

# Impact of Research on Quality of Teaching at Higher Education: Students' Perception

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## Abstract

This study was conducted to find out student's perspective about the impact of research on the quality of teaching at higher education. Descriptive research method was adopted to check the opinions of research students about the impact of research. Random sampling technique was adopted for collection of data. Population of the study included all the M.Phil and Ph.D research students enrolled in six departments namely English, Urdu, Chemistry, Physics, Education and Psychology from three faculties of Arts/Humanities, Science and Social Science respectively. For the collection of quantitative data a self-developed questionnaire was used. Questionnaire contained four factors namely; Teacher as knowledge producer, Updated pedagogical skills, Students participation in research and Impact of research. Statistical Package for Social Sciences (SPSS) was used for analyzing the gathered information. Regression test was applied to investigate "the impact of research on the quality of teaching at higher education". Conclusions of the study revealed that students gave positive opinions in the favor of the teacher about role of teacher as knowledge producer. Study showed teachers were updated with practical and pedagogical skills and teachers ensure accessibility of research work to their students. No significant difference was observed regarding the quality of teaching. Overall positive linear relationship was observed among the impact of research (independent variable) and role of teacher as knowledge producer, practical and pedagogical skills of teachers and accessibility of research projects to the students (dependent variable).

**Key Words:** Higher Education, Knowledge Producer, Quality Teaching, Research Impact

## I. INTRODUCTION

Education is considered as the main source of modifying desired behavior among individuals of society. Education as a tool can be used to change the thinking and actions of the society. Growing body of studies requires updated knowledge to fulfil the demands of society. There is an increased need of the time to ensure the quality education and learning. The role of higher education is very significant in this regard (Bates & Poole, 2003). Main role of higher education is to cultivate the highly educated and skilled persons having democratic and ethical sprits. Higher education play a critical role for preparing the professionals of almost all disciplines like administration, management, and teaching. Quality in higher education is assumed as predominant agenda around the world especially in developed countries. The developing countries have also been pressurized to ensure the quality of education in global perspective. (Rena, 2010)

The general practice of higher education is revolved around teaching, research and management (Cortese, 2003). In early 19<sup>th</sup> century Humboldt (1810), the German educational reformer was probably the first person who linked research with teaching at that time when the only purpose of universities was to deliver knowledge. Education was controlled by higher authorities or government. He felt now it is the time to develop the democratic educational institution that would be free from the influence of government and creates its own knowledge according to the demand of society and time. On the light of his thoughts, Berlin University, currently Humboldt University sets its directions on democratic manner. The present design of formal universities' is much likely working on the ideas of William Von Humboldt (1810). The modern universities of these days have their own journals to publish their articles or research work (Savvina, 2016).

Quality of higher education in universities are mainly linked with research and teaching following the idea of Humboldt (1810). In Pakistan Higher Education Commission the governing body for higher education is regulating the universities and higher educational institutions. Since 2002, after the establishment of HEC, universities in Pakistan gave devoted response to research. By linking the promotions of senior faculty with research publications split the teaching diversity and as a result, weightage of research is increased at university level. HEC rules for promoting research causes volume in research publications and till now a huge expansion of research is a proof of the scenario.

Almost all the universities have their own journals to publish the research work of faculty members and research scholars. Higher Education Commission published the list of HEC recognized research journals having the impact factors and W, X, Y and Z categories in different areas like science, arts and humanities, social science and multi discipline domains. This list is available on the website of HEC as named "National Research Journals recognized till June 30, 2020". HEC also align research as a criteria for the recruitment of faculty at university level. This diversity of research is not limited only to science and technology but also cover arts and social science disciplines. (Council & RAB, 2019).

In present, research is considered as an important element, especially at higher educational institutes and universities. These steps shift the attention of scholars and teachers to be more focused on research and publications on the other hand the teaching at higher institutions is compromising (Cortese, 2003).

The main purpose of research is knowledge building and educational development. When universities linked research as a mandatory part of certain educational programs significantly in higher degrees, teachers and scholars paid more attention to research. To ensure quality, the arts/humanities and social science disciplines also put their efforts in the field of research. This trend of research at the university level affects teaching and instructional activities (Coate, Barnett, & Williams, 2001).

Research and teaching are two components that are interlinked but have different dimensions. The emerging trend of research in higher education not only effect the learning environment for students but for the teachers too. Teachers especially in higher education pay more focus to research activities as compared to the teaching process. Coate et al. (2001) defines teaching as organized communication or delivery of information while defines research as a process of organized curiosity. Research and teaching are two different disciplines and there is a need to maintain a balance between both elements for quality assurance in higher educational institutions. (Council & RAB, 2019).

In universities, academic staff simultaneously play the role of teacher and research supervisor. It seems obvious that research has its impact on teaching, because at university premises, in a given period, the academic staff has to manage their time for teaching and research. As HEC links the promotion of faculty with research along with several incentives are given to those faculty members who possess certain research publications. The importance of research is not denied but the emerging trend of research at higher educational institutions created an imbalance situation between teaching and research. There is a need to create a balance between teaching and research for academic excellence at the university level. The researcher wants to examine the impact of research at Islamia University where the researcher is working as an academician. To identify the situation of research and teaching the researcher wants to analyze "Students' perception about the impact of research on the quality of teaching at higher education".

## II. LITERATURE REVIEW

In present days research is considered as essential factor for the advancement of academic teaching along with the academic achievement and progress of learners. It had its impact on the society and nation as well. The prime function of higher educational institutions and universities are to uplift the nation's economic, civic and cultural development. In academic aspect, research motivates the learners to conduct research in the areas of interest that prove constructive for whole community. (Degl'Innocenti, Matousek, & Tzeremes, 2019).

The mission of higher educational institutions and universities are to develop the personality that possess wisdom, creativity and intellectual abilities of individuals on the other hand it contribute to the development of whole society, as it promote culture, welfare and health of community and advancement of science and technology (Arsenault, Talbot, Boustani, Gonzalès, & Manaugh, 2019).

In this regard universities and higher educational institutions pursuing knowledge that motivate the learners towards research. Now research is considered as a basic study in almost every field of academic discipline in universities and higher education. Primary goal of educational research is to create or generate knowledge. In the process of teaching and learning, research approach make a significant difference toward academic excellence (Mercer, 2007). Research in education helps to acquire answers to those question which leads to discover new theories about any educational problem, solve learning deficiencies, developing new strategies towards a problem and selecting the best possible solution (Melin, Astvik, & Bernhard-Oettel, 2014) . Research also assists in discovering research gaps at various stages of education. Morris Sr (2005) explained that research in social construct ensure the growth of children and associate it with pedagogy and andragogy.

At university or higher educational institutions, teacher role is divided into several parts like instructor, supervisor, evaluator and administrator. These responsibilities and versatile role of teacher at university level distinguish him from college and schools teachers. Mainly teaching can be define as organized communication or delivery of information in which a teacher transmits information to the students in the form of visual, textual, audio-video and practical demonstration. While research can be define as process of organized curiosity. It involves highest level of cognitive abilities to solve a particular problem. Research is the highest form of learning. According to

Wilhelm and Fisher (2019) research skills are necessary for the university teachers to solve the problems related to classroom environment and learning of students. Research skills involve time management, concentration, critical thinking, creative writing, statistical techniques, use of resources and goal setting. The fusion of these traits with pedagogical skills can improve efficiency and production by engaging in such activities that help to achieve both teaching and research goals simultaneously.

Mercer (2007) elaborate that it is difficult for the teachers to complete their workload along with research activities at university level. As a result the quality of teaching and research is being compromised. Unequal distribution of workload, lack of resources and extra duties of university teachers are certain factors that affect the teaching and research.

### III METHODOLOGY

The central aim of the research report was to discover "The impact of the research on quality of teaching at higher education; Student's perception". Descriptive research design was adopted to accomplish the objective. Population of the study comprised on all the research students from M.phil and PhD programs of three faculties. Researcher randomly selected three faculties namely Arts/Humanities, Science and Social Science for the collection of data. Random sampling techniques, a type of probability sampling was adopted for conducting the research. Researcher select two departments from each faculty for data collection. Departments of physic and chemistry from the faculty of science, departments of urdu and english from the faculty of arts/humanities while departments of psychology and education from faculty of the social sciences were selected randomly. Sample of the study was consisted on ten research students, five from M.Phil and five students from PhD programs of each department. Total sample size was consisted on 60 research students from three faculties of Islamia University of Bahawalpur. Out of 60 questionnaires 44 filled questionnaire were returned, out of which 19 (43%) were male students and 25 (56%) were female. With respect to M.Phil and PhD programs, 30 (68%) respondent from M.Phil program whereas 14(31%) respondents from PhD program fill the questionnaire. The returned ratio was 73%, among the filled questionnaires 28 (63%) respondent belongs to urban areas while 16 (36%) belongs to rural areas.

For the purpose of data collection a self-developed questionnaire was used. The questionnaire was comprised on two parts. First part included demographic information, second part included 16 close ended questions. Four factors were elected to check student's perception about the impact of research on the quality of teaching. The first factor related to the role of teacher as knowledge producer, second factor linked with the updated practical and pedagogical skills of teachers, next factor cognate with the accessibility of research work to students and last factor was associated with the impact of research on teaching. Five statements related to the role of teacher as knowledge producer, four statements were related to the updated practical and pedagogical skills of teachers, four statements were allied with the accessibility of research work to students and three statements were linked with impact of research on teaching were included in the questionnaire. After the consideration of validity and reliability the tool was selected for data collection. Reliability of tool was identified by Cronbach's Alpha, as value of the Cronbach's Alpha was higher than 0.07 for each item, that showed internal consistency of the tool.

### IV RESULTS AND DISCUSSIONS

**Table 1: Impact of Research on the Role of Teacher as Knowledge Producer.**

Independent Variable	Dependent Variable	$\beta$	t	F	$R^2$	Sig
Research Impact	Teacher's role as Knowledge Producer	.298	6.970	6.80	.139	.013

Table 1 illustrate the impact of research on the role of teacher as knowledge producer. The goodness of fit values ( $R^2 = 0.139$ ) describes 13% total variance on teacher's roles as knowledge producer (dependent variable) was described by research impact (independent variable). The value of f ( $F = 6.800$ ,  $p = .013$ ) showed the model fit is significant. It suggested linear relationship between research impact and creation of knowledge by teacher.

The ( $\beta = .298$ ) value of the independent variable exhibits contribution caused in the dependent variable because of its change. The result explain that research impact contributed mainly in explaining the variation in knowledge creation, and one unit increase in research impact will cause 29% increase in production of knowledge. Above table elaborate the extent to which independent variable contributes to value of the dependent variable that is

role of teacher as knowledge producer. The t-value ( $t = 6.970$ ,  $p = .013$ ) is also significant, which indicates that research had positive impact on generating/creating knowledge. That showed the positive impact of independent variable on dependent variable.

**Table 2: Impact of Research on the Pedagogical Skills of Teachers.**

Independent Variable	Dependent Variable	$\beta$	t	F	$R^2$	Sig
Research Impact	Pedagogical skills of Teachers	.384	6.652	13.331	.241	.001

Table 2 elucidate the impact of research on the pedagogical skills of teachers. The goodness of fit values ( $R^2 = 0.241$ ) describes 24% total variance on practical and pedagogical skills of teachers (dependent variable) was described by research impact (independent variable). Value of f ( $F = 13.331$ ,  $p = .001$ ) showed the model fit is significant. It suggested linear relationship between research impact and pedagogical skills of teacher at university.

The ( $\beta = .384$ ) value of the independent variable explains contribution caused in dependent variable because of its change. The result explain that research impact contributed mainly in explaining the variation in teaching training, and one unit increase in research impact will cause 38% increase in practical and pedagogical skills of teachers. Above table elaborate the extent to which independent variable contributes to value of dependent variable that is pedagogical skills of teachers. The t-value ( $t = 6.652$ ,  $p = .001$ ) is also significant, which indicates that research had positive impact on teacher training/Pedagogical skills of teachers. That showed the positive impact of independent variable on dependent variable.

**Table 3: Impact of Research on the accessibility and Participation in Research work.**

Independent Variable	Dependent Variable	$\beta$	t	F	$R^2$	Sig
Research Impact	Participation in Research	.446	6.130	19.994	.323	.000

Table: 03 explain the impact of research on the accessibility and research participation. The goodness of fit values ( $R^2 = 0.323$ ) describes 32% total variance on accessibility and research participation (dependent variable) was described by research impact (independent variable). The value of f ( $F = 19.994$ ,  $p = .000$ ) showed the model fit is significant. It suggested linear relationship between research impact and accessibility and research participation.

The ( $\beta = .446$ ) value of independent variable explained contribution caused in the dependent variable because of its change. The result explain that research impact contributed mainly in explaining the variation in research participation, and one unit increase in research impact will cause 46% increase in the accessibility of research and participation. Above table elaborate the extent to which the independent variable contributes to the value of dependent variable which is the accessibility of research work and participation. The t-value ( $t = 6.130$ ,  $p = .000$ ) is also significant, which indicates that research had positive impact on research involvement and participation. That showed the positive impact of independent variable on dependent variable.

**Table 4: Impact of Research on the Quality of Teaching.**

Independent Variable	Dependent Variable	$\beta$	t	F	$R^2$	Sig
Research Impact	Quality of Teaching	.370	9.426	24.146	.365	.000

Table 4 explain the impact of research on the quality of teaching. The goodness of fit values ( $R^2 = 0.365$ ) describes 36% total variance on quality of teaching at university (dependent variable) was described by research impact (independent variable). The value of f ( $F = 24.146$ ,  $p = .000$ ) showed the model fit is significant. It suggested linear relationship between research impact and quality of teaching.

The ( $\beta = .370$ ) value of independent variable exhibited contribution caused in the dependent variable because of its change. The result explain that research impact contributed mainly in explaining the variation on the quality of teaching, and one unit increase in research impact will cause 37% increase in the quality of teaching. Above table elaborate the extent to which independent variable contributes to value of the dependent variable that is quality of teaching. The t-value ( $t = 9.426$ ,  $p = .000$ ) is also significant, which indicates that research had positive impact on research involvement and participation. That showed the positive impact of independent variable on dependent variable.

## V. CONCLUSIONS

This article examined the impact of research on the quality of teaching at higher education. As study disclosed the ideology of modern universities is linked with early 18<sup>th</sup> century reforms given by Humboldt (1810). Thoughts of Humboldt (1810) lead to the evolution of universities to be research oriented instead of just imparting knowledge. These ideas of Humboldt (1810) flourished not only the new ways of generating knowledge but also introduced new andragogy and pedagogical skills and delivery of updated acquired research skills from teachers to students of higher education. These practices strengthen the ideas of Humboldt (1810) and now universities from all around the world is ranked on the basis of research and publications. If we discuss the role of higher education in Pakistan, the ranking of universities is also linked with research. The universities in Pakistan made efforts to be ranked in the top of HEC recognized research journals. As HEC criteria, not only the rank of universities but the promotion of faculty at higher education is directly linked with research and publications. The research culture in Pakistan is different as compare to outer world. As Humboldt (1810) suggested that universities or higher educational institutions should be research oriented, and it is the responsibility of university teacher to equip himself with pedagogical skills to accomplished academic excellence and knowledge production. Among all these benefits of research-teaching practice in higher education, there is a common observation that somehow research is overlapping the teaching. It seems difficult for the university teacher to pay attention on research and teaching equally. Another question is to be address here either the teachers in universities are focusing more on research instead teaching to get research incentives. The aim of the study is to check the common practices of university teachers and the role of research with relevance of teaching.

The parameters of teaching was divided in four factors; Role of teacher as knowledge producer, updated pedagogical skills of teachers, accessibility of research opportunities and research impact. These factors fully attributed to the paradigm of teaching at university level. Humboldt (1810) put lights on the importance of creating and updating knowledge. He linked research with teaching mainly to create new gate ways of knowledge. Creation of knowledge can also be done through research. This study demonstrated that research plays significant role in generating knowledge and had good impact on the quality of teaching. According to Humboldt (1810) perspective, teacher should be a knowledge producer. This study showed that role of research is effective in generating knowledge and enable the teacher to be a knowledge producer.

Second component of teaching is related with the andragogy and pedagogical skills of university teachers. For the achievement of academic excellence, knowledge of subject matter is not sufficient. For effective teaching, it is very significant for the university teachers to have practical and pedagogical skills. Research discover new methods of teaching and learning styles and it is essential for the teachers to adopt updated pedagogical skills. The study elaborate that research had positive impact on acquiring practical and pedagogical skills of university teachers. Andragogy and pedagogical skills positively affect the performance of teacher and made learning more effective. Finding of the study exhibited that implications of research related to practical and pedagogical skills, proved to be helpful for the teachers to adopt new teaching styles.

Third factor is related to student's participation and accessibility of research work. Ensuring teacher's research project to students is the main element of the study. The discoveries of research should be shared with students to ensure research oriented learning. Findings of study highlighted the significance of research opportunities which provided to the students helps them to develop research skills. The study proved that publication and research findings of university teachers had strong impact on their quality of teaching. To attain academic excellence it is obligatory to make accessibility of research publication to the students at universities.

It was premised at the beginning of study that quality of teaching is compromising at higher education because of the division of workload and research work and teachers at higher education pay more focus on research as compared to teaching to get research incentives. Following that, it was expected that the paradigm of teaching and research should be different. The research findings highlights the positive impact of research on the quality of teaching. Positive relationship was observed between research and teaching at higher education. This study showed that research supports and enhance the quality of teaching at higher education. Different aspects of teaching at higher education was strengthen by research. We conclude from the above discussion that research had strong and positive impact



directly on the quality of teaching and this practice is essential for academic progress. This contribution of research should be continued for the enhancement of quality education at universities.

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