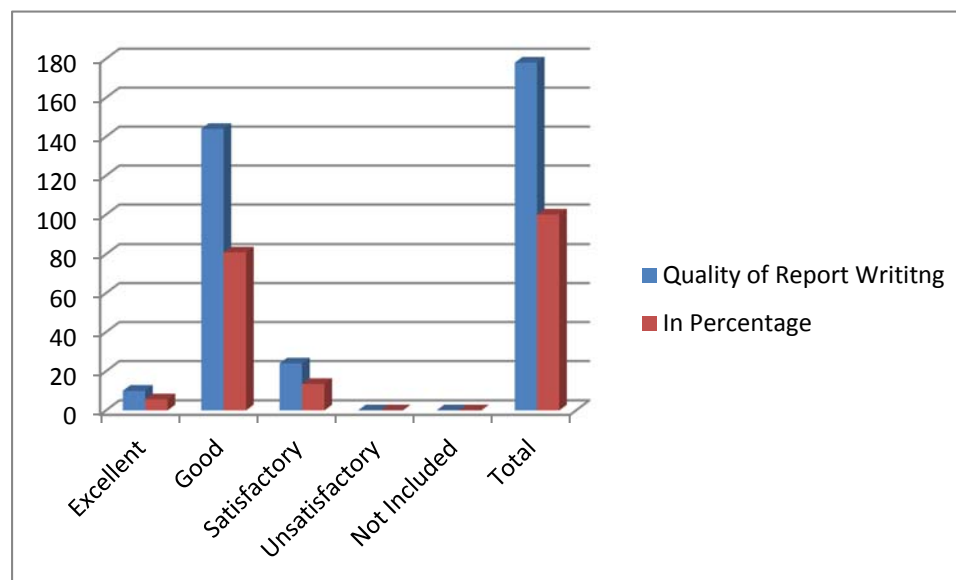
**Fig 4.39.1 Written Report Organization**

Figure 4.39.1 shows that written report organization of the majority dissertations was found good.

Table 4.40 Quality of Report Writing

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Quality of Report Writing	10	144	24	0	0	178
In Percentage	5.62	80.90	13.48	0.00	0.00	100

Majority of 80.90% dissertations scored good on the quality of report writing while 5.62% scored excellent and 13.48% scored satisfactory

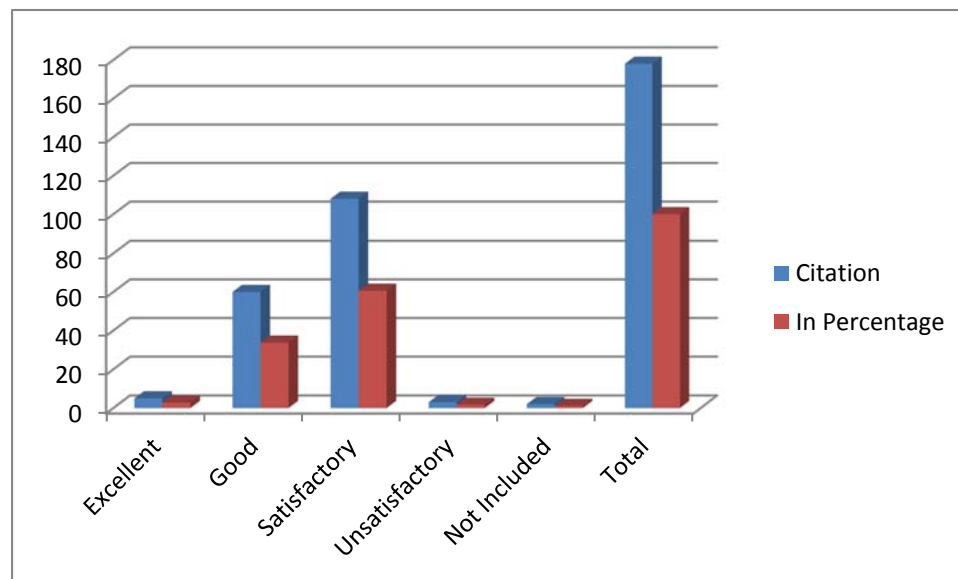
**Fig 4.40.1 Quality of Report Writing**

The figure shows that the quality of report writing of majority dissertation was found good on the five point categorical scale.

Table 4.41 Citation

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Citation	5	60	108	3	2	178
In Percentage	2.81	33.70	60.67	1.68	1.12	100

The quality of majority citation in dissertations was found satisfactory (60.67%) while 33.70% was found good and 2.81% dissertations were placed in excellent category. Two dissertations had no citation and 1.68% dissertations' citations were found unsatisfactory.

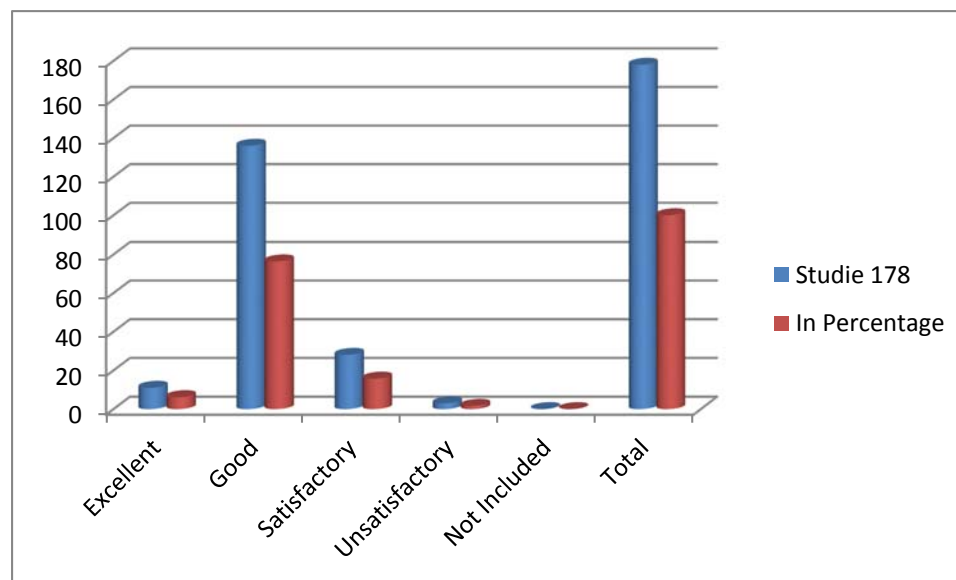
**Fig 4.41.1 Citation**

The citation section of education dissertations was found satisfactory as evident from the figure 4.41.1

Table 4.42 Total Studies

	Excellent	Good	Satisfactory	Unsatisfactory	Not Included	
Studies 178	11	136	28	3	0	178
In Percentage	6.18	76.40	15.73	1.68	0.00	100

The result of the study shows that 6.18% dissertations were found excellent while majority dissertations (76.40%) were found good and 15.73% were placed in satisfactory category. Three dissertations were found unsatisfactory.

**Fig 4.42.1 Total Studies**

The results of the study show that the overall result of the quality of dissertations was found good.

Table 4.43 Chi-square test performed with the help of Mini Tab Software

Category	Count	Excellent	Good	Satisfactory	Total
Research Topic	Actual	28	127	20	175
	Observed	21.13	94.12	59.75	
Abstract	Actual	5	134	37	176
	Observed	21.25	94.66	60.09	
Introduction	Actual	40	59	79	178
	Observed	21.49	95.74	60.78	
Objectives	Actual	51	96	27	174
	Observed	21.01	93.58	59.41	
Research Question	Actual	21	34	8	63
	Observed	7.61	33.88	21.51	
Literature Review	Actual	7	65	103	175
	Observed	21.13	94.12	59.75	
Methodology	Actual	36	109	33	178
	Observed	21.49	95.74	60.78	
Samples	Actual	39	105	33	177
	Observed	21.37	95.2	60.44	
Tools of data collection	Actual	61	87	27	175
	Observed	21.13	94.12	59.75	
Focus on research problem	Actual	7	106	64	177
	Observed	21.37	95.2	60.44	
Data analysis and results	Actual	15	70	91	176
	Observed	21.25	94.66	60.09	
Response to questions	Actual	5	57	98	160
	Observed	19.32	86.05	54.63	
Discussions	Actual	13	59	53	125
	Observed	15.09	67.23	42.68	
Conclusion	Actual	6	43	123	172
	Observed	20.76	92.51	58.73	
Suggestions	Actual	29	107	36	172
	Observed	20.76	92.51	58.73	
Ethics of research	Actual	8	111	58	177
	Observed	21.37	95.2	60.44	
Proposed research	Actual	11	116	48	175
	Observed	21.13	94.12	59.75	
Written report organization	Actual	5	102	67	174
	Observed	21.01	93.58	59.41	
Quality of report writing	Actual	10	144	24	178
	Observed	21.49	95.74	60.78	
Citations	Actual	5	60	108	173
	Observed	20.88	93.05	59.07	
Total		402	1791	1137	3330

$$\begin{aligned}
\text{Chi-Sq} = & 2.237 + 11.485 + 26.447 + \\
& 12.423 + 16.350 + 8.875 + \\
& 15.947 + 14.096 + 5.464 + \\
& 42.831 + 0.062 + 17.681 + \\
& 23.590 + 0.000 + 8.486 + \\
& 9.446 + 9.010 + 31.302 + \\
& 9.800 + 1.838 + 12.695 + \\
& 14.550 + 1.009 + 12.454 + \\
& 75.259 + 0.539 + 17.953 + \\
& 9.661 + 1.226 + 0.210 + \\
& 1.837 + 6.424 + 15.895 + \\
& 10.610 + 9.809 + 34.429 + \\
& 0.289 + 1.007 + 2.495 + \\
& 10.498 + 26.496 + 70.340 + \\
& 3.267 + 2.270 + 8.796 + \\
& 8.363 + 2.623 + 0.098 + \\
& 4.854 + 5.086 + 2.311 + \\
& 12.196 + 0.757 + 0.969 + \\
& 6.142 + 24.333 + 22.254 + \\
& 12.082 + 11.737 + 40.532 = 771.725
\end{aligned}$$

$$\text{DF} = 38, \text{P-Value} = 0.000$$

The P-value indicates that there is no relationship between the three variables and they are significantly independent of each other. The observation thus made for the sample population is unbiased and reliable.

Table 4.44 Mean % value of actual count of sample values

Category	Excellent %	Good %	Satisfactory %	Total %
Research Topic	16.00	72.57	11.43	100.00
Abstract	2.84	76.14	21.02	100.00
Introduction	22.47	33.15	44.38	100.00
Objectives	29.31	55.17	15.52	100.00
Research question	33.33	53.97	12.70	100.00
Literature review	4.00	37.14	58.86	100.00
Methodology	20.22	61.24	18.54	100.00
Samples	22.03	59.32	18.64	100.00
Tools Of Data Collection	34.86	49.71	15.43	100.00
Focus ON R-problem	3.95	59.89	36.16	100.00
Data Analysis & Result	8.52	39.77	51.70	100.00
Response To Question	3.13	35.63	61.25	100.00
Discussion	10.40	47.20	42.40	100.00
Conclusion	3.49	25.00	71.51	100.00
Suggestion	16.86	62.21	20.93	100.00
Ethic of Research	4.52	62.71	32.77	100.00
Proposed Research	6.29	66.29	27.43	100.00
Written Report Organization	2.87	58.62	38.51	100.00
Quality of Report Writing	5.62	80.90	13.48	100.00
Citation	2.89	34.68	62.43	100.00
Average	12.68	53.57	33.75	100.00

Results

The data analysis clearly indicates that a majority of sample population falls under good category (52.72%) followed by satisfactory (32.91%) and excellent (12.38%).

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter includes summary, findings, discussion, conclusions and recommendations which were drawn from the analysis of the data.

5.1 Summary

The purpose of the study was to evaluate PhD dissertations in the discipline of education of social sciences. The primary objective was to evaluate PhD dissertations in Pakistan in respect of quality. The second objective was to compare the quality of dissertations conducted under HEC and UGC and the third objective was to suggest improvements in the quality of research in Pakistan.

The population of the study consisted of 308 dissertations in the discipline of education; the study was delimited only to those dissertations that were available online or through any other source. The researcher downloaded most of the dissertations from the HEC website. However, a few dissertations that were not added to the HEC repository were manually collected. Some of the dissertations were uploaded several times by different names which were excluded. A total of 217 dissertations were collected, the researcher delimited the study to those dissertations that were conducted in English language, and further delimited to only those studies which fulfill the requirement of the rubric that was adapted for the evaluation of PhD dissertations. After the exclusion of dissertations, 178 dissertations were left for evaluation. The researcher adapted the rubrics of world renowned universities which they have used for the purpose of evaluation in universities and on the basis of the rubric that I have developed on my

own. The tool was improved with the help of literature review and the research conducted on the evaluation of dissertations around the world. The researcher also adapted those rubrics and developed a comprehensive rubric to encompass all the aspects of the dissertation. Many of those rubrics were about one aspect of the dissertation. Some studies were conducted only on the literature review, Fitt et al., (2009) used the rubric of Boot & Beile in their study “Assessing the Quality of Doctoral Dissertation Literature Reviews in Instructional Technology” and evaluated the entire dissertation, that rubric was prepared only for the literature review not for the entire dissertation. One research was conducted on the citation section. The researcher only found two studies which encompass the whole dissertation; one was conducted in Iran in Persian language while the other “How to Grade a Dissertation” conducted by Lovitts (2005) was based on the group discussion. These studies were the closest studies to this research. The researcher also adapted some guidelines from this research and improved the rubric. The rubric was tested in a pilot study which was conducted on the studies of M.Ed. in the department of I.E.R, University of Peshawar. Initially rubric consisted of 14 elements, after testing the rubric was improvised and six more elements were incorporated to the rubric. The scale of rubric consisted of five points categorical scale namely excellent, good, satisfactory, unsatisfactory and not included. For every dissertation, data were collected on one separate sheet using the rubric, the sheet contained 20 items namely Research topic, Abstract, Research questions, Objectives, Literature review, Methodology / Research design, Sample, Tools of data collection, Focus on research problem, Data analysis & results, Response to questions, Discussion, Conclusion, Suggestions, Ethics of research, Proposed research, Written report organization, Quality of report writing and Citation

(Muhammad, 2013). After the collection of data, the data were analyzed by two methods one percentage and the other statistical analysis using MedCalc and Minitab software. For comparison of HEC and UGC dissertations, first of all percentage was calculated than on MedCalc software the Z test of two proportions was performed and the hypothesis was tested. For evaluation of quality of PhD dissertations in Pakistan again percentage was calculated and software method was used to explore the quality of research, for this purpose Chi square test was applied using Minitab software.

From the overall outcome of the study, the researcher found that the quality of HEC dissertations were slightly better than UGC on every item of rubric using percentage method. While statistical analysis showed that on several points HEC dissertations were better than UGC and there was a significant difference between two proportions which proved the hypothesis that HEC dissertations were better than UGC.

The second objective of the study was to explore the quality of research in Pakistan. Percentage and Minitab software were used for the analysis of dissertations, after the analysis, the researcher drew the conclusion that on five points categorical scale the quality of dissertations was found good and the result of the study was reliable. During the process of evaluation the researcher also found that some dissertations were copycat of others. The researcher also proposed some recommendations for the improvement of quality of research in Pakistan and to eliminate plagiarism.

5.2 Findings

5.2.1 Findings of the Comparison of HEC and UGC Dissertations

From the comparison of HEC and UGC dissertations the following findings have been drawn:

1. Using percentage on the element of research topic, in comparison the HEC dissertations were found better on the scale of excellent with 16.03% than UGC with 14.89% while UGC dissertations were found better with 76.59% on the scale of good than HEC with 69.50%. The research topics of 4.25% UGC dissertations were found unsatisfactory compared to 0.76% of HEC. While the result of MedCalc statistical software shows that there is no significant difference in the quality of HEC and UGC dissertations on the element of research topic on all five categories.

2. On the element of Abstract UGC dissertations were found better on the scale of excellent, UGC scored 6.38% compared to HEC that scored 1.53% while on the scale of good 77.10% of the HEC dissertations were found better as compared to 70.21% of the UGC dissertations. The result of MedCalc software shows that there is no significant difference on all five categories because the P value is greater than 0.05.

3. The introduction chapter of HEC dissertations was found better in quality on the scale of excellent and good respectively with HEC scoring 25.19% and 34.40% on the scale of excellent and good as compared to UGC 14.89% and 29.78% respectively. On the lower level of quality HEC has less dissertations (40.45%)

compared to UGC high percentage of (55.32%). While MedCalc software shows that there is no significant difference on all five levels because the P value is higher than 0.05.

4. Objectives of HEC dissertations were found better in quality than UGC on all scales respectively; 33.59% to 14.89% on excellent, 56.50% to 46.81% on good, and 0% to 2.13% on the scale of unsatisfactory. The result of the MedCalc showed that there is significant difference on the category of excellent and satisfactory because the P value is less than 0.05.
5. The research questions of the HEC dissertations were better, HEC scored 22.10% as compared to UGC that scored 10.64% on the scale of good while 6.38% of the UGC research questions were found unsatisfactory compared to zero percent of the HEC research questions. Majority of HEC and UGC researchers did not include research questions in their research. The statistical result of MedCalc showed that there is significant difference on the scale of unsatisfactory.
6. The quality of Literature review of HEC dissertations was found to be better than UGC on all scales respectively; 4.58% of HEC and 2.12% of UGC were excellent, 42% of HEC and 21.28% of UGC was good, Zero percent of HEC and 4.25% of UGC dissertations were unsatisfactory. On the lesser quality scale UGC achieved high percentage of 70.21% and HEC achieved less percentage of 53.42%. The result of the MedCalc statistical software showed that there is significant difference on the category of good because the P value is less than

0.05 while on the remaining four categories the result showed no significant difference.

7. The quality of methodology and research design section of HEC dissertations was found better, HEC scored 21.37% while UGC scored 17.02% on the scale of excellent. The MedCalc analysis showed that there is no significant difference on all five categories because the P value is greater than 0.05.
8. The sample of HEC dissertations was found better than UGC since HEC scored 26.72% percent while UGC scored 8.51% on the scale of excellent. On the scale of good UGC dissertations scored 65.96% which is better than HEC that scored 56.50%. 2.13% of the UGC dissertations were unsatisfactory. The statistical result showed that on the scale of excellent there is significant difference because the P value is less than 0.05 and on the remaining four categories there is no significant difference in two proportions.
9. Tools of data collection of HEC dissertations were found better, HEC scored 38.93% compared to UGC score of 21.28%, while the quality of UGC dissertations was also found to be better since UGC scored 59.57% while HEC scored 45% . Tools of data collection of 4.25% of the UGC dissertations were found unsatisfactory. The result of the statistical analysis showed that there is significant difference in two proportions on the scale of excellent.
10. Focus on the research problem of HEC dissertations was found better than UGC on the scale of good with the HEC scoring 61.10% and UGC scoring 55.32%.

The statistics showed that there is no significant difference on all five scales because the P Value is higher than 0.05.

11. The data analysis element of HEC dissertations was found better than UGC dissertations on the scale of excellent and good respectively 9.16% to 6.38% and 44.30% to 25.53% . Data analysis of two UGC dissertations was found unsatisfactory.
12. The quality of Response to questions of HEC dissertations was found better than UGC dissertations with 38.90% to 12.76% respectively. While response to questions of two HEC dissertations was found unsatisfactory and 12.21% dissertations did not respond to questions. The analysis of the MedCalc shows that on the scale of good there is significant difference in HEC and UGC dissertations. There is clear difference between two proportions.
13. Discussion section of HEC dissertations (9.16%) was found better than UGC (2.13%) dissertations on the scale of excellent, while on the scale of good HEC dissertations achieved 40.50% compared to UGC that achieved 23.76%. Majority of UGC (59.57%) dissertations did not include discussion section as compared to HEC (18.32%) dissertations. There is significant difference on the scale of good and not included in HEC and UGC because the P value in both scales is less than 0.05.
14. Conclusion element of HEC dissertations was slightly better than UGC. The conclusion of one UGC dissertation was found unsatisfactory. The result of the statistical software shows that there is no significant difference on all five scales.

15. The quality of suggestions of UGC dissertations were found better with a 21.28% as compared to HEC dissertations with a 14.50% . While on the scale of good HEC dissertations were better with 63.40% as compared to UGC dissertations with 51.06%. Suggestions of 2.13% UGC dissertations were found unsatisfactory. The statistical analysis shows that there is no significant difference on all five scales because the P value is greater than 0.05.
16. The ethics of research of UGC dissertations (72.34%) were found better than HEC (58.80%), while one UGC dissertation was found unsatisfactory. The statistics show that there is no significant difference in the quality of HEC and UGC dissertations.
17. Proposed research of the HEC dissertations was found better with a 7.63% as compared to UGC's 2.13% on the scale of excellent, while on the scale of good UGC dissertations with 80.85% were found better than HEC that had a 59.50%. The MedCalc analysis shows significant difference on the scale of good and satisfactory. There is clear difference in two proportions on these two scales.
18. The written report organization of 65.96% UGC dissertations was found better as compared to 54.20% of the HEC on the scale of good. On the statistical analysis there is no significant difference in two proportions.
19. The quality of report writing of HEC dissertations was found better than UGC on the scale of excellent, while on the scale of good UGC dissertations were better

with 87.23% in comparison to HEC with 78.60%. Statistical analysis showed no significant difference on all scales.

20. On the excellent scale HEC dissertations' citations were found better than UGC, while 2.29% HEC dissertations citations found to be unsatisfactory. Statistical analysis showed no significant difference on all scales on the element of citation.

21. On the scale of excellent 7.63% of the HEC dissertations were found better as compared to 2.13% UGC dissertations. On the scale of good UGC dissertations 78.72% were found better as compared to HEC dissertations with 75.60%. On the scale of unsatisfactory 4.25% UGC dissertations were found unsatisfactory compare to HEC with 0.76%.

5.2.2 Findings from the Cumulative Dissertations

22. The overall quality of research topic of dissertations was found good on five points categorical scale as evident from Figure 4.22.1.

23. The overall quality of abstract of dissertations was found good; it is evident from figure 4.23.1

24. The quality of introduction section of PhD dissertations in education was found good; it is evident from Figure 4.24.1.

25. The quality of objectives framed in dissertations was found largely good and excellent, evident from figure 4.25.1

26. The researcher found that majority of researchers did not include research questions in their dissertations which is evident from Figure 4.26.1.

27. The quality of literature review of majority dissertations was found satisfactory
Figure 4.27.1.
28. The sample size of majority dissertations was found good which is evident from
Figure 4.28.1.
29. The quality of research methodology adopted for the research of majority
dissertations was found good which apparent from Figure 4.29.1.
30. The quality of tools of data collection of PhD dissertation of education was
found good on the five point categorical scale, figure 4.30.1.
31. Focus on the research problem of the majority dissertations was found good; it is
evident from the figure 4.31.1
32. Data analysis of the majority dissertations was found good, figure 4.32.1
33. Response to the questions section of the majority dissertations was found
satisfactory as evident from the Figure 4.33.1
34. The quality of conclusion section was found satisfactory of majority
dissertations, Figure 4.35.1.
35. The quality of suggestions presented in dissertations was found good as evident
from the Figure 4.36.1.
36. The proposed research sections of majority studies were found good (Fig 4.37.1)
37. Ethically majority of the dissertations were found good as evident from Figure
4.38.1
38. The quality of written report organization of dissertations was found good,
Figure 4.39.1.

39. The quality of report writing of more than 80% dissertations was found good, Figure 4.40.1.
40. The references of the majority dissertations were found satisfactory according to APA standard (Figure 4.41.1).
41. The statistical software Minitab result showed that there is significant difference in the three variables namely excellent, good and satisfactory. The result found that the three variables were independent from each other and the result of the study is unbiased and reliable in nature.
42. The researcher found that majority of the PhD dissertation fall under good category while 12% in the excellent category which shows that the quality of PhD dissertation in education is good.
43. The majority of dissertations were found good on the five point categorical scale, Figure 4.42.1.

5.3 Discussion

The primary purpose of the study was to evaluate PhD dissertation in the field of education and compare the quality of dissertations conducted under HEC and UGC. The studies conducted under education were the population of this study, which encompassed 308 dissertations by the end of July 2012. The researcher searched for available dissertations from different sources and found 217 dissertations for evaluation. The researcher scrutinized them for those research studies that fulfilled the criteria of the rubric for evaluation. Some research studies were excluded due language; written in Urdu, and in the end 178 dissertations were left for evaluation out of these 131 were

conducted under HEC and 47 under UGC. First, the researcher evaluated all the dissertations in the light of guidelines of the rubric. One sheet was filled for every dissertation which comprises of 20 points with five point categorical scale, namely Excellent, Good, Satisfactory, and Unsatisfactory and not included.

5.3.1 Discussion on the Comparison of HEC and UGC Dissertations by Parts

To compare the quality of research conducted under HEC and UGC, the researcher used Z test of comparison of two proportions and percentage. Twenty elements were evaluated in each dissertation on the five point categorical scale.

The first element was the research topic. The result showed that the quality of HEC dissertations was slightly better on the scale of excellent using percentage method while on the scale of good UGC dissertations were slightly better but the result was insignificant. While the result of MedCalc statistical software shows that, there is no significant difference in the quality of HEC and UGC dissertations because the P value is less than 0.05. On the basis of MedCalc results the hypothesis is rejected that HEC dissertations are better than UGC. The overall result of the quality of the research topic was found good, because majority research topics were workable and the topics were related to the field of education (Gay, 2000).

The abstract of HEC dissertations was slightly better on the scale of good on five points categorical scale, while the analysis of statistical software shows that there is no significant difference in the quality of HEC and UGC dissertations on the category of abstract, the hypothesis rejected that HEC dissertations were better than UGC. The

researchers provided introduction of the study, objectives of the study, and tools of data collection and conclusion of the study as Dirks (2012) suggested in his study.

The introduction of HEC dissertations were found better on the scale of excellent and good, while HEC had fewer dissertations in the satisfactory category compared to UGC. Statistical software showed that there is no significant difference on the five point's categorical scale because the P value is Higher than 0.05 on all scales. Hence, the hypothesis rejected that HEC dissertations were better than UGC.

The objectives of HEC dissertations were found better than UGC in quality on five point's categorical scale. On the scale of excellent HEC dissertations were convincing, challenging and supported the objectives which were helpful in the process of the research as mentioned in the guidelines of Rice University (2008). The MedCalc result showed that there was significant difference on the scale of excellent because the P value was less than 0.05. Hence, the hypothesis accepted that HEC dissertations were better in quality than UGC. On the scale of good HEC dissertations were found good but the difference between two proportions were not significant. While on the scale of satisfactory, there was significant difference in the quality of HEC and UGC dissertations. Majority of UGC dissertations scored satisfactory compared to fewer HEC dissertations, because UGC scored higher than HEC, the hypothesis rejected that the quality of HEC dissertations was better than UGC but it also showed that UGC dissertations scored higher on lower scale on the five point categorical scale. HEC dissertations already scored better on the scale of excellent and good so only a few remaining dissertations fell under satisfactory category. Hence, the hypothesis accepted

for the overall result of the objectives section that HEC dissertations were better in quality than UGC.

The quality of research questions of HEC dissertations were found better on the scale of good on the basis of percentage, the difference between proportions was 12% but statistically the difference was not significant. On the scale of unsatisfactory there was significant difference between the two proportions. A significant number of UGC dissertations were found unsatisfactory therefore the hypothesis is accepted that HEC dissertations were better in the quality than UGC.

Comparing on the basis of percentage the researcher found that HEC dissertations were better on all scales than UGC. While the result of MedCalc software shows that, the quality of literature review was better on the scale of good because the difference between the two proportions was significant. Hence the Hypothesis is accepted that HEC dissertations were better than UGC. While on the scale of satisfactory large portion of UGC dissertations were found satisfactory compared to lesser HEC dissertations but the statistical difference between the two proportions was not significant. On the lower scale, UGC scored better than HEC while on the higher scale HEC scored better than UGC. Literature review gives the researcher a chance to demonstrate his expertise's in the field of study suggested by Randolph (2009) and provide a framework to relate the finding of his study in the discussion section with the previous studies.

There is no significant difference in the proportions of HEC and UGC dissertations on the element of methodology. Statistical software MedCalc result also showed no significant difference on five point categorical scale. Hence the hypothesis is rejected that HEC dissertations were better in quality than UGC.

On the scale of excellent the quality of samples size of HEC dissertations were found better than UGC; there was a significant difference in the two proportions. While on the scale of good UGC dissertations scored better than HEC on the basis of percentage, but statistically the difference was not significant. The statistical result showed that on the scale of excellent there was significant difference in the quality of HEC and UGC dissertations. Hence, the hypothesis was accepted that HEC dissertations were better in the quality than UGC.

The quality of HEC dissertations were found better on the element of tools of data collection. On the scale of excellent there was significant difference in the quality of HEC and UGC dissertations. While on the scale of good UGC did better than HEC and the result was insignificant to reject the hypothesis. On the scale of unsatisfactory two UGC dissertations were found unsatisfactory compared to HEC that had none. Hence, on the scale of excellent, the P value is less than 0.05, which shows that there was significant difference between two proportions. Therefore, the hypothesis accepted that HEC dissertations were better than UGC.

On the category of focus on the research problem, HEC dissertations were slightly better on all scales; while on the scale of unsatisfactory one UGC dissertation was found unsatisfactory. The statistical result shows that there was no significant difference on any scale on the “focus on the research problem”. Therefore the hypothesis is rejected that HEC dissertations were better than UGC.

On the quality of data analysis and results section, HEC dissertations were better on the scale of excellent and good while on the scale of satisfactory UGC dissertations

did better than HEC on percentage. While on the statistical calculations, HEC did better on the scale of good and the result was significant statistically, the analysis was systematic and the researchers correlated results, discussion, and conclusion section with references as Ruiying and Allison (2003) mentioned in their study. On the scale of unsatisfactory two UGC dissertation scored unsatisfactory and the data analysis and result sections of the two dissertations were found unsatisfactory because the selection of improper tools for data analysis. The evidence supports the hypothesis that HEC dissertations were better than UGC.

The quality of responses to questions in HEC dissertations was better than UGC dissertations on the scale of good; the difference between two proportions was significant. Hence the hypothesis was accepted that HEC dissertations were better than UGC. On the scale of satisfactory, a large number of UGC dissertations scored satisfactory compared to HEC; the difference between two proportions was 40%, the difference was significant therefore the hypothesis was rejected that HEC dissertations were better than UGC but it is also a fact that UGC scored higher than HEC on a lower scale. On the scale of unsatisfactory two HEC dissertations were found unsatisfactory while on the scale of not included 16 HEC dissertations did not answer the questions that they posed in the introductory section and literature review section. On the basis of these evidences the hypothesis was rejected that HEC dissertations were better than UGC.

The discussion section of HEC dissertations were found better on five point's categorical scale than UGC dissertations. On the scale of excellent HEC dissertations were better than UGC and the difference was significant statistically while on the scale of good HEC dissertations were better than UGC and the P value was less than 0.05

therefore the hypothesis was accepted that HEC dissertations were better than UGC. One UGC dissertation was found unsatisfactory. While on the scale of not included a large number of UGC dissertations did not include discussion section into their dissertation compared to HEC lesser dissertations. The difference was significant which supports the hypothesis that HEC dissertations were better than UGC dissertations.

The conclusion section of HEC dissertations were slightly better than UGC dissertations on all five scales but the difference between the proportions was not significant on all scales, therefore the hypothesis is rejected that HEC dissertations was better in quality than UGC.

The quality of suggestions of UGC dissertations were found better on the scale of excellent but statistically the result was found insignificant while on the scale of good HEC dissertations were found better than UGC but statistically it was not significant either, therefore the hypothesis is rejected that HEC dissertations were better than UGC.

The research component ethics of the research of HEC dissertations were found better on the scale of excellent while on the scale of good UGC dissertations were found better than HEC but on the overall scale the difference between proportions was not significant therefore the hypothesis is rejected that HEC dissertations were better than UGC.

The proposed research section of HEC dissertations was better than UGC but statistically the result was not significant and could not support the hypothesis therefore it is rejected that HEC Dissertations were better than UGC. While on the scale of good UGC dissertations scored better than HEC and the difference was statistically significant therefore the hypothesis rejected that HEC dissertations were better than UGC.

On the component of written report organization, there is no significant difference on five points categorical scale therefore the hypothesis is rejected that HEC dissertations were better in quality than UGC.

The quality of report writing of HEC dissertations was found better than UGC on the scale of excellent while on the scale of good UGC dissertations were better but the difference between both proportions was statistically not significant. Therefore the hypothesis was rejected that HEC dissertations were better than UGC.

The quality of citation of majority PhD dissertations were found satisfactory on the five point categorical scale, there was minor difference in the score of HEC and UGC dissertations on different scale but the difference was not significant. While on the scale of unsatisfactory, HEC dissertations were found unsatisfactory, therefore on the outcome of statistical calculation the hypothesis is rejected that HEC dissertations were better than UGC. The sources cited were not up to the standard as suggested by de-Miguel and Mario (2010) in their study “The Evaluation of Doctoral Thesis. A Model Proposal”.

5.3.2 Discussion on the Cumulative Dissertations of HEC and UGC

On the scale of excellent HEC dissertations were found better than UGC. Ten dissertations of HEC (7.63%) were found better as compared to one UGC dissertation (2.13%) but statistically the results do not support the hypothesis that HEC dissertations were better than UGC because the result was statistically not significant. On the scale of good, UGC dissertations were slightly better than HEC on the percentage scale; 99 dissertations of HEC (75.60%) compared to 37 dissertations of UGC (78.72%). The result was not significant therefore, the hypothesis is rejected that HEC dissertations were

better than UGC. One HEC dissertation was found unsatisfactory as compared to two UGC dissertations but the difference between the two proportions was not significant therefore, the hypothesis is rejected that HEC dissertations are better than UGC.

The overall comparison shows us that HEC improved the quality of research in Pakistan, Maximum weaknesses removed. In initial stages after the establishment of HEC the quality and the quantity of research was not high but within short time, HEC transformed the rules and regulations for PhD scholars and made it mandatory to send the dissertation for evaluation to technologically advanced countries to improve the quality of PhD dissertations; improving the quality of dissertation evaluation. Therefore dissertations conducted later achieved High quality. A study could also be conducted on the comparison of HEC initial and later stage dissertations.

The researcher also finds some shortcomings in this research. The researcher have the feeling that two component should not have been included in the research rubric; one response to questions and the other proposed research; both are very hard to judge at times.

5.3.3 Discussion on the Quality of Education Dissertations in Pakistan

The quality of research topics of majority studies was found to be good. The topics of three dissertations were found unsatisfactory on the five point's categorical scale. Poticell & Olivarez (1997) noted that the research topic should be researchable and should have significance in the field of the study.

The quality of abstract of majority dissertations was found good. Only 20% of the dissertations fall in satisfactory category. Dirks (2012) argue that good abstract includes clear introduction, objectives, and methodology and conclusion of the study.

The result of introduction showed that more than 50% dissertations fall in the category of good and excellent and 44% under satisfactory. The result shows that the researchers were not strong in the introduction area of the research.

The quality of objectives of majority of the PhD dissertations were found to be good and excellent. The statistics show that the researchers know, how to frame good objectives for their study which support their research topic and help them in the research process.

Majority of researchers did not include research questions in their studies which shows that they are unaware of the importance of research questions and how it could improve their study, and help them in completing their research effortlessly.

Looking at the result of literature review the researcher found that the research culture in Pakistani Universities are not fully developed yet. Majority of literature reviews were just the history of research done in the field of the education. Therefore majority of the studies were placed under the satisfactory category as per the rubric principles.

The selection of the population and sample size of the majority dissertations were found according to the APA style and were placed under the good category. In majority dissertations sample size was randomly selected and the researchers give step by step description how the sample is selected as suggested by Yount (2006).

The majority of the researchers adopted suitable research design for their studies. The quality of the research designs were good and supported by APA style.

Tools for data collection of the majority dissertations fell under the category of

good and excellent respectively. Lion's share was taken by good and then excellent. The result shows that the researchers selected the right tool for the data collection and it supported the nature of their study.

A majority of the researchers focused on the research problem during their research and were found good, the researchers established clear relationship between research questions and results of the study as mentioned in the guidelines of IR University of Japan (2002) while one third of the research studies were placed under satisfactory category because the focus was not entirely on the research problem.

The methods used for data analysis in the majority dissertations were found satisfactory. The researchers need to work on the selection of test for analyzing data because the quality of data analysis of dissertations were not good, the students of education do not have the expertise of statistical analysis therefore they need to consult an expert from the concerned field, so that any mistake in the data analysis procedure are avoided, and the analysis fulfill the requirement of APA style. More than 40% dissertations were found good and up to the standard of APA style.

The issue how the researchers handled the questions they framed in introduction and literature review sections, the researcher found that majority did not respond to the questions appropriately. There were some tiny gaps in the understanding of the study due to this reason majority dissertations were placed under the category of satisfactory. More than one third fell under good category; the answers were appropriate and fulfilled the requirement of research, they used statistical analyses to answer the research questions and tested the hypotheses as suggested by Duquesne University (2006).

The quality of discussion sections were not up to the required standard; nearly one third of the dissertations did not include discussion sections in their dissertations while nearly the same numbers were placed under satisfactory category which shows that the standard of discussion section in education's dissertations is satisfactory. One third was found good and only a handful studies were found to be excellent. Only one third of dissertations supported and complied with the argument of the Gay, (2000) and APA (2010) that the researcher evaluate and interpret the possible implications of his research with respect to his hypothesis and draw conclusion.

Reid and Gough (2000) suggested that the quality of conclusion is good if drawn from the findings of the research. The conclusion section of the dissertations were poorly written by most of the researchers. More than two third of dissertations were placed under satisfactory category. The researchers drew some major conclusions from the research but they also overlooked some major outcome and did not draw conclusion for that. One fourth of the dissertations were found good. The researchers required to discuss all possible implications of the study and to bring out the advantages and shortcomings arising out of the study, and give limitations of their study (Ruiying & Allison 2003; Duquesne University, 2006)

A majority of the suggestions presented in the dissertations were found good and helpful in the remedial of the problem while suggestions presented in the excellent category; drawn from the findings of the research that have direct relationship to the problem. The researchers also pinpointed the issues and suggested future workable plan for that problem (Duquesne University, 2006).

Ethically majority of the dissertations were found good as suggested by Gay, (2000) that the researchers contributed accurate scientific knowledge to the field of study and protect the copyrights of others by giving credits to the authors. Majority of dissertations fulfilled the APA requirements for ethics and protect the confidentiality of the participants. One third of dissertations were placed under satisfactory category because the lack of originality and contributions of new knowledge to the field of study.

The quality of written report organization of dissertations were found good; every component was placed where it supposed to be. Tables and figures were systematically organized as mentioned by Rice University (2008).

The quality of report writing of the majority dissertations were found good. The researchers followed the rules of the grammar and minimum spelling mistakes were found and thoughts were presented fluently.

Only one third of dissertations were placed in good category while majority of the dissertations were placed under satisfactory category. It is apparent from the result that the majority of the researchers had a limited knowledge of the APA manual. They used minimum citations.

The statistical analysis shows that the majority of dissertations were found good while one third of dissertations were found satisfactory and 12.38% were found excellent. The P value shows that there is no relationship between the variables and there is significant difference between them and the research is unbiased and reliable.

The overall result of 178 dissertations shows that the majority of dissertations (136) scored good on the five point categorical scale and 11 dissertations were found

excellent while 28 dissertations were placed under satisfactory category. Three dissertations failed the test and were placed under the unsatisfactory category.

The researcher also found during the evaluation of dissertations that some dissertations were plagiarized and were excluded from evaluation process.

5.4 Conclusions

5.4.1 Conclusions Drawn from the Comparison of HEC and UGC Dissertations

There is no difference in the quality of research topics of the dissertations of HEC and UGC. Therefore, the hypothesis is rejected that HEC dissertations were better than UGC.

The quality of abstract of HEC dissertations was slightly better than UGC on the basis of Percentage but statistically the hypothesis is rejected because the difference was not enough to conclude that HEC dissertations were better than UGC.

The quality of introduction section of HEC was slightly better than UGC but the difference was not enough to support the hypothesis, therefore the hypothesis is rejected.

The quality of objective section of HEC dissertations was better than UGC and the difference between the two proportions was significant therefore the hypothesis was accepted. Although HEC dissertations scored lesser on the scale of satisfactory compared to UGC's high score but it also proved that HEC scored higher on the higher scale while UGC scored better on the lower scale.

The research questions of HEC dissertations were slightly better than UGC, while significant dissertations of UGC were placed in the unsatisfactory category as compared

to HEC therefore the hypothesis is accepted that HEC dissertations were better than UGC.

The quality of literature review of HEC dissertations was better than UGC on all scales. Statistically there was significant difference between the two proportions and this support the hypothesis that HEC dissertations were better than UGC.

There is no significant difference in the quality of methodology section of HEC and UGC dissertations therefore the hypothesis rejected that HEC dissertations were better than UGC.

The quality of the sample size of HEC dissertations was better than UGC on the scale of excellent therefore the hypothesis was accepted while on the scale of good UGC dissertations were better on percentage but statistically the result was not significant.

The quality of tools of data collection of HEC dissertations was significantly better than UGC on the scale of excellent, therefore the hypothesis was accepted while on the scale of good UGC dissertations were slightly better than HEC but the difference was not significant therefore the hypothesis was rejected.

Focus on the research problem section of HEC dissertations was slightly better but the difference was not enough that hypothesis could be accepted. Therefore the hypothesis was rejected because there was no significant difference.

The data analysis section of HEC dissertations was better than UGC. The difference between two proportions was enough to accept the hypothesis. On the scale of unsatisfactory UGC scored higher than HEC and the difference was significant therefore the hypothesis was accepted that HEC dissertations were better than UGC.

The quality of responses to questions of HEC dissertations was better on the scale of good and the hypothesis was accepted because the difference was significant. But on the scale of unsatisfactory and not included, significant number of HEC dissertations fell under these scales therefore, on these two scales the hypothesis was rejected.

The Discussion sections of HEC dissertations were better on all scales than UGC. The difference between two proportions was significant therefore, the hypothesis was accepted.

A majority of UGC dissertations (59%) did not include discussion section in their dissertations compared to (18%) A HEC dissertation, therefore, the hypothesis was accepted that HEC dissertations are better than UGC.

The conclusion section of HEC dissertations was slightly better than UGC but the difference was not significant to accept the hypothesis.

The quality of suggestions of HEC dissertations was better but the difference was not significant to accept the hypothesis.

The ethics of research section of HEC dissertations was better than UGC but difference between the proportions of HEC and UGC was not significant therefore, the hypothesis was rejected.

On the element of proposed research UGC dissertations were better than HEC and the difference between the proportions was significant therefore the hypothesis was rejected that HEC dissertations were better than UGC. Here UGC dissertations were better than HEC.

Written report organization of HEC dissertations was better but the difference was not significant to accept the hypothesis.

The quality of report writing of HEC dissertations was better than UGC on the scale of excellent while on the scale of good UGC dissertations were good but the difference in both cases was not significant therefore, the hypothesis was rejected that HEC dissertations were better than UGC.

The citations of three HEC dissertations were unsatisfactory as compared to UGC's none; while two HEC dissertations did not include citation in their dissertations. It was evident from results that citation of UGC dissertations was slightly better than HEC therefore hypothesis was rejected.

The overall quality of HEC PhD dissertations was better than UGC on percentage scale but the difference was not significant to back the hypothesis. Therefore, the hypothesis was rejected that HEC dissertations were better than UGC.

On the basis of the twenty elements which were evaluated independently in this study, the results of the majority elements supported the hypothesis that HEC dissertations were better than UGC.

5.4.1 Conclusions of Quality of Education Dissertations in Pakistan

The quality of majority research topics was good on the five point categorical scale while the research topics of three dissertations were unsatisfactory.

The research studies do not support their topics. Majority of research topics of dissertations supported the study of Poticell & Olivarez (2012) that the research topic should be researchable and have some significance in the field of study.

The majority of research abstracts were good, only the abstracts of one fifth of dissertations were satisfactory. Majority of abstracts included introduction, objectives, methodology, and conclusion of the study as suggested by Dirks (2012).

The quality of objectives of majority PhD dissertations was good and excellent respectively. The researchers provided convincing objectives that determines the challenge of the research and its applications (Rice university, 2008), and help in the process of research.

Majority of researchers did not include research questions in to their dissertations.

The quality of literature review section was not up to the standard. Majority of the literature reviews were the history of research done in the respective field of studies. Lovitts (2005) gives a brief note in her study about good literature review that it should include discussion of the literature, should be selective, investigative, and thematic.

In majority dissertations the quality and selection of sample size was good and the procedure of sample selection was random and explained step by step as Fitt et al., (2009) described in their research “Assessing the Quality of Doctoral Dissertation Literature Reviews in Instructional Technology”.

The majority researchers selected good research methodologies for their research as suggested by de-Miguel & Mario (2010), that the method should be relevant to the objectives, explain all the steps of the research and the selection procedure of sample and instrument.

The majority researchers used good tools for data collection in their research. Therefore, majority dissertations were placed in good and excellent category as suggested

by Yount (2006) that the researchers used appropriate tool for data collection and explain the selection procedure of tools, and data collection.

Majority of the researchers were focused in their research on the research problem and the majority were placed in good category as suggested in the guidelines of IR University of Japan (2002) that arguments should be clear and related to the research problem.

The researchers were weak in the data analysis process and so majority of dissertations placed under satisfactory category. The lesser use of statistics may be a reason of that. The studies do not support University of Peshawar (2012) guidelines for data analysis that the result calculated, executed carefully, and presented with clarity.

Majority of the researchers were unable to link the questions of the study that they posed in introduction and literature review sections. The responses of the researchers to the questions were weak, they used limited statistical analysis to answer research questions, and hypothesis in discussion section as suggested in the guidelines of Duquesne University (2006).

The researchers did not understand the concept of discussion section in the dissertations. One third did not include discussion in their research and one third was placed in satisfactory category. Pathirage et al., (2004) give 20 to 40% weightage to analysis and discussion section in their research on the “Improving Dissertation Assessment”.

The conclusion of majority dissertations was very poorly written; the researchers overlooked the major finding in their research as suggested by Duquesne University (2006) in their guidelines that in the conclusion section researcher answers to his

experiment. Reid & Gough (2000) also suggested in their study that the researcher draw conclusion from the finding and data analysis of the study.

Majority of suggestions derived from the finding of the study were good. Suggestions should be in the light of conclusion of the research (Duquesne University, 2006).

The majority of dissertations were ethically good because they contributed new and accurate knowledge to the study and protected the participants of the study.

The report organization of majority of the dissertations was good on the scale of good; the researchers organized the report according to APA required format.

The report writing section of the majority researchers was good. They produced good reports with minimum grammatical and spelling mistakes as suggested by Yount (2006) in his study that the researchers follow the rules of grammar, spelling and style suitably.

The citations presented in the dissertations were poorly managed and the majority citations were satisfactory. Samraj (2008) suggested in his study “A discourse analysis of master’s theses across disciplines with a focus on introductions” that the researchers use latest and relevant references to their studies and follow APA rules for citations section.

The quality of majority dissertations was good in the discipline of education on five point categorical scale. Khatami et al., (2012) define the strengths of a good research; well written discussion, literature review, reference of the study, and good writing skills.

The black shadows of plagiarism still exist beside the HEC tough regulations; the students find loopholes to trick the system. The researcher also feels the need of research to find out plagiarized studies in the existing dissertations in Pakistan.

The researcher found some shortcomings in the current study, the induction of “proposed research” element in the rubric because it is very difficult to judge, sometime it could lead the research to biasness.

5.5 Recommendations

On the basis of the findings and conclusions of the study, the following recommendations are made for improving the quality of research in Pakistan.

- A statistician should be appointed in all those departments where the research is conducted and is essential for the award of degree. The statistician can help the students in the process of data analysis and suggest what type of test needs to be applied on different types of data.
- Teachers should work on the different aspects of research and report writing in the class for improving the quality of education and research. Namely research questions, review of literature, data analysis and selection of right test for data analysis, discussion section and citations.
- There should be anti-plagiarism section in every department to prevent plagiarism; the students be oriented in the use of plagiarism software. The anti-plagiarism section can play a vital role in this regard.
- Every written assignment should be checked for plagiarism to eliminate plagiarism and educate research scholars.

- Every faculty Member should be provided anti-plagiarism software with proper training so that they can impart the required knowledge to research students.
- The research scholars be provided access to computers and internet facility in the department and it should be mandatory for the library to facilitate them in their research activities.
- Research scholars should be provided laptops so they can complete their research in time.
- The departments should also discourage teachers to take class in the library unless it is very necessary since it wastes the precious time of research students. The library should be open to students beyond normal working hours.
- Printing and Photocopy facilities should be provided to researchers to enable them to collect necessary material for their research.
- HEC should make it compulsory for every research department to publish research journal and have a dedicated website for it, in this way the quality of research could be improved.
- HEC or University should also pay the research students to publish their first research paper in an international journal or HEC recognized journal. Similar to the existing practice whereby the university pays the teaching staff for publication of research papers.
- The universities should develop their own rubric and guidelines for the research and evaluation of research.

- The dissertation submitted for evaluation should be checked on the rubric by the adviser and committee members before it is sent for evaluation to external examiners.

5.6 Suggestions for Future Research Work

An evaluated study had long been required for the practical evaluation of the quality of research in Pakistan. The researcher tried to fill the gap but still there is room for improvement. Numerous dimensions are still there that needs consideration for further research, for instance:

- A study is required for the evaluation of PhD dissertations in Pakistan for plagiarism.
- A study is also required for the evaluation of research journals in Pakistan.

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Appendix A

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Appendix B

S.No _____

Instrument for Evaluation

Research Topic _____

Name _____ Year _____

University _____

S.No	Items	Excellent	Good	Satisfactory	Unsatisfactory	Not Included
1	Research Topic					
2	Abstract					
3	Introduction					
4	Objectives					
5	Research Questions					
6	Literature Review					
7	Methodology/ R-design					
8	Samples					
9	Tools of Data Collection					
10	Focus on Research Problem					
11	Data Analysis & Results					
12	Response to Questions					
13	Discussion					
14	Conclusion					
15	Suggestions					
16	Ethics of Research					
17	Proposed Research					
18	Written Report Organization					
19	Quality of Report Writing					
20	Citation					

Appendix C

**DIRECTORATE OF ADMISSIONS
UNIVERSITY OF PESHAWAR
PAKISTAN**



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PBX: ++92-91 9216701—20 Extension: 3004
Direct Telephone: ++92-91 9216477
Fax: ++92-91 9216687

(CONFIDENTIAL)

No. _____/PhD/Adms-III.
To:

Dated: _____/2012

Dr. Giampiero Pegliuci

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**EVALUATION OF PhD RESEARCH DISSERTATION IN RESPECT OF MS SYEDA BUSHRA
HTKHAR, PhD RESEARCH SCHOLAR, DEPARTMENT OF ENVIRONMENTAL SCIENCES,
UNIVERSITY OF PESHAWAR**

Sir,

Thnak you for sending email PhD thesis evaluation report of the above named, PhD Research Scholar, Department of Environmental Sciences, It is my pleasure and honour to inform you that in accordance with the MPhil/PhD Statutes and Regulations, the Vice-Chancellor, has graciously appointed you as one of the examiner for evaluation of the dissertation titled "ANALYSIS OF TOXIC HEAVY METALS AND PESTICIDES IN DAIRY MILK OF PESHAWAR DISTRICT" in respect of the above said Research Scholar. A copy of the dissertation is enclosed with the request to kindly evaluate it, keeping in view, the following points:-

1. Appropriateness of the Research Topic (i.e. academic/applied significance).
2. Organization of dissertation (i.e. presentation of chapter titles, headings, and subheadings etc).
3. Originality of the research work.
4. Presentation and interpretation of the data acquired.
5. References (whether upto date or not) and
6. Correctness of language.

Whereas, the scholar has mostly completed all other requirements for the award of PhD Degree. The Public Defence of the said Research Scholar will be held soon after the dissertation is evaluated and approved by majority of the examiners. To this end, expert evaluation report of not less than 250 words or one typed page may very kindly be prepared and furnished in both soft and hard form to the undersigned at your earliest convenience. The Evaluation report shall make specific reference to either of the following;

- i. The Scholar may be recommended for award of PhD Degree.
 - ii. The Scholar may be asked to revise the thesis and re-submit for fresh examination.
- I shall remain obliged for your immediate response.

Thanks

**(Dr.Hizbullah Khan)
DIRECTOR ADMISSIONS**

- NB:**
1. Return of the thesis copy is not mandatory
 2. An honorarium of \$300 (US) is paid as a token of honour for evaluation after the Public Defence of the Scholar