

HIGHER EDUCATION QUALITY: A LITERATURE REVIEW

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Abstract

The purpose of this paper is to examine the quality dimensions associated with the higher education institutions. Through a rigorous literature review and by integrating insights drawn from these studies, the author has proposed a set of quality dimensions relevant to the higher education institutions. The findings reveal rich and meaningful insights into quality dimension area of higher education institutions. The set of quality dimensions can act as a list of items for educational institutes to address quality issues. It would help in ensuring that the essential issues and factors are covered during implementation. For academics, it provides a common language for them to discuss and study the quality dimensions from various perspectives. This paper validates and extends the dispersed findings of existing literature by providing a useful unifying framework for quality dimensions relevant for higher education institutions.

Keywords:

Quality Dimensions, Higher Education, Quality Definitions

1. INTRODUCTION

Industries have realized that quality is the key factor for long-term survival and success [1]. The manufacturing industries were the first to realize the need for quality and subsequently, quality concept was introduced in service industries [2]. But, quality concept has now been extended into education sector [1]. Higher education institutions, like other industries, are obligated to provide services meeting certain sets of standards and needs [3]. The educational institutions have realized the need for quality focus as the operating environment of higher education institutions has undergone changes in the last two decades in terms of increasing demand for higher education, technological advancement, evolving knowledge economy, and pressure to respond to the needs and aspiration of institutions' stakeholders [4]. These changes have posed major challenges to higher educational institutions and long term survival of an educational institution depends on its quality education delivery system. Quality issues are now increasingly becoming relevant for the higher educational institutions and universities [5], [6]. The higher education institutes have realized that great benefits can be achieved by providing high quality education to the satisfaction of various customer groups. Educational institutes consider introduction of quality management initiatives as a way of responding to the challenges within higher education and as a means of improving staff and student morale, increasing productivity, and delivering higher quality services [7]. Higher education is now facing commercial competition due to the globalization and reduction of financial support from government agencies [8]. Educational institutes consider quality management initiatives as a way of responding to the challenges and as a means of improving staff and student morale, increasing productivity, and delivering higher quality services [7]. In the prevailing dynamic and increasingly competitive higher

educational landscape, the institutes need to maximise their efforts so as to continuously improve their services [9].

The educators and those being educated are the most obvious characters in an educational institution. The list of stakeholders in education system includes government and its agencies, university officials, employers, faculty, staff and students [10]. According to McAdam and Welsh [11], educational institutes are required to satisfy their various stakeholders who include citizens, taxpayers, parents, students, trainees, schools, universities, staff, managers, governors, employers, government departments and agencies and local government. Each stakeholder places different demands on the educational institutes. The key issue is the ability of the quality concept to facilitate the perspectives of these stakeholders who have differing perception of higher education quality.

Although students are the primary beneficiary of education, but there are other stakeholders ranging from parents, prospective employers and society as a whole; and all of them have a vested interest in what they perceive as how successful and appropriate is the education for the needs of the students [12].

Employers and industry groups see educational institutions from economic perspectives, families of existing and potential students and community organizations see educational institutes from societal perspective and academic disciplines and other education providers see from educational perspectives [13].

The concept of educational quality is multi-faceted and multi-dimensional with respect to conceptualization, assessment and measurement and it is difficult to be assessed through one perspective [14]. In order to improve the quality of education, it is necessary to know the quality dimensions and quantify the current quality levels. Higher educational institutes need more effective delivery systems to address the quality issues and performance of higher education systems.

Higher education institutes with varying customers and stakeholders are facing huge pressures to become more accountable and responsive to customer needs, and become more efficient, effective and customer-centric. Quality is fast emerging as a theme that is rapidly spreading within the higher education institutions [14].

This paper intends to review the existing body of information on the quality dimensions of higher educational institutions proposed by various authors in the literature. The objective of the paper is to address this question: What are the dimensions of quality in higher education?

The structure of this paper is designed in the following way. Section 1 provides an introduction; Section 2 describes the research method; Section 3 presents the literature review findings on quality dimensions of education institutions from various perspectives. Section 4 provides conclusion and suggestion for future work.

2. METHOD

The purpose of the literature review was to summarize the research findings on quality dimensions of higher education published in peer-reviewed journals. A comprehensive literature review of quality dimensions of higher education was undertaken to address these research question. The literature was reviewed using the principles of deductive reasoning, where care was taken to use all the facts published in standard scientific journals. Forward and backward searches were conducted to deepen the analysis. The general methods of content analysis have been followed to review the published literature. Furthermore, the aim of present review was to delineate critical dimensions of educational quality that can be utilized in future for addressing multiple and divergent quality aspects of educational institutions. The author examined the peer-reviewed literature on quality in higher education written in English. The search strategy is based on selected keywords and databases. Many papers were reviewed from cross-references because these contained the required information. Based on the review, the literature review section has been divided into distinctly different sub-sections.

3. LITERATURE REVIEW

3.1 QUALITY DEFINITION

According to Harvey and Green [15], quality can be viewed as excellence, as transformative, as fitness for purpose or as value for money and as perfection. Quality in the educational context increasingly includes terms such as “fitness for purpose”, and “value for money” [15].

An alternative view of educational quality proposed by Astin [16] is that quality is a continuing process of critical self-examination that focuses on the institution's contribution to the student's intellectual and personal development. Astin's [16] analysis of quality is relevant and can easily be adapted for analysis at the international level. For example, rankings and accreditation agencies often focus on inputs and some outputs.

Harvey and Green [15] categorized common approaches to quality in three main groups - excellence in inputs and outputs, fitness for purpose , value for money and then proposed an alternative perspective.

- First, quality can be understood as excellence in inputs and outputs or as consistency - defined as no errors.
- Another different view, defines quality as fitness for purpose. Fitness for purpose can be evaluated either through customer satisfaction or as defined by the institutional mission.
- A third perspective, according to Harvey and Green [15] is that of quality as value for money.

3.2 QUALITY FROM DIFFERENT STAKEHOLDERS' PERSPECTIVE

Higher education is intangible, heterogeneous and inseparable from delivery process-it possesses all the characteristics of service [17]. Typical stakeholders in higher education are the students, faculty and the senior management. The framework of quality in education proposed by Shank et al. [17] includes course design, course marketing, student

recruitment, induction, course delivery, course content, assessment monitoring, and other miscellaneous and tangibles.

Sahney et al. [1] opined that education institutes should aim to satisfy the needs of various stakeholders, through the design of an appropriate system comprising a management system, a technical system and a social system. Quality in education should be defined from an overall perspective including the quality of inputs, the quality of processes and the quality of outputs. In fact, the very concept of quality would infuse within itself the different aspects of academic life [1].

Srikanthan and Dalrymple [18] suggest that quality system in a higher education should satisfy the expectations of quality from the perspectives of different stakeholders:

- Providers (funding bodies and community) interpret quality as value for money. Education delivery system should ensure optimum utilization of resources in providing an acceptable level of quality in the delivery. Funding bodies look for return on investment.
- Users of the product (both current and prospective students) interpret quality as excellence and the education should ensure a relative advantage in career prospects.
- Users of outputs (the employers) interpret quality as fitness for purpose. Employers look for competencies matching the functions. The system should provide assurance of comparatively high level of capability of the graduates to handle the job complexities
- Employees of the sector (both academics and administrators) expect high level of job satisfaction and interpret quality as perfection. They expect comparatively high level of respect in terms of remuneration and recognition.

3.2.1 *Quality from Employer Perspective:*

According to Harvey and Green [15], employers place importance to five broad areas of graduate attributes: knowledge, intellectual ability, ability to work in a modern organisation, interpersonal skills and communication. From the perspective of employers the education delivery system should have these capabilities [10].

- Develop students' ability to communicate effectively (written and oral)
- Lead students to employment as an optometrist
- Develop students' self-management skills
- Develop students' problem-solving skills
- Concentrate on giving students subject knowledge required by the profession
- Provide good opportunities for student teamwork
- Encourage students to be innovative (do things in new ways)
- Include adequate work experience for students placements
- Develop students' ability to use information technology
- Offer students some subjects/topics as options (modules)

Martensen and Gronholdt [19] examined the competencies of the graduates from an employer's point of view and divided them into two categories with eight competencies grouped under each category:

- Professional competencies
 - In-depth knowledge of the field

- wide scope within the field
 - language skills
 - IT skills
 - communicative skills
 - business knowledge
 - application of theoretical knowledge and
 - ability to create results
- Personal and social competencies
- flexibility
 - commitment
 - cooperative skills
 - adaptability
 - motivation to learn/try new things
 - intercultural understanding through specific course themes
 - results orientation and
 - management skills

3.2.2 Quality from Front-Line Staff Perspective:

Front-line staff expects that education delivery system should have these capabilities [10].

- Have, within the staff team, the range and correct balance of knowledge, expertise and interest to match department requirements
- Adhere to published timetables e.g. lectures not cancelled, appointments kept
- Encourage students to be actively involved in the learning process rather than be passive recipients of knowledge
- Have a library with adequate resources to cater for the learning demands of students
- Have a library with adequate resources to meet demands
- Ensure that the disparate skills of all staff are used to the best advantage of students and staff
- Give prospective students adequate information about the programme
- Have adequate technical assistance and support in the clinics for undergraduate work
- Operate in a department where individuals are given a clear view of what they are expected to achieve
- Give students useful feedback from assessed work to help them channel their improvement efforts
- Have adequate technical assistance and support for research
- Provide good opportunities for student teamwork
- Assess need for different levels of help with foundations subjects and provide it selectively to students
- Incorporate the views of employers into approval and review of the programme
- Give recognition to students with different academic backgrounds
- Monitor students' attendance at lectures, tutorials and practical sessions
- Have students who are able to work on their own with little guidance from their teachers
- Offer students some subjects/topics as options (modules)
- Encourage students' high academic achievement above all else
- Be able to lead students to employment other than as an optometrist

- Base final student assessment on examination only

3.2.3 Quality from Faculty Perspective:

The quality in education has essentially been look at from the perspective of external customers such as employers and students, ignoring the internal customer's perspective [14]. However, employee satisfaction is important and acts as a major driver towards adoption of a customer centric philosophy by any organization. Every organization, including educational institutions, should consider the requirements of their employees seriously and initiate measures to meet them so as to cultivate employee satisfaction [14].

The following items have been identified as the customer requirements and these have been categorized as tangibles, competence, attitude, delivery and reliability.

Tangibles

- Appropriate physical facilities; Adequate facilities and equipment; Salary; Allowances and benefits; Adequate and efficient teaching assistants

Competence

- Effective classroom management; Proper classroom procedures; Opportunity and control for curriculum development.

Attitude

- Effective problem solving; Cordial Interpersonal relations; Proper monitoring systems and evaluation procedures

Delivery

- In-service training and development; Continuous personal growth; Politeness and courtesy; Orderly environment conducive to teaching; Individualized attention

Reliability

- Fair and firmly enforced rules and regulations; Security of job; Recognition for work

3.2.4 Quality from Student Perspective:

Students expect that education delivery system should have these capabilities [10].

- Have a library with adequate resources to cater for the learning demands of students
- Give students useful feedback from assessed work to help them channel their improvement efforts
- Have staff who are approachable and friendly
- Have teachers who show comprehensive knowledge of their subjects
- Lead to employment
- Have teachers who know how to teach/help students learn
- Prepare students adequately for examination
- Give prospective students adequate information about the programme
- Encourage students to be independent learners: to identify their own strengths and weaknesses and to be responsible for their own learning
- Offer some subjects/topics as options (modules)
- Recruit only students with high academic ability and entrance qualifications
- Have staff who discuss attendance at lectures, tutorials and practical sessions with individual students

- Monitor attendance at lectures, tutorials and practical sessions
- Give recognition at recruitment to prior learning and/or work experience
- Have students who are able to work on their own with little guidance from their teachers
- Encourage high academic achievement above all else
- Be able to lead to employment other than as an optometrist
- Base final assessment on examination only

Hill et al. [20] grouped the quality of faculty under the following heads.

Delivery in the classroom

- Teaches at the right level so that the students understand
- Well prepared and presented sessions
- Well organized, sequence of content evident during the course
- Knowledge of new developments and research in the area
- Ability to transmit enthusiasm for the subject
- Stimulating and interesting

Feedback to students during the session and in assignments

- Flexibility in order to need different learning needs
- Approachable
- Encouraging and inspiring in both verbal and written feedback
- Constructive and positive
- Consistent, clear information which is reviewed and developed

Relationship with students in the classroom

- Good communicator and interactive with the students
- Good facilitator of debate and discussion
- Supportive, who does not make a student feel stupid
- A light touch, who can have a bit of fun
- Encourage risk taking and creativity in the group

With respect to curriculum and engagement with learning, students expect [20]

- Flexible curriculum that takes into account student group experience
- Appropriate content to course
- Allows student to challenge practice when linking theory to real world
- Assignment relevant to work
- To be introduced to new perspectives
- Use of sound, up to date evidence

With respect to support systems, students expect [20]

- Student support unit
- Network of other students on the course
- Shared experiences from work place – learn from each other
- Readily available library and IT
- Wide range of information sources

O'Neill and Palmer [21] grouped quality attributes under the following dimensions.

Process dimension

- Interest in solving student problems

- Error-free and on-time service

- Non-excessive waiting time
- Knowledgeable employees
- Prompt service
- Willingness to assist students
- Employees to convey confidence
- Secure in dealing with institution

Empathy dimension

- Personal attention of employees
- Convenience of operating time
- Employee understanding of the needs
- Employees having best interest at heart

Tangible dimension

- Good facilities to cater for students
- Pleasing environment
- Staff appearing neat and professional
- Signposting and information appealing

Voss [22] proposed the following quality dimensions of faculty behaviour.

- Assertiveness: This dimension characterizes behaviour of the faculty to interact with students while standing up for his estimation. It is an ability to assert oneself.
- Communication skills: Faculty should be able to use the right words to gain access to the contents of their students' minds in general and to tailor their messages to best suit students' language abilities and preferences in particular
- Empathy: This attribute describes the faculty's willing to take the student's perspective and their ability to identify with and understanding of the student's situation, emotions, and motives
- Enthusiasm: Enthusiastic faculty convey pleasure and interest for their subject
- Expertise: This quality dimension refers to the subject-specific competence, skill and professionalism of the instructor
- Fairness: This attribute means that faculty are free from favouritism, self-interest, or preference in judgment
- Flexibility: This dimension describes that faculty are readily open to new ideas, suggestions, criticism, and questions during and after class
- Friendliness: This attribute is associated with cheerful nonverbal signals (body posture, forward body lean, casual smiling) and the willingness to help students
- Teaching skills: This dimension addresses the ability of faculty to employ appropriate pedagogy (to select suitable course contents and give their lessons a plausible structure.)

Narang [23] grouped the quality attributes as follows:

Physical facilities

- Training on state-of-the-art technology
- Adequate facilities/infrastructure to render service
- Well-equipped computer laboratories with modern facilities
- Comprehensive learning sources
- Academic, residential and recreational facilities
- Aesthetic view of facilities

- Training in a well-equipped communication classroom
- Effective classroom management

Academics

- Adherence to schedule
- Adequacy of subject faculty
- Avail regularly for student's consultation
- Close supervision of students' work
- Expertise in subject and well-organized lectures
- Good communication skill of academic staff

Learning outcomes

- Practical orientation in education
- Adaptability of modern techniques
- Design of course structures based on job requirements
- Problem-solving skills
- Sense of social obligation
- Opportunities for campus training and placement
- Extra-curricular activities

Responsiveness

- Prompt service at service departments
- Courteousness and willingness to help
- Cleanliness, orderliness, systematic and methodical
- Transparency of official procedure, norms and rules

Personality development

- Encouragement for sports, games and cultural activities
- Enhancement of knowledge
- Recognition of the students

Ng [24] suggested the following nine quality dimensions of educational quality.

- Leadership.
- Strategic planning.
- Staff management.
- Resources.
- Student-focused processes.
- Administrative and operational results.
- Staff results.
- Partnership and society results.
- Key performance results.

Ardi et al. [25] developed a quality model with five dimensions for higher education.

- Commitment of top management: This includes commitment of top management, leadership and support.
- Course delivery: This includes teaching standard, educational quality and course organization.
- Campus facilities: It includes infrastructure, learning facilities and other facilities.
- Courtesy: It is defined as an emotive and positive attitude toward students [26]. It includes politeness, respect, consideration and friendliness
- Customer feedback and improvement: The importance of this dimension has been promoted in several studies.

According to Joseph and Joseph [27], the service quality in education from students' perspectives is as follows:

Physical aspects

- Accommodation facilities

- Academic facilities
- Campus layout and appearance
- Sports and recreational facilities

Cost/time

- Length of degree
- Cost of accommodation
- Cost of education

Academic issues

- Reputable degree
- Excellent instructors

Programme issues

- Specialist programmes
- Flexible structure and content
- Practical component
- Options available
- Flexibility to move within school of study
- Flexible entry requirements

Career opportunities

- Employable graduates
- Information on career opportunities

Location

- Ideal location

Trivellas and Dargenidou [28] identified the following as quality dimensions of higher education.

Academic resources

- Sufficiency of academic equipment, e.g. laboratories, workshops
- Ease of access to information sources, e.g. books, journals, networks

Competence

- Theoretical knowledge of academic staff
- Practical (relevant) knowledge of academic staff
- Expertise of academic staff in teaching/ communication

Attitude

- Extent to which academic staff understand student's academic needs
- Degree of academic staff's willingness to help
- Availability of academic staff for guidance and advice

Content

- Extent to which students learn communication skills
- Extent to which students learn team working skills
- Relevance of curriculum to the future jobs of students

Reliability and responsiveness

- Administrative contact
- Confident and dependable administrative advice
- Early notification of administrative changes

Assurance and empathy

- Courteous and confidence in contact
- Personal contact and understanding
- Contact with caring

Student perception of quality is an important variable and may be related to almost any definition of educational quality

[5]. Gallifa and Batalle [5] proposed slightly redefined dimensions of quality based on Parasuraman et al. [29] model.

- Tangibles: It includes physical aspect of facilities such as signs, comfort, accessibility, spaciousness, functionality, cleanliness, etc.
- Reliability: It has reference to elements that intervene in the training process such as schedules, didactic materials, contents, size of groups, academic services, curriculum structure, elective subjects, attendance control, etc.
- Responsiveness: It is about the speed and quality of response from the institution and the people who constitute it. Agility in common processes and attention to incidents.
- Assurance: It is about professionalism, staff accomplishment of assigned tasks, teaching capacity, professional experience and treatment by teachers, accessibility and friendliness of administrative staff, etc.
- Empathy: It is about capacity of the centre to understand student needs and ability to give response to them, flexibility of curricula, response to social demands, also ways for student participation, complementary services etc.

3.3 QUALITY MODELS BASED ON TQM

Higher education institutions have embraced TQM to ensure that the quality of their education continuously improves [30]. Mustafa and Chiang [31] and Peat et al. [32] suggested a TQM based framework covering all critical areas of higher education in terms of faculty, staff and infrastructure, academic life, management's policy towards employees, curriculum design, pedagogy, admission processes, and other non-academic processes. Similarly, Viswanadhan and Rao [33] proposed these as quality parameters: commitment of top management and leadership, customer focus, course delivery, communication, campus facilities, congenial learning environment and continuous assessment and improvement. Sakthivel et al. [26] identified five parameters viz commitment of top management, course delivery, campus facilities, courtesy and customer feedback and improvement.

Sakthivel et al. [26] proposed a quality model for educational institutes based on the TQM concepts with the quality dimensions as follows:

- Top Management commitment- Leadership is the predecessor of process improvement. It includes top management commitment and support.
- Course delivery - It includes teaching standard, educational quality and course organization.
- Campus facilities - It includes infrastructure and learning facilities.
- Courtesy - It is defined as emotive and positive attitude toward students.
- Customer feedback and improvement

However, the inadequacy of applying TQM-based quality models across academic and service departments of the educational institutions was highlighted by Srikanthan and Dalrymple [18], [34]. Srikanthan and Dalrymple [18] presented a holistic model for quality in higher education that differentiates the teaching-learning functions from the service functions of the university. Accreditation agencies place emphasis on the learning component of quality.

3.4 OUTCOME BASED QUALITY

In recent years, the quality focus is on the learning outcomes in higher education [35]. Gallifa and Batalle [5] viewed quality as relative to processes or outcomes [5]. All the critical components of the education system produce outcomes [36]. The traditional methods of assessment of educational quality by measuring the levels of inputs such as expenditure per student, number of library volumes, number of faculty and so forth, are not adequate [37]. But, the outcome of education services is often intangible and difficult to measure, as it is reflected in the transformation of individuals in their knowledge, characteristics, and behaviour [38].

Higher education institutions should develop alternative evaluation procedures to assess and maintain quality and increase accountability by measuring and assessing the major outcomes. It requires defining the desired results or outcomes of a particular instructional/educational process. Outcome based assessment has now become a general trend [39]. Most of the accrediting bodies have endorsed outcomes assessment as the appropriate tool for evaluating institutional effectiveness.

Student perception of institutional quality is an outcome quality [40] based on a service-marketing definition of quality [41]. Quality must be judged on the assessment of the user or consumer of the service and this is a very important outcome for institutions. Educational quality is viewed as a stakeholder-relative concept [15] and among several stakeholders in higher education students are very important. Students form an essential part of university processes and their perceptions of quality are relevant as outcome quality. Student assessment of quality in teaching and learning is another outcome [42] and sometimes these opinions or perceptions are taken into consideration in faculty promotion and in quality rankings of teaching universities. Another interesting approach is assessing the quality of the total student experience [43], [44]. These approaches are based on subjective student expectations and perceptions. According to Wiers-Jenssen et al. [44], student satisfaction approaches may be used as a tool for bridging gap between traditional and academic views on how to improve higher education with market-oriented perspectives.

3.5 CRITICAL SUCCESS FACTORS (CSF) OF EDUCATIONAL QUALITY

According to Sahu et al. [45], the following are the CSFs.

Roles and responsibilities of senior management,

- Commitment; Vision; Resource allocation and budgetary provision; Policy making through stakeholder participation; Performance-like promotions; Proactive management; Social responsibility through affirmative action; ISO certification

Infrastructure

- Good library with sufficient number of staff, books, periodicals scientific journals of all courses; Good ambience in class rooms/seminar rooms; Good and well-equipped laboratories; Hygienic wash rooms; Canteen with subsidized food; Hostel accommodation; Play ground; Transportation facility; Internet facility; Medical facility, psychological counselling; Computer centre; Workshop

Training development and placement

- Communication skills; Industrial training; Technical writing skills; Trainings for knowledge beyond syllabus; Quality management training; Database of potential employers; Interaction with HRD management potential employers; Tracking placements of alumni; Feedback from the employers

Academic aspects

- Up-to-date syllabus; Teaching quality monitoring; Competent teaching methodology; Teaching aptitude of faculty; Student-teacher ratio; Qualified instructor (non-teaching staff)

Research and development and consultancy

- Incentives for R&D; Grants/funding for research projects; Consultancy work

Administration

- Academic planning and monitoring; Facilitation of various demands of teachers and students; Recruitment of competent staff; Communication of with stakeholders; Inspection and maintenance of institutes facility; Inspection of teaching/evaluating process; Signing MoUs with MNCs and other institutes; Organizing lectures of experts; Organizing conference/seminars/workshops/training, etc.; Data analysis regarding performance of students, teachers, etc.; Implementation of policies delineated by management and statutory bodies

Promoting institute's initiatives

- Institute initiative's publicity; Instillation of awards for staff members

Technical institute's excellence measures

- Technically competent human resource; Research papers; Higher grade on independent accreditation agency; Strong and effective alumni association; High employability score against standard indices; Consistently good academic results (high scores of students); Research and development initiatives; Recognition through various awards; High number of MoUs with MNCs and other technical institutes; Satisfaction of stakeholders, students, parents and others; Better personality traits in students, such as leadership, teamwork, communication, less anxiety regarding job; Higher resource and finance credibility of institute

4. CONCLUSION

Answering the research question "What are the essential features of quality in Education?" the author provides a framework for viewing educational quality characteristics from different perspectives. This framework builds on a literature review that involves major sources of journal and conference articles. The literature review gives qualitative insights on research considering quality in educational institutions.

Quality matters as a core value in higher education. While world-class institutions, global rankings, and accreditation have become hot topics within field of education, the potential of researching these topics is significantly limited by the lack of the orizing about what quality means. Quality must beat the centre of

the research and the first step must include revisiting the notions of quality. In this context, the author feels that this paper should guide research and practice in higher education. The author has tried to contribute to that important goal by presenting quality characteristics in education from various perspectives.

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