

Analyse the Provision of Physical Infrastructure, Academic Facilities and Learning Resources in Degree Colleges of Punjab

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Abstract

The purpose of the present study was to analyze the provision of physical infrastructure, academic facilities and learning resources in degree colleges of Punjab. It was quantitative study the nature of the study was descriptive and survey type. All principals, teachers and students of degree colleges in government degree colleges of Punjab was population of the study. There are total number of 618 degree colleges in Punjab, in which 12827 are the teaching staff, as well as 207515 students are enrolled in all degree colleges in Punjab. The sample of the study was selected at three stages. At first stage, following 09 districts out of all 36 districts of Punjab were selected randomly. At the second stage, one male degree college and one female degree college from each district, total 18 colleges (09 male +09 female) were selected as a sample of the study. At the third stage, one principal of each sample college and 30 students and 10 teachers as systematically selected from each college. Three questionnaires were used one for students, second for teachers and third for heads of the institutes. Validity of the research tools were ensured through expert opinions while the reliability of the questionnaires for this study were determined through the Cronbach Alpha. Statistical tools including mean, standard deviation and t-test was used for this purpose. The study's main suggestions were that the infrastructure of current degree colleges might be enhanced by providing suitable physical facilities, which could be accomplished with effective planning and adequate government financial allocations. In Punjab, fully equipped science laboratories with chemicals may be made available at the college level.

Keywords: Provision, Physical Infrastructure, Academic Facilities, Learning Resources

Introduction

In National Education Policy 2009 (NEP, 2009) a chapter was denoted to quality in education. It was described that some standards will be persuaded and defined through developing the policies, strategies and plans. The NEAS 2007 has significantly identified the deficits in quality and has confirmed the low quality of education in Pakistan. There must be taken certain actions to improve the quality. The areas of improvement include quality of teacher, pedagogy and curriculum, assessment and learning environment. There was a little emphasis on improving the quality of higher education before the establishment of Higher Education Commission (HEC) of Pakistan. However, tireless efforts were made with concrete steps towards improving the standards of Higher Education encompassed with improved quality of faculty, graduates, curriculum, infrastructure and ICT facilities. The Quality Assurance Programme (QAP) of HEC has been developed with the aim to assure and enhance the quality of Higher Education (HE) being imparted so that Pakistani HEIs are equally compatible with international standards. (HEC Annual Report 2011-2012 & 2012-13). The primary focus of

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the HEC is the enhancement of quality and establishment of the system for assuring and maintaining the quality of Higher education of Pakistan. In institutionalizing the system of quality assurance and building the culture of quality higher education HEC faced many challenges. HEC had to build the criteria and standards of quality assessment as well as the effective system for implementation.

For ensuring that the standards and criteria are met appropriately a system of capacity building was required (Higher Education Commission Report, 2002-08). Some advantages of quality assurance are given below:

1. Increase the value of higher education
2. increase graduates employability
3. Assist transitionally in recognizing the degree and credit hours transfer.
4. Helps in multicultural and international mobility of students and academics (Higher Education Commission Report, 2002-08)

For getting these advantages from the higher education, HEC formulated a quality assurance programme and main objectives of this programme are as under:

1. Enhancing the capacity of the HEC in carrying out the activities regarding the quality assurance
2. Ensuring that basic standards and criteria of quality are met at domestic institutions.
3. Revising the curriculum for meeting the advances in the subjects.
4. Introducing new and innovative approaches such as building international collaboration arrangements between foreign and Pakistani universities.
5. Establishing the mechanism for evaluation of quality education in HEIs.
6. Introducing methods of quality assurance both at systematic and institutional levels.
7. Informing the public about the validity and quality of institutions and programs based on uniform assessment criteria.
8. Building capacity for continuous quality assurance programme at each university.
9. Taking measures for keeping substandard institutions and programs under observation. (HEC Report 2002-08)

There are several yardsticks of quality education. Different countries and organization have formulated and launched different Quality Assurance Programmes due to the plural nature of evaluation systems and the responsible of institutions (Buela et al., 2018). Quality is the multidimensional concept in higher education that consists of related activities and functions forming the academic life in an institution. Hence, any assessment framework for quality must include the quality of teachers, curriculum, infrastructure, services for students' support, and other necessary resources (Isani & Virk, 2015).

UNICEF (2000) described the quality criteria benchmarks; quality of learners, content, process, outcomes and learning environment. Despite teachers' competence, curriculum development, and student support services, quality infrastructure, learning environment and assessment system etc. Information and Communication Technology (ICT) is a new parameter of quality education set by many organizations. Strategies made for quality education consists of increasing the enrollment of students in schools, facilitating students with high-quality educational services, and continuous evaluation. Its main focus is to train teachers and managers, upgrade learning material, and to provide access to Information and Communication Technology (UNESCO, 2013). Due to judicious and gigantic efforts of HEC,

some Pakistani universities have marked to find the place in the list of top 500 universities of the World. But the current status of quality of higher education in Pakistan is not satisfactory is quite questionable in terms of global perspectives and in the context of knowledge being provided in these institution (HEC, 2005). Still, many universities of Pakistan have not raised their quality to meet the international standards of quality of higher education. There is the wide gap in the quality of higher education that requires to have the focused approach for assuring and enhancing the standards of quality in educational sector. Since, quality assurance is the one of the biggest challenges for higher education of Pakistan in international context. In order to improve quality of education in degree colleges of Pakistan and to align their undergraduate programs with those of the affiliating universities, HEC has developed following nine Minimum Quality Standards (MQS):

1. Vision, Mission and Goals
2. Academic Programs and Evaluation
3. Student Admission and Progression
4. Academic Faculty and Non-Academic Staff
5. Physical Infrastructure, Academic Facilities and Learning Resources
6. Organization, Governance and Financial Management
7. Research
8. Public Disclosure and Transparency
9. Community Link & Outreach (Higher Education Commission, 2011)

Quality of higher education is placed below the international standards and has been worsen day by day. While, inputs for improving the quality has not been responded properly by the system. There are many factors that erodes the quality of education and. The hindrances that prevent the progress of higher education from achieving the global standards include low standards for entry admission, lack of professional teachers, unmotivated students, imbalance of teacher-student ratio (1:5 to 1:85) , lack of physical facilities, and supportive learning environment, low quality facilities, and ineffective mechanism (Malik, 2002). Therefore, quality in higher education has been the watchword throughout the world and has achieved the attention recently in Pakistan. Hence, this study would be the effective endure and useful contribution in the field of educational research.

Literature Review

Quality is an integral element of culture that has evolved throughout the world for several centuries. It is not a recent or new development but the literature on this subject is quite recent, emerging in nineteenth and twentieth century. Quality has been an essential and predominant feature in our lives nowadays. Owing to emerging desire for quality in the world, a new philosophy has taken place in industries and organizations that holds belief in delivering the quality that is required (Walsh, 2002). There are several definitions of quality illustrated in the literature.

According to Juran (2014) quality can be defined as fitness for use. While, Crosby (2016) suggests that quality is the conformance to requirements. These definitions illustrate that quality is standard or criteria that satisfies the customers' needs. Feigenbaum (2016) suggests quality is the characteristics of engineering, marketing, manufacture, and maintenance of the product that meets the customers' needs and expectations as it makes the

total composite of the product. Quality has been defined in ISO 9000 as the totality of characteristics and features of service and product that satisfy the customers' needs (ISO, 2017).

According to Lemaitre (2008), quality enhancement recognises the dedication to quality that exists in higher education institutions; it also focuses on their ability to develop and apply persuasive techniques and systems for consciousness, as well as the steps that contribute to quality. Quality is an emanation, an air, and an overall sensation that the establishment is doing everything with excellence (Rauf, 2014) in reality, the nature and quality of higher education are critical to civilise civilizations. Quality higher education has become a yardstick for a highest positions. The governments that recognise its importance and are taking appropriate steps to improve the standard of higher education are ranked first in the top universities list. HEC has been making its sincere efforts into action to ensure the quality of education, but the main issue is the lack of authorized personnel (faculty). There have been many efforts and measures taken by Higher Education Commission of Pakistan for improving the educational quality in order to meet the global standards. In this context, HEC has adopted precise and focused strategies in order to achieve the bet outcomes and to bring the consistency in the process of Quality Enhancement and assurance in the higher education of Pakistan (Batool & Qureshi, 2006). These efforts reflect that higher education institutions of Pakistan are being sensitized with the international progress in international context and to bring the complete and desired harmony in the higher education of Pakistan. Hence, HEC has various short term and long term goals for taking the initiatives to improve the quality of education and knowledge provided to students in higher education institutions of Pakistan. According to Rehman (2007), HEC places a strong emphasis on quality enhancement, affirmation, and accrediting mechanisms. As a result, in Pakistan's universities, accepted transformation in the provision of high quality education necessitates the development of a framework for continuous and self-regulating systemic change. In brief, HEC has presented an instrumental methodology as well as practical programs to enhance the quality of higher education, which begins with the establishment of a purpose and is followed by the capacities that can only be developed in order to attain the aims. To guarantee the effectiveness of the programmes, a quality management structure as well as system are recommended. One important reason is that it will improve the quality and significance of their graduates and research initiatives, allowing universities to play a larger significant role in the economic (Tovey, 1992).

In regards with these definitions education is understood as the complex system which having political, cultural and economic foundations. The analysis in this research will be conducted in the light of these definitions. It is important to focus on the systematic nature of education in which all its dimensions are interdependent and interlinked with one another. These definitions have international perspective and influence that drive the debate and discussion for educational quality (Motala, 2000). According to Adams (1993) national educational contexts also contribute in defining the quality in many countries. As many stakeholders have their own view and perspective of educational quality, thus it is essential to include all the stakeholders for contextualized understanding of the quality (Motala, 2000). Beeby (1966) comments that school system is judged by each of us in relation to the ultimate goals that we set for our children, nation, and community as well as for ourselves.

Research Methodology

All principals, teachers and students of 3rd and 4th year classes (session 2016-17) in government degree colleges of Punjab was population of the study. According to Bureau of statistic Punjab, 2016. There are total number of 618 degree colleges in Punjab, in which 12827 are the teaching staff, as well as 207515 students are enrolled in all degree colleges in Punjab. From the above mentioned population, the sample of the study was selected at three stages. At first stage, following 09 districts out of all 36 districts of Punjab were selected randomly. At the second stage, one male degree college and one female degree college from each district, total 18 colleges (09 male +09 female) were selected as a sample of the study. At the third stage, one principal of each sample college and 30 students and 10 teachers as systematically selected from each college. Systematically sampling techniques was used in the selection of the sample. In this way total No. of students, teachers and principals were 540, 180 and 18 respectively. Given the nature of the problem, a descriptive research, such as a survey, seemed appropriate. As a research tool, questionnaires were used. This study's questionnaire items were in the form of a Likert Scale. The questionnaires were created to gather information from students, teachers, and principals about existing educational quality, issues in achieving and sustaining educational quality, and suggestions for improving educational quality in Punjab's degree colleges. The surveys were assessed on 54 pupils, 18 instructors, and three principals as part of a pilot study. The goal of the pilot study was to (a) delete certain unclear items, (b) identify problems with questionnaire administration, and (c) focus on areas for research tool enhancement. Under the supervision of the supervisor, appropriate revisions were made to the research tools and methodology used in this study in light of the testing. In quantitative research, reliability and validity are critical. Expert opinion was used to confirm the accuracy of the research tools, whereas the test re-test technique was used to demonstrate the reliability of the questionnaires for this study. The surveys were sent to the respondents through prepaid postage and e-mail, but where necessary, they were personally handed over to the participants by friends. Telephone calls were also used to remind the male respondents. Before using SPSS to do statistical analysis on the data, it was cleared and codified. This was accomplished using statistical methods such as mean, standard deviation, and percentages.

Results and Interpretation

Table 1 Means and SD of Heads Regarding the Quality of Infrastructure

Statements	N	Mean	SD
Building fulfils the instructional requirement of students	18	2.1667	1.50489
Classroom are well equipped.	18	2.1667	1.50489
Number of classrooms is sufficient.	18	1.8333	.92355
Sufficient health services are available at the college.	18	2.1667	1.24853
Sufficient emergency services are available at the college.	18	2.1667	.92355
Accommodation for laboratories, library and IT is appropriate.	18	2.6667	1.53393
Refreshment points with hygienic food and drinks are	18	3.0000	1.68034

available for the students at the college.			
Hostel accommodation is available for the students and the teachers.	18	2.1667	1.50489
Proper furniture and fixture are available in your college.	18	2.1667	1.50489
Accommodation for laboratories, library and IT is appropriate.	18	1.8333	.92355
Recreational facilities for the students are available at your college.	18	2.1667	1.24853

Table 1 describes mean score and standard deviation about Means and SD of heads regarding the Quality of Infrastructure. The mean score and standard deviation (M= 2.33, SD= 1.28) regarding Building fulfils the instructional constraint of learners. The mean score and standard deviation (M= 2.83, SD = 1.72) regarding Classroom are well equipped. The mean score and standard deviation (M= 2.33, SD= 1.28) regarding Number of classrooms is sufficient. The mean score and standard deviation (M= 2.16, SD= 1.38) regarding Sufficient health services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Accommodation for laboratories, library and IT is suitable. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Refreshment points with clean food as well as drinks are obtainable for the learners at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Hostel accommodation is available for the students and the teachers. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Accommodation for laboratories, library and IT is suitable. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Recreational abilities for the students are available at your college. The highest mean score is 2.83 regarding Equipment's are needs and requirement. So, it is decided that Equipment's are needs and requirement.

Table 2 Mean and SD of Teachers Regarding the Quality of Infrastructure

Statements	N	Mean	SD
Building fulfils the instructional requirement of students	180	2.3667	1.25471
Classroom are well equipped.	180	2.2167	1.17362
Number of classrooms is sufficient.	180	2.3333	1.11365
Sufficient health services are available at the college.	180	2.5944	1.08157
Sufficient emergency services are available at the college.	180	2.4889	1.09590
Accommodation for laboratories, library and IT is appropriate.	180	2.3778	1.21515
Students at the college have access to refreshment stations with clean food and drinks.	180	2.4222	1.09318
Hostel accommodation is accessible for the students and the teachers.	180	2.5000	1.22588
Your college has appropriate furniture and fixtures.	180	2.4444	1.11977
Accommodation for laboratories, library and IT is appropriate.	180	2.4333	1.14384

Your college provides recreational opportunities for students.	180	2.3444	1.07445
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Table 2 depicts mean score and standard deviation about Means and SD of teachers regarding the quality of infrastructure. The mean score and standard deviation (M= 2.33, SD= 1.28) regarding building justifies the instructional obligation of learners. The mean score and standard deviation (M= 2.83, SD = 1.72) regarding Classroom are well equipped. The mean score and standard deviation (M= 2.33, SD= 1.28) regarding Number of classrooms is sufficient. The mean score and standard deviation (M= 2.16, SD= 1.38) regarding Sufficient health services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding accommodation for laboratories, library and IT is appropriate. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Students at the college have access to refreshment stations with clean food and drinks. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding hostel accommodation is available for the students and the teachers. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding accommodation for laboratories, library and IT is appropriate. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding your college provides recreational opportunities for students. The highest mean score is 2.83 regarding equipment's are needs and requirement. So, it is decided that Equipment's are needs and requirement.

Table 3 the Perception of Students Regarding the Quality of Infrastructure

Statements	N	Mean	SD
Building fulfils the instructional requirement of students	540	2.3556	1.29630
Classroom are well equipped.	540	2.5463	1.14921
Number of classrooms is sufficient.	540	2.6389	1.25178
Sufficient health services are available at the college.	540	2.7593	1.21425
Sufficient emergency services are available at the college.	540	2.5167	1.17555
Accommodation for laboratories, library and IT is appropriate.	540	2.2074	1.06624
Students at the college have access to refreshment stations with clean food and drinks.	540	2.4963	1.01655
Hostel accommodation is available for the students and the teachers.	540	2.7648	1.02395
Proper furniture and fixture are available in your college.	540	2.5537	1.06508
Accommodation for laboratories, library and IT is appropriate.	540	2.4000	1.25253
Recreational facilities for the students are available at your college.	540	2.5519	1.04050

Table 3 illustrate the mean score and standard deviation about Means and SD of students regarding the quality of infrastructure. The mean score and standard deviation (M= 2.35, SD= 1.29) regarding Building fulfils the instructional requirement of students. The mean score and standard deviation (M= 2.54, SD = 1.14) regarding Classroom are well equipped. The mean score and standard deviation (M= 2.63, SD= 1.25) regarding Number of classrooms is sufficient. The mean score and standard deviation (M= 2.75, SD= 1.21) regarding Sufficient health services are available at the college. The mean score and standard deviation (M= 2.51, SD= 1.17) regarding Sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.20, SD= 1.06) regarding Sufficient emergency services are available at the college. The mean score and standard deviation (M= 2.49, SD= 1.41) regarding Accommodation for laboratories, library and IT is suitable. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Students at the college have access to refreshment stations with clean food and drinks. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Hostel accommodation is available for the students and the teachers. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Accommodation for laboratories, library and IT is appropriate. The mean score and standard deviation (M= 2.33, SD= 1.41) regarding Recreational pionts for the students are available at your college. The highest mean score is 2.83 regarding Equipment's are needs and requirement. So, it is decided that Equipment's are needs and requirement.

Conclusions

It is concluded majority of the respondents agreed about the quality of infrastructure in degree colleges, Building fulfils the instructional requirement of students, Classroom are well equipped, Classroom are well equipped, Number of classrooms is sufficient, sufficient health services are available at the college, sufficient emergency services are available at the college, Accommodation for laboratories, library and IT is appropriate, Students and teachers have access to refreshment outlets with sanitary food and drinks at the institution. Hostel lodging is also available for students and staff. Your college has adequate furniture and fixtures, and the infrastructure at degree colleges is of high quality. So, it is decided that Equipment's are needs and requirement. So, it is decided that Equipment's are needs and requirement. So, it is decided that Equipment's are needs and requirement.

Recommendations

1. The government should provide additional funds for the provision of computers in degree colleges of Punjab in required number in order to enhance the computer literacy.
2. In-service teachers training and professional development opportunities should be provided to teachers of degree colleges for improving their methods and technique.
3. Libraries should be maintained with availability of necessary books in degree colleges and college should motivate students and teachers for getting benefit from the library.
4. Students should be provided the facility of accommodation and transport in degree colleges of Punjab.

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