

Improving the Service Quality of Higher Education Institutions: Special reference to Information Systems

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Abstract— Qualitative measures and indicators are at a higher level than Quantitative measures and indicators in the field of education with the latest arrivals of technology and knowledge delivery methods. Electronic learning environment and electronic services help in many ways to improve the service quality of higher education. The objective of this research was to study the contribution of information Systems towards improving the service quality of higher education institutions. Enhancing the service quality of information systems has become a premier requirement in higher education institutions because it has given a considerable weight for its own strategic plan. Quality is the backbone of higher education, and Information Systems help to keep it straight without drawbacks. The well-established Information Systems has been identified as a key tool to improve the service quality of higher education institutions in this context in the information age.

Keywords- Higher Education, Higher Education Institutes, Information Systems, Quality, Service Quality, University

I. INTRODUCTION

Service quality is a subject that deserves to be discussed as it has become a popular tool in every field. “Quality of higher education has been considered as the basic priority of higher education development during last several decades in many countries of the world” (Haskova, 2016, p 1). “Universities intending to enhance their image are encouraged to consider focusing their efforts on marketing communication information and service quality” (Sultan & Yin Wong, 2012, p 774). Although it forms in the business and marketing fields, the service quality has methodically expanded to education field too. The service is provided in two ways by the academic institutions; traditional services and electronic services. Electronic services have become a popular topic and new measurement indicators have arrived to measure the electronic service of educational service. “Information and information systems to be important and

significant factors on which higher education institution’ quality assurance is based on” (Haskova, 2016, p 1). “Although information and knowledge are separate concepts, they join together to work like a combined socket and the electronic media is the key gear in a given academic environment” (Gunawardhana & Perera, 2015b, p 9). Academic institutions provide preferable service using advancement of Information Systems and it has been pointed out as a premier tool in their strategic plan.

The objective of this research was to study the contribution of Information Systems towards improving the service quality of higher education institutions. This research study mainly based on the literature, and critical review was carried out using previous research in the relevant fields. It consists of various peer-reviewed journals between 2000 and 2017. In addition, some primary information was collected through interviewing the experts in the field, among direct observations of information systems of selected universities. Content analysis was carried out to derive conclusions.

The paper is organized as follows. Section II provides a detailed literature on Service Quality in Higher Education. Section III presents the discussion on the usage of information systems in higher education. Discussion on the study is included in Section IV. The conclusion is given in by Section V. Section VI discusses the further work on the study.

II. SERVICE QUALITY IN HIGHER EDUCATION

Service quality is important to an academic institution in many ways; acquiring popularity, attracting funds, challenging other institutions, facing global competition and, competing for better rankings. “Improving service quality within a higher education context is often mentioned as an internal goal without any explicit references to what is meant by service quality in higher education” (Sultan & Yin Wong,

2012, p 756). There are many ways to define the quality of higher education. "Quality assurance is not a concept that is classified as right or wrong" (Mizikaci, 2006, p 50). Service quality in higher education has become a complicated concept and it is difficult to find a unique definition with different interpretations. Previous researchers in the field have defined the service quality in higher education taking into consideration different dimensions. Jain, Sinha and Sahney (2011) have defined the quality of service elaborating the research works of Sahney (2002).

- i. value addition in education,
- ii. conformance of education output to planned goals, specifications and requirements
- iii. defect avoidance in education process
- iv. excellence in education" (Jain, Sinha, & Sahney, 2011, p 302).

Parasuraman, Zeithaml, and Berry (1985) have done a massive contribution to the literature in the field of service quality. According to them "meeting or exceeding customer's expectations of education" can be identified as the quality of education (Parasuraman, Zeithaml & Berry, 1985). Mizikaci (2006) has presented the principles and concepts that are essential to discuss the high quality in higher education. These are;

- the emphasis on service;
- anticipating and meeting the needs and expectations of the students;
- recognizing and improving transformation processes and systems;
- implementing teamwork and collaboration;
- instituting management based on leadership, knowledge-based decisions, and involvement;
- solving problems based on systematic identification of facts and the use of feedback systems and statistical methods or tools; and
- implementing a genuine respect for and development of human resources – the people who work in colleges and universities" (Mizikaci, 2006, 36; Sharabi, 2013, p 311)

The above definitions show different aspect of service dimensions in higher education. Quality of education is the wealth for an institute to market their programs and to achieve a higher rank among others. "Under current conditions in the market of education services the investment into education has, similarly as in case of other investments, its economic side. Therefore to assure the quality of education processes and their management becomes a priority task for each higher education institution" (Haskova, 2016, p 4). Quality level, standards, and policies create a good image for an institute. Improving service quality is one

of the main goals of all higher education institutions through academic performance, research publication and citation, and resource development etc.

"In today's environment, higher education (HE) institutions need to become more efficient and participate in a competitive global market where client expectations are continually rising. In this new reality, quality is critical for success" (Sharabi, 2013, p 309). "The image of a university in a competitive global market is important because it determines the marketability of the programs/courses, and affects student attraction, retention and funding opportunities" (Sultan & Yin Wong, 2012, p 758). There are several factors to determine the best university or higher education institute for a student by parents. The service quality is considered to be a significant factor among them. Therefore, many strategies are used to provide a better service for students and staff. In this context, electronic information systems have become an area for discussion.

III. USAGE OF INFORMATION SYSTEMS IN HIGHER EDUCATION

An Information System is very useful for all parties of higher education institutions alike academic, non-academic, administrative, students, researchers, and all information seekers. Administrative parts and policymakers of higher education institutions use the Information Systems for resource management, resource sharing, student recruitment and management, strategic planning, and delivering facilities. Students use information systems for managing their academic activities and needs; lecture notes, tutorials, examinations, results, resources, and so on.

Several electronic systems are available in higher education institutions; document management system, student information systems, learning management systems, exam management system etc. "Information systems are inter-disciplinary systems that can be described as interrelated information and knowledge components with identifiable boundary, working together for some purpose. An Interactive Learning System therefore, can be described as, an information and knowledge system for the purpose of learning and teaching." (Sabry & AlShawi, 2009, p 164). Sabry and AlShawi (2009) have described the five main knowledge components that were included in an Interactive Learning System based on previous research works of the field. They are Content, Learner, Technology, Pedagogy, and Interaction. An information system is a combination of hardware, software, human, information, and knowledge. "Information and Communication Technology (ICT) is integrated into the system for teaching and learning,

administration, research and community engagement” (Warnasuriya et al, 2015, p 33). Electronic Information Systems help to manage academic, nonacademic, administrative, and other affairs at universities and higher education institutions. New features are added to information systems on the requirement of users, and ‘Collaborative Working Space’ has become a new trend. Under these circumstances, formation and usage of Information System is at a higher level among higher education institutes.

“Information System makes student services cheaper, easier, faster, and more accurate than traditional Information System at present. It helps to reduce university workload and involvement of human and physical resources. Students can access information within few seconds and more effective way to fulfill their academic needs” (Gunawardhana & Perera, 2015a, p 16). Information systems help students to improve communication skills, computer skills, team working skills, collaborative learning skills and other. “It is believed that the use of Interactive Learning System can generally support students in terms of accommodating both the sequential and global learning styles as well as developing the required skills” (Sabry & AlShawi, 2009, p 175). Information systems provide easy access to information in an effective manner to students, staff, degree programs, internal arrangements, finances, infrastructure etc.

“To support the goal of student-centered learning, the student information system features a streamlined application process that allows anytime, anywhere registration with a date-driven set-up to support traditional and distributed learning offerings” (Seeman & O’Hara, 2006). “Information systems used at higher education institutions support essentially academic management processes like student’s registration, student’s management, student’s marks, among others” (Piedade & Santos, 2008). Students have access to enroll the degree courses when they have the permission from the system administrator. There is no staff member to help them unless they face query. Online assistance is available there when they place an online request.

With the rapid growth of technical improvements, universities accept the new information and communication technologies to offer services to students. Teaching and learning environment have upgraded with the readiness of this trend in higher education sector also. Manual for Institutional Review of Sri Lankan Universities and Higher Education Institutions (2015) has pointed out the importance of Information systems. “A user- friendly Management Information System (MIS) is in place for the effective and efficient management of operations. This system allows information to be logically stored and easily retrieved for instant availability of information and swift execution of tasks in a cost-effective and efficient manner” (Warnasuriya

et al, 2015, p 33). “There is no doubt that currently information systems form an integral part of the management and quality assurance processes” (Haskova, 2016, p 5). Today the students cannot do their academic work without electronic services. Electronic services provide opportunities for many benefits for students and all parties in the higher education sector. “The ‘Management Information System’ has an updated permanent record of all currently enrolled students comprising all admissions; academic, demographic, educational background records; assessment and examination results” (Warnasuriya et al, 2015, p 39). Universities and higher education institutions create voluminous amounts of data through academic, non-academic, and research activities. Data is moved to the process of collecting, filtering, delivering, storing, and management for better access. Information systems carry out all these services and it influences the enhancement of the quality of educational service. The well-established information system is an asset for an institute or university to face many challenges and create many opportunities.

IV. DISCUSSION

Although in the past, education has been known as a transfer media, a person or student is conversing to a better position or better person, it has become a leading service today. Education is a primary need of every person and service level of education can affect students in every way to make better opportunities. Although the education system has to face many challenges, it is continually moving in the better direction with innovative electronic services. Service quality helps towards excellence in higher education through contributing in many ways. “Higher education institutions will have to face many difficulties if they conduct their program without the support of Information Systems. That reason has come to be the major point to depend on Information Systems” (Gunawardhana & Perera, 2015a, p 16).

Education institutions are becoming as profitable organizations of expansion of latest technologies in many countries. Academic institutions worldwide completely have given their attention to improving services while invest funds and resources to enhance the electronic service level. Many organizations have come to stage to provide degree programs and it has created unnecessary competition among academic institutions countrywide and worldwide, and at the same time, both public and private institutions are facing challenges in terms of various ranking methods. Students are the customers of the academic institutions and they focus on student satisfaction through their services.

Service quality is a new dimension in the field of higher education to achieve international standards. Higher education institutes investigate the different methods to improve their service to that of the international level. Technology provides a massive support to direct it at a better level. "Use of quality systems in the higher education context have made a profound impact in the areas of administration, teaching, and research" (Mizikaci, 2006). Information Systems have identified as a tool to obtain better learning efficiency for pedagogical purposes" (Hustad & Arntzen, 2013). "Issues of quality assurance and quality enhancement have acquired a major focus of attention in the higher education sector" (Mizikaci, 2006). Because education institutes are in a contest to attract students to their degree programs from other competitors. "The academic reputation of a school is a major factor in determining its selection" (Seeman & O'Hara, 2006). Students are the customers of the education sector and they have a wide variety of selection in degree programs and institutes. Institutes should show that why their programs are exceptional and unique using their proficiencies and quality of services.

Higher Education Institutes (HEIs) around the world are developing Higher Education Management Information Systems; HEMIS (Ali, 2010). "In Malaysia, the public universities carry the responsibilities to produce highly competitive graduates in order to enhance graduate employability. To achieve such targets, public universities are often expected to have effective and efficient information management system" (Ghani, Muhammad & Said, 2012, p 245; Gunawardhana & Perera, p 2015a). Information Systems provide many services for students such as student registration, course registration, exam registration, online exams, issuing results, webmail service, welfare activities, students clubs, electronic learning, electronic library facilities, electronic networks, electronic evaluations, data storage etc. Academic institutions produce of large dimension data and information every day since those engage with academic, administrative and research activities. "Students are expecting a quick response to their information needs and easily accessible information through the system in the academic level" (Gunawardhana & Perera, 2015a, p 15). "Universities have been at the forefront of online service provision. E-services such as enrolment, course delivery, course support, and library lending are rapidly becoming standards within the education sector" (Gunawardhana & Perera, 2015a; Kim-Soon, Rahman & Ahmed, 2014; Sutarso & Suharmadi, 2011).

Educational institutes like Universities are non-profitable organizations and their behavior on information needs different from commercial companies. Their vision is to create academic products and to meet academic

requirements. Information Systems are available at universities and higher educational institutions in deferent names like student information system, learning management system, subject management system, student registration system, payment system, Moodle etc. The service level of information system of a higher education institution has become an indicator to measure the performance of education service. All most all universities and higher education institutions attempt to reach well-established information system. Therefore, they are being invested in human resources and physical resources to make it a reality by avoiding the failures of the information system.

V. CONCLUSION

An Information System is not a warehouse and it is doing an immense service by providing many services. Learning support tools, learning management tools, web-based applications, have all caused in enhancement of teaching and delivering methods. It helps to locate, organize, retrieve, and disseminate information. In addition, it creates opportunities for editing, publishing, indexing of academic materials, and updating the repository. These all have contributed as functions of Information Systems to serve for higher education sector. Error free records, less assistance of staff, efficient service, environment with appropriate security, data integration, customer service, and easy and quick transactions are some of the benefits which come with online system.

"Main principles of quality assurance were formulated in an official document known as European Standards and Guidelines (ESG). According to them information and information systems are two of the key components creating and supporting quality of each higher education institution" (Haskova, 2016, p 1). Information Systems help in many ways to improve the service quality of higher education institutions. Educational services are being converted as electronic services from course registration to getting transcript certificates through Information Systems. Teaching methods, delivery methods, communication styles, teaching strategies have improved in many ways with technology improvement of Information Systems. Academic institutions provide preferable service using advancement of Information Systems and it has pointed as a premier tool in their strategic plan. Level of Information System has become one of performance indicator when enhancing the service quality of education.

VI. FUTURE WORK

It is suggested that all higher education institutions should carry out research to identify strengths and opportunities of Information Systems to enhance the service quality of education. Further research is needed to examine the impact of collaboration tools of systems towards the enhancement of service quality in higher education. Future works will include the investigation of integrating “Social Networks Sites” and Information Systems, which are being used in higher education sector.

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