

**Evaluation of the Improvement in the  
Quality of PhD Theses Produced during 2001-2012:  
A Case Study of Pakistani Universities**

Muhammad Ahsan<sup>\*</sup>, Mumtaz Akhtar<sup>\*\*</sup> Razaqat Ali Akbar<sup>\*\*\*</sup>  
and Muhammad Munir<sup>\*\*\*\*</sup>

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**Abstract**

It goes without saying that the national development of every country greatly depends upon the development of higher education and research. Unfortunately, Pakistan is lagging behind in this area. This can be judged from the fact that since the creation of this country in 1947, Pakistani universities have produced very few PhDs. Therefore, at the dawn of twenty-first century, the Higher Education Commission (HEC) was established to improve this sector and since then thousands of students have completed their doctorate programmes and many more are in the pipeline. In quantitative terms, it is a tremendous and commendable development in such a short span of time. However, it is important to establish if this increase in quantitative terms has translated into an increase in quality as well. This is the main focus of the present research. Unfortunately, the outcome of this research highlights that there has been little development in this area. On the basis of these findings, the paper also suggests some measures for further improvement.

**Keywords:** Higher Education, PhD theses, quality of research, research improvement, HEC

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\* Research Consultant, UK. Email: ahsan736@msn.com

\*\*Director & Professor, Institute of Education and Research, University of the Punjab, Lahore.

\*\*\*Chairman & Professor, Department of Elementary Education, Institute of Education and Research, University of the Punjab, Lahore.

\*\*\*\* Research Scholar.

## Background to This Issue

Higher education plays a key role in the development of every country. Therefore, since the creation of Pakistan, this issue has been of prime concern among respective circles, e.g., government authorities, policy makers and planners, educationists as well as the general public. The University Grants Commission (UGC) was established in 1974 to address this issue. The UGC came into existence by an Act of Parliament and the basic objective of this institution was to improve the standard of higher education, assessing and fulfilling the financial needs of universities, building institutional capacity and cohesion in the respective institutions in the country (Pakistan, 1974, p. 13). However, because of a lack of financial and administrative powers, this institution remained weak and largely ineffective University Grant Commission (University Grant Commission, 2000, pp. 3-4; Parveen *et al*, 2011, pp. 260-67; Sheikh, 1998, pp. 40-52; Nordic Recognition Information Centre, October 2006). For this reason, in 2002, the government established a new institution named the Higher Education Commission (HEC). In fact, the establishment of HEC was a revolutionary step in the development of the higher education sector of Pakistan. Since its inception in 2002, the HEC has achieved more in one decade than the total achievements made during the previous 55 years. It is noteworthy that there was only one university (i.e., University of the Punjab, Lahore) in 1947 when this country was created (Chouhan, 2008, pp. 29-48). However, in early 2013, there were 147 universities and recognised degree awarding institutions working in public and private sectors of this country (Higher Education Commission, 03<sup>rd</sup> April 2013). This is a very encouraging development in the higher education sector of Pakistan.

It needs not to be emphasised here that the HEC has changed the entire fabric of the higher education sector of Pakistan. The progress made during the past decade can be judged from the situation that by the end of 2002, the university enrolment which was only 135,000, reached 360,000 by the year 2007, i.e., almost triple in a short period of time. Similarly, the research publications in the nationally and internationally recognised journals also increased four times during this period. The data indicates that during 2011, as many as 6250 research papers were published by Pakistani academicians (Rode, 13<sup>th</sup> January 2013). An earlier estimate of USAID published in 2008 also highlights similar findings. It stated that the HEC's main focus was the acquisition of excellence in the higher education sector of Pakistan. For this reason, the quality targets were set in different areas of this sector (USAID, 2008, p. 143). According to 2012 ranking, six Pakistani universities were among the top 300 Asian Universities while two universities were ranked among the top 300 Science and Technology universities of the world (*Pakistan Today*, 30<sup>th</sup> May, 2012).

In quantitative terms, while considering the number of PhDs, during 2003-11, Pakistani universities have produced 3950 PhDs as compared to 3280 PhDs produced during 1948-2002. As now a vast majority of Pakistani universities are well established within higher education sector, it is estimated that the total number of PhDs produced during 2013-16 will be considerably more than the PhDs produced during last decade. This situation also highlights that the research output has also grown eight-folds since 2002 (i.e., from 815 in 2002 to 6250 in 2011) and around 80 percent of research publications came from universities (*The Nation*, 19<sup>th</sup> July 2012). Quantitatively, this is a very encouraging and positive development. Needless to say that quantity alone cannot produce the desired results unless it is coupled with quality. One of the most important objectives of the establishment of HEC was to promote excellence in the quality of research. The quality goals were set at par with international standards and a lot of emphasis was laid on improving the quality of PhD theses. For this reason, not only were the standards for admission in all PhD fields enhanced; it was also made mandatory for every PhD thesis to be evaluated by two foreign examiners. This situation reflects that for HEC, the quality of PhD research has been more important than the quantity (Rehman, 28<sup>th</sup> July 2012).

In this perspective, it is vital to explore whether the recent quantitative development in the higher education sector of Pakistan has also helped in improving the quality of academic research? Similarly, while a PhD is considered the highest qualification in academia, what improvement has been made in the quality of PhD theses produced in the last decade? Therefore, while considering the time period of 2001-12, this short piece of research is confined to exploring the development made in the quality of PhD theses in various areas, e.g., overall improvement in the quality, structural improvement, linguist quality and presentation, originality of work, etc. It will also attempt to provide some guidelines to research students to help them to further improve the quality of their work.

The judgments for weight of different aspects of academic writing were based on indicators drawn from literature and judgments were made by the authors personally.

## **Methodology**

This paper can be considered as our attempt in account of the process of our own initiative, a self-reflective narrative, a wrenching dialogue with ourselves, based on our own encounter with the wish to see a substantial improvement in the quality of PhD theses now being produced in Pakistani universities. The exploration of the

dimensions of improvement in the quality of higher education is a vast and complex topic which demands that we cover a range of issues. Furthermore, there is no absolute consensus among academic researchers with regard to the tools and techniques used to quantify the quality. It reflects that there is no single criterion to judge the quality of PhD theses. Therefore, to simplify the process as well as the limited scope of this research, our attempt was only being confined to a few areas mentioned in the above objectives. The present research is evaluative based on judgments of research in nature and for this purpose; we evaluated a random sample of 28 theses completed during 2001-02 and another set of 28 theses concluded in 2011-12. These two groups of theses can be called the first and the second batch, respectively. There are a few important points with regard to these 56 documents.

The thesis for evaluation was selected randomly from faculties of social sciences in three universities of Pakistan.

- These theses were conducted in different disciplines of various universities in Pakistan.
- Many of these theses were also evaluated by the main author of this paper in the capacity of a foreign examiner for PhD theses.
- However, for the purpose of the present study, all the documents were evaluated by these three authors.
- The main focus of the present attempt was to find out various technical weaknesses in which improvement was required in both batches.
- For the purpose of simplicity, the various components of each thesis were given a percentage score and then all these scores were aggregated in each batch.
- On the basis of these aggregations, the overall average percentages were calculated for the purpose of comparison.
- After this exercise, a cross comparison of the outcome of both batches were made.
- This situation presented an overall picture of the quality of both batches and also reflected how much improvement was made during the first decade of the establishment of HEC.

### **An Overview of the Outcome of this Research**

The following self-explanatory table clearly reflects the state of the quality of different components of PhD theses concluded during 2001-02 and 2011-12. Due to the limited space available here, we are not able to discuss each and every component in detail. The structural aspect is one of the most important elements in judging the quality of any publication. Broadly speaking, it includes overall structure and layout of the whole thesis as well as a variety of presentational aspects. Here, while comparing the two batches of theses, it was noted that the progress made during the reported period was negligible. A similar situation can also be seen in the construction of headings and sub-headings, overall consistency and coherence, linguistic quality, referencing and cross-referencing quality and quantity of bibliography, and the element of interwoven arguments with a respective supporting statement. Unfortunately, in contrast to this, some decline in quality was noted in the areas of linking the respective theory with methodology, results and discussion, intellectual depth and originality of the work, and critical analysis of the issue.

*The State of Development in the Quality of PhD Theses Conducted in 2001-02 and 2011-12 (Average score in percent)*

Areas of Development	Batch One	Batch Two
	2001-02 % age	2011-12 % age
Overall structure of thesis	59	60
• Introduction	62	59
• Review of literature	64	66
• Methodology	58	61
• Results and discussion	56	58
• Conclusion	57	56
Construction and numbering of headings and sub-headings	66	71
Link of respective theory with methodology, results and discussion	66	63
Overall consistency and coherence	64	68
Linguistic quality (overall)	65	67
Intellectual depth and originality of work	72	68
Critical analysis of the issue	68	66
Referencing and cross referencing	65	67
Quality and quantity of bibliography	62	68
Interwoven arguments with supporting information	66	72
Overall situation (average score)	65.3	67.0

During the present research, apart from evaluating the above mentioned theses, the authors also had numerous one to one discussions with research students and research supervisors. The main focus of these discussions was to explore the nature of the issues of various aspects of the quality of PhD theses as well as to find out the main reasons for delay in completing their doctorate programmes. In this context, it was observed that during their research process, a large number of students faced at least seven major challenges which were mainly personal in nature. These challenges were: i) unknown hesitation at the pre-writing stage of a research proposal, ii) lack of confidence in data collection and field work, iii) pre-write up nervousness and indecisiveness while working on the thesis, iv) hesitancy and reluctance regarding how and where to start each chapter, v) lack of confidence and skill with regard to critical analysis, vi) lack of expertise in cross-referencing, and, vii) inability to make the concluding chapter a true reflective of the overall thesis. In this whole process, the vast majority of research students had as their target, to only achieve a PhD qualification while not bothering much about the quality of their thesis. On the other hand, equally important was that a large number of research supervisors were unable to give due time and attention to their students and some of them even justified it by presenting one reason or another. Unfortunately, this state of affair is not a healthy sign for the development of the research culture in Pakistan.

## **Conclusions**

Academic research is a key component of the education sector and development in this area plays an important role in the overall progress of every nation. This paper is an attempt to analyse the improvement in the quality of PhD theses produced during the first decade of this century which was in fact the period when the HEC came into existence with its main aim being to improve the overall quality of higher education in Pakistan. This institution has provided tremendous facilities in this regard and the number of PhDs produced during the reported period was considerably more than the total number of PhDs produced throughout the previous history of Pakistan. Unfortunately, in spite of huge quantitative improvement, the improvement in the quality of PhD theses was negligible. There might be many reasons for that but the HEC cannot be made responsible for all the ills in this area. Our experience showed that there were at least two major factors responsible for this state of affairs. A large number of students were only working to achieve the certificate rather than the acquisition of knowledge. Similarly, many research supervisors have also not been able to pay due attention to their students. However, it must be mentioned here that a major responsibility still rests with the research students as a PhD programme is their project and they should make every

effort with regard to its quality. As mentioned above, they should particularly focus on improving the structure, conceptual base, consistency, coherence and intellectual depth of their thesis and for this they should use strong and up to date reference.

## **Recommendations**

The above situation presents a discouraging picture with regard to the state of the quality of PhD theses being produced in Pakistan. How can these researchers improve the quality of their work? No doubt, this is an important challenge for them and unfortunately there is no single prescription to cure all the ills in the system. Rather, this situation demands a series of integrated and multi-dimensional attempts to be made on several fronts. Every research student must realise that originality and creativity is the essence of a PhD thesis and before starting, you need to read several good quality theses as well as other relevant publications. It goes without saying that a thesis is a systematised statement which presents a new point of view or a new version of an old point of view. Therefore, ask yourself what are you going to say in your thesis and why? How will you do it? What your results would mean to you and why? What new component you will add in the already existing body of knowledge? How will it benefit a wider community? While doing this, keep in mind that in your thesis, your arguments, analysis and outcome must be consistent and interwoven. Also, think of your audience which in fact is the examiners whom you need to satisfy. While doing all this, you need to be a good time manager so that your PhD should not be delayed (Ahsan *et al*, 2013). In the following pages, we will highlight few important points in this regard.

## **Constructing the Conceptual Foundation a Thesis**

This is one of the major challenge areas in which research students particularly feel difficulty and confusion. A theory is in fact a set of facts in relation to one another. It is an abstract of thought, or a hypothesis assumed for the sake of argument or investigation. Over the years, a large number of students asked the authors of this paper why they need a theory in their thesis. It is customary that a researcher needs a set of assumptions as a starting point for guidance regarding what he/she does, what is to be tested by experiment, or, to serve as a check on observations and insights. Theories help us to think critically, logically and coherently by sorting various phenomena into manageable categories so that the appropriate units and level of analysis can be chosen and, where possible significant connections and patterns of behaviour identified. In an academic research, it is not possible to avoid theories because the interpretation of 'reality' is always linked with theoretical assumptions of one kind or another. It is also true in the context that

theories are always embedded in our daily life activities and a close connection exists between a theory and practice. It reflects that theories explain the laws of respective discipline and patterns of behaviour. The critical analysis of a theory or theories is particularly essential in a PhD thesis. In this process, you may come across four types of situations in your thesis, i.e., i) you might be using a single theory, ii) multiple theories, iii) a mixture of theories supplemented with your own conceptual component, or, iv) purely a conceptual base developed on your own. Situation three or four may arise when partially or fully, other theories do not fulfill the requirements of the objective of your thesis.

### **Critical Reading and Development of Your Thesis**

Critical reading is the foundation for critical writing. Therefore, it is always important to focus on the main theme of the book or a paper you are reading and also the points used to support that theme. Critical reading should lead you toward the preparation of the contents of your thesis. It is important that whatever you read; you put that material in the relevant headings and sub-headings you have developed. You will note that after a while, these contents will automatically improve with the progress in your reading. Now, you can start writing those parts of your thesis that you are most comfortable with and go with what interests you - start your writing there, and then keep building up on it. In this process, move about in your writing by completing various sections as you think of them. Later on, you will be able to spread those out in front of you - all of the sections that you have written. Now, the next stage is to sequence them in the best order and then see what is missing. Similarly, during the write-up, you need to construct your paragraphs very skillfully. A paragraph is a short argument that supports one main idea about your topic. There are four types of sentences which make a paragraph and remember that:

- The *topic sentence* is a general statement, or argument, that you intend to prove in the body of the paragraph. It states one *main idea* about the topic, the idea discussed in the body of the paragraph. Every other sentence in the paragraph must be related and subordinate to the topic sentence.
- A *supporting sentence* backs up the claim made in the topic sentence and a paragraph may contain several supporting sentences.
- A *limiting sentence* reduces the scope of the topic sentence in some way and there should be only one limiting sentence per paragraph.
- A *transitional sentence* links paragraphs with a common idea and it is usually the last sentence in a paragraph.



## Consistency and Coherence

Some research students are not confident about the use of simple words with regard to adding argument or emphasising a statement, e.g.: as well as, furthermore and additionally, etc. The same is also true when making comparisons, highlighting similarities or differences (e.g., the use of: likewise, in the same way, equally, although, yet, conversely, on the contrary, otherwise and despite, etc.). Research students need to familiarise themselves with these basics which are commonly used in all research. For instance when providing reasons or explaining their results, they have to use appropriate words, e.g.: for this reason, to this end, for this purpose, or by way of illustration. Similarly, when they are drawing their conclusions, it is better to use relevant phrases such as: as has been noted, finally, in brief, in short, to summarise, consequently, and it reflects, etc. They also need to realise the importance of the adequate use of command words. There are several command words which are frequently used in academic writing, such as: account for, argument, criticise, describe and justify, etc. Additionally, there are a large of abbreviations and foreign languages' words used in academic reports. For instance: edn. (Edition, e.g. (exempli gratia), et. al. (et alii: and other), *ibid.* (*ibidem*: in the same work), i.e. (*id est*: that / which is / are), and *op. cit.* (*opere citato*: in the work recently cited). The proper use of these abbreviations and words will definitely be helpful in improving the quality of a thesis.

## Strength of Structure

The structure is the skeleton and physical feature of a thesis. When talking about the quality of a research report, it is an important component which attracts the immediate attention of the reader. The element of structure is considerably weak in many Pakistani theses and this is particularly true of structuring heading and sub-headings. Generally there are four type of numbering used for headings and sub-headings, i.e., i) Arabic numerals (1, 2, 3 or 4 decimal system), ii) Roman numerals (i., ii., iii., iv, ...; or, I., II., III., IV., ...), iii) alphabetical numerals (a., b., c., ...; or, A., B., C., D., ...), and, iv) multiple numerals (1.4.2., a), b), c)...., i., ii., iii., ...). The best option in a thesis is to use multiple numerals as there is more scope. Another important point regarding the structural quality of a thesis and that is the element of signposting. It is always helpful if research students keep on referring back and forth at every stage of their thesis. Similarly, it is also important that at the beginning of each chapter they should highlight three things, i.e., the main issues discussed in that chapter, links with previous chapter(s), and links with the coming chapter(s). Similarly, at the end of each chapter, a section of concluding comments and a diagram if possible, can also be added covering all the main components of that chapter, their links with previous chapter(s) and links with following chapter(s).

## Referencing and Citation

This is an important area in research in which many students face problems. This can be judged from the fact that several Pakistan based PhD theses reflect that neither the students have enough knowledge in this area nor do they realise its importance. This is important in the context that prior to reading the thesis, many examiners directly head to the bibliography to look at its quality and quantity of references used in the document. Therefore, it is crucial that research students should gain reasonable skill in the correct use of punctuation and method of quotations, systems of citation as well as their comparative overview. While introducing the quotations, they should know the following:

- *Short quotations:* Use single quotation marks ‘...’, e.g., Ismaeel (2004: 45) noted that ‘academic research environment in Pakistan is considerably underdeveloped.’
- *Long quotations:* Use indent and single line spacing, but not quotation marks.
- *Quotation within a quotation:* Use double commas within the single commas quotation, e.g., ... ‘ ... “ ... ” ...’.
- *Use the same words as in the original source:* In the case of an error in the original source, add [sic] in square brackets.
- *Diagrams, graphs or illustrations:* Reference your sources in the same way as quotations.
- Quotes must make a *significant point* (and *fit well*) in the overall discussion.
- Unnecessary words in a quote can be omitted by using three dots (...).
- To further clarify your point within the quotation, you can add words in square brackets [...].
- *Quotation from a secondary source:* The original author’s name, year and page number should come first, e.g., Ali (1966, cited in Smith, 2009, p. 11) reported that ‘... ..’

It is beyond the reach of this short piece of research to discuss the systems of citation (e.g., Chicago, MLA, APA, Harvard, CSE, AMA, AIP, AMS and ACS, etc.), which in fact is an important issue. An ill prepared bibliography will create a very bad image of the whole thesis. Therefore research students are strongly recommended to read relevant books in this regard (Pears and Shields, 2008, John and Keller, 2007; Neville, 2007; Lipson, 2006). Plenty of information is also available on the websites of European and American universities’ which is just a one click away.

## What Your Examiner Does and Does Not Want to See

When you are at the finalisation stage of your thesis, you need to keep in mind that each examiner will evaluate your thesis on the basis of at least seven strands, i.e., i) intellectual depth, ii) originality of the work, iii) critical analysis of the issue, iv) adequate referencing and cross referencing, v) quality and quantity of bibliography, vi) structure and interwoven arguments, vii) linguistic quality. By the same token, there are many reasons why they ask for amendments. For instance: the structure is not logical, the overall report is insufficiently organised, lack of consistency and rationality, ideas are not well thought out, general assumptions are made, unclear sentences, paragraphs are too long or too short, too many grammatical and spelling mistakes, ideas are taken from elsewhere, too many repetitions, presence of irrelevant information, lack of critical analysis, qualitatively or quantitatively poor bibliography, and often the concluding chapter is too weak or unreflective of the overall report. The research student should be extra careful with all these issues as any one of them may cause delay in the completion of their study programme.

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