

Development of Integrated Information Management System Service Quality Model in an Accounting Faculty

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Abstract

This paper presents the development process of an integrated information systems service quality model to address the problems of efficiency and effectiveness in managing a faculty in meeting both internal and external customers' satisfaction. Basing on a qualitative and an exploratory case study approach, the model demonstrates five main components that need to be included the integrated information systems service quality. These components are teaching and learning; research, innovation and publication; graduate employability; industry linkages and human capital. These components subsequently, define the service quality elements consistent with previous studies. This paper shed some understanding on possible alternatives to existing information management systems in improving service quality in institute of higher learning.

Keywords: Integrated information systems, faculty, service quality, institute of higher learning

1. Introduction

Service quality has become a key focus in enhancing private sector competitiveness (Parasuraman et al., 1985) and meeting customers' expectations (Parasuraman et al, 1985; Cronin and Taylor, 1992; Wisniewski and Wisniewski, 2005). It is a major element that affects the long term profitability and going concern of organisations (Reichheld and Sasser, 1990; Zeithaml et al, 1996; Agus et al., 2000). High customer perception of service quality in an organisation indicates that the organisation is being managed appropriately (Kendrick, 1997). Service quality is often assessed by customers' satisfaction which serves as an input for continuous improvement, strategic decision making and management compensation schemes (Ittner and Larcker, 1998). Customers' demand and satisfaction is not limited to private sector but also applies to institution of higher learning particularly the public universities.

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 (Alias and Abdul Rahman, 2003). Since a university are aggregated to departments, these departments are also expected to have a proper management system so as to ease the burden of the university to stream line the student enrolment and other related activities. Effective information management system would assist the department community to manage huge application capacities quickly and creatively and in turn able to provide its customers particularly students to get quick and efficient feedbacks (Biggs, 2001). Using a faculty in a Malaysian public university as the setting, this paper explores the concept of integrated information system service quality. Based on a qualitative and an exploratory case study approach, this study provides an understanding on the integrated information management system implementation success in meeting service quality. This study adds to the service quality literature in the context of higher learning institution.

The remainder of this paper is structured as follows. The next section, Section 2 provides a review of relevant literature. Section 3 outlines the modelling methodology. The model is presented in section 4. The conclusion is provided in the last section.

2. Literature Review

Studies in the management literature have noted that the key strategy for success and survival of any organisations is the deliverance of quality services to customers (Parasuraman et. al, 1985; Zeithmal et. al., 1990; Pitt and Watson, 1995). High customer perception of service quality in an organisation indicates that the organisation is being managed and operated appropriately (Kendrick, 1997). Service quality is often assessed by customers' satisfaction. In order to meet such satisfaction, appropriate strategies and tools need to be implemented to ensure continuous improvement of service quality (Ashill et al. 2005).

A body of the literature has described service quality as a form of attitude that results from the comparison of expectations with performance (Bitner, 1990; Bolton and Drew, 1991; Cronin and Taylor, 1992). These studies also found that service quality is affected by several factors such as human or behavioural factors (Nishii et al., 2008), implementation of appropriate performance tools (Calisir, 2007) and organisational policy (Ashill et al., 2005; Drew and Healy, 2006). Service quality relies on the participation of the individuals within an organisation and the availability of information management systems would assist in motivating and monitoring such individuals (Pitt and Watson, 1995). However, there is a lack of studies that have examined the link between service quality and information system.

With the emergence of the internet-based technologies in the recent years, for many organisations, relying on information system has become a necessity for organisational success. This has led many researchers to examine the impact of information system on service quality. One prominent tool is the one developed by Parasuraman et al (1988) for retailing discipline. The model known as SERVQUAL examined 44 attributes of service quality related to perceptions and performances. Othman and Owen (2001) argued that SERVQUAL has become a popular instrument to measure service quality due to its applicability of techniques in measuring and managing service quality. However, according to Alias and Abdul Rahman (2003), this tool could not be generalised to all types of services due to gap score and applicability. Their argument was supported by other studies that have suggested other quality measures should be developed on specific services (Babakus and Boiler, 1992).

Other studies have also developed service quality measurement such as SERVPERF (Cronin and Taylor, 1992) and Carter's instrument (Othman and Owen, 2001). Cronin and Taylor (1992) introduced SERVPERF as an alternative to SERVQUAL and noted that perception of service quality would depend on a customer's preconceived attitude about the service. As a customer experienced a service, his attitude about the service quality may differ causing a change in future attitude. Othman and Owen (2001), on the other hand introduced Carter Instrument to measure service quality in the banking industry with specific focus on Islamic banking. They developed this model to incorporate Islamic dimension to the existing SERVQUAL and consequently, introduced a dimension known as 'Compliance with Islamic Law'. These two instruments, however have also shared the same criticisms as SERVQUAL.

The importance of information management system service has also received wide attentions from practitioners and organisations in order to compete with the competitive environment. This is evident where a variety of services being offered to users of information management system (Myers et al., 1997; Alias and Abdul Rahman, 2003). The importance of information management system service quality however, is under-researched in the information system literature as most researchers in this discipline tend to focus on the technical development rather human aspects (Pitt and Watson, 1995; Jiang et al., 2003). Further, examination of such study in the context of institute of higher learning is also limited. Such limitation motivates this study to explore this issue.

3. The Modelling Methodology

One public university in Malaysia is chosen as setting in this exploratory case study. This study uses interview survey involving focus group interviews and individual interviews with administrators and academics from the faculty of accountancy in the public university. The purpose of such survey is to extract richer view of integrated information management system for service quality from the viewpoints of the interviewees. The questions were developed based on the adaptation from Alias and Abdul Rahman (2003) with some modification to suit the context of this study.

The questions asked in the focus group interviews include the types of services they would like to be offered, whether the services currently offered to both internal and external customers satisfactorily, whether the services offered being delivered in simplified way, whether the services offered being managed in a cost-effective way and whether the organisation structure support the services' performance.

The focus group interviews were conducted during a strategic planning session. The focus group consists of 12 individuals of academics and administrators in the faculty. For this interview session, the focus group were encouraged to pour out ideas on the best components or features that are needed in developing an integrated information management system quality model for the faculty. The session was conducted for three days with time break in between.

Insert figure 1 about here

Upon completion of the focus group interviews, the qualitative data was then coded and categorised to identify the components that could be included as part of the integrated information management system for service quality. The individuals comprising of 20 academics and administrators were then approached after identification of the components. The individuals were approached via email or telephone to obtain their consent to participate in individual interview session. Upon obtaining their consent, the individual interviews were conducted at separate sessions within a time frame of two months. The individual interviews were conducted to determine whether the proposed components identified in the focus group interviews are consistent to individual interviews. Figure 1 presents the framework for analysing integrated information management system for service quality.

To further enhance the credibility of the proposed components, this study also reviewed documentations and direct observation of the working environment as part of the data collection (Tellis, 1997). This is consistent to the Alias and Abdul Rahman (2003) that has adapted the Soft System Methodology developed by Checkland (1981). The components were then conceptualised and overall conclusion was made to represent the integrated information management system service quality. Figure 2 presents the research operational framework adapted from Alias and Abdul Rahman (2003) with some modifications.

4. The Model

This study develops the integrated information management system service quality based on the analysis of the exploration case study. Based on the observation of the documentations and environment, this study found that mission and vision of the university and the faculty, their strategic objectives, organisational structure and work culture influence the conceptualisation of the integrated information systems service quality components. Such findings are consistent with Alias and Abdul Rahman (2003). The effectiveness of the integrated information management system should be at macro level to include both internal and external customers.

The integrated information management system model developed consists of five main components which represent the overall activities in a faculty of a public university. The five main components consist of teaching and learning; research, innovation and publication; graduate employability; industry linkages and human capital. The participants from the focus group and individuals were then requested to identify possible issues in each component. The responses were then analysed, coded and grouped accordingly. The issues reflecting the quality of the integrated information management system service for each component are presented as follows:

4.1 Teaching and Learning

The quality of teaching and learning is a major concern among all university departments particularly in faculties. The faculty has to ensure that the quality of teaching and learning should encompasses one that satisfies the demands of public accountability such as producing more graduates at lower cost and more PhD staff (Harvey and Green, 1993). The quality should also encompass the ability of the faculty to motivate students to learn effectively and to accredit their learning to public recognition (Biggs, 2001).

In addition, quality teaching also should be able to transform students' perceptions of their world and apply their knowledge to practice upon graduation. Therefore, the integrated information management system service should be able to assist the faculty to meet its goal in fulfilling the quality of teaching and learning. Of consequence, the following issues need to be addressed when designing the model:

Issue 1: Does the system facilitate the management of teaching and learning?

The management of the faculty has to be involved with a number of tasks related to teaching and learning. These tasks include timetable scheduling, classroom allocations and consultation hours that involved extensive interactions and communications between administrators, academics and students. The system should be designed to ease the interactions and communication breakdown between these parties. Of consequence, would assist in speeding up the process without much hassle and disturbance.

Issue 2: Does the system support the mission of the university as a whole?

The university mission is to enhance the knowledge and expertise of students in their respective discipline. The system should be designed to support such mission by providing easy accessibility to allow students to gain new knowledge. At the same time, the system should be able to assist in improving students' soft skills in terms of communication, writing and coordination of information. This in turn, would enhance the competency of the students in their learning process.

Issue 3: Does the system fulfil the internal and external customers' satisfaction?

With the advancement of information technology, information could be disseminated in a very effective manner without having to go through various processes in getting the knowledge and skills from the academics to the students. Teaching materials, assignments and projects could be made available through the system without much time consumption and face to face meeting. The system should be designed to reduce the number of processes would increase the satisfaction of not only the academics but also the students specifically.

4.2 Research, innovation and publication

The faculty has taken various initiatives and programs to facilitate research, innovation and publication among its community. The quality of research, innovation and publication should focus on the establishment and fostering of quality researches and the ability of academics and students to collaborate and undertake researches that contribute vastly and significantly on the area interest. In addition, the establishment of integrated information management system service to monitor and encourage publication among its community such as electronic publication would allow the scholarship of research, innovation and publication to be '*making public*' (McKinney, 2007). Therefore, the integrated information management system service should be able to assist the faculty in transpiring the research, innovation and publication conducted in the faculty to the academic and practical world. Of consequence, the following issues need to be addressed when designing the model.

Issue 1: Does the system fulfil the needs of academics and students for research purposes?

One of the main priorities of the faculty is to enhance research culture within the faculty. The research culture could be further instilled with the existence of a support system that could assist the academics and students in their research activities. The system should be able to provide linkages between academics and potential students in particularly, by providing systematic and consistent information of academics and current/ potential students. The system should be designed to include a database system that provides information such as research curriculum vitae and research expertise of academics as potential supervisors.

Issue 2: Does the system allow the academics and students to publicise their product output?

Product output in terms of research and innovation could only be of good quality provided the output be publicised in the form of publication or copyright or patent. The availability of a system that serves as a database consisting of product output could help to publicise the efforts of the academics and students in their research and innovation activities. The system should be designed to include such database in order to not only increase the credibility of the academics and students but also on the potential of the product output to the market.

Issue 3: Does the system improve the quality of processing product output?

The accounting faculty is involved with many tasks related to research and innovation that include publication, research ethics, patent, copyright and grant application.

These tasks often are voluminous and require many hours to manage. The system should be designed to accommodate the processes activities in producing the product output could be minimised. This is to ensure that the product output could be delivered and executed on time.

4.3 Graduate Employability

The term 'graduate employability' has become a major concern among universities. This is due to the fact that graduates have to compete more than ever for the best jobs, as the number of graduates entering the market continues to increase. The faculty on the other hand need to work harder than ever to produce the most employable graduates to stay competitive (Holmes, 2001). This in turn has caused concern to the faculty in producing highly quality graduates in order to be able to survive in the real world. Such concern is important as it reflects the ability of the faculty in assisting the graduates to secure a job after graduation within a period of time. Therefore, the integrated information management system service should be able to assist the faculty in building up the database for graduates in order to increase their employability. Of consequence, the following issues need to be addressed when designing the model.

Issue 1: Does the system provide information on potential employers and graduates?

The faculty has provided efforts in assisting graduates upon in getting employed upon graduation. In order to provide such assistance, there is a need to link the faculty with potential employers. However, the list of potential employers is not being made available in a friendly manner due to manually preparation. The system should be designed in a way that could help the faculty in obtaining a database of potential employers/employees which inputted by the employers/employees with detailed information on specific job requirement and expectation of potential employers/ employees.

Issue 2: Does the system provide information that caters graduates' career path?

In accounting discipline, graduates have choices in selecting their career path. Graduates can opt to choose to join the private sector or the public sector. Within these sectors, graduates can opt to become management accountants, public accountants, auditors and managers among others. The system should be designed in a consistent and systematic manner that would assist the graduates to determine the career path that they would like to enrol upon graduation more easily. This could be done by having a system that allows and determines the potential employees according to the respective sectors.

Issue 3: Does the system provide strategic advantage to the students?

Graduate employability is a very stiff and competitive among universities as employers tend to put certain expectation on graduates and would have created certain perceptions on graduates from a particular university. Therefore, there is a need for the faculty to assist the graduates by using a mechanism to trumpet the capabilities of the graduates. The system should be designed to allow the graduates to trumpet their achievement and capabilities to future employers and hence support the readiness of the graduates.

4.4 Industry Linkages

The faculty needs to have linkages with the industry which is often perceived in terms of the production and injection of knowledge into production and management. The main issue related to industry linkages is the capacity of the knowledge production centres to produce useable new knowledge and new applications (Barry and Sawyer, 2008). The development of integrated information management system must have appropriate orientation and an ability to transmit knowledge to customers. The faculty through the publication of research findings do much of this in the normal course of their work. The important point is to engage in more deliberate and targeted transmission to industry and other users of the research product (Barry and Sawyer, 2008). Therefore, the integrated information management system service should be able to assist the faculty to link with the industry in order to meet its goal in fulfilling the dissemination of knowledge in theory to practice and vice versa. Of consequence, the following issues need to be addressed when designing the model:

Issue 1: Does the system keep track of updates from professional bodies?

The faculty has a need to keep track and update the academics and students in changes of the accounting standards in a continuum basis. Academics in particularly need to enhance and equip themselves with new financial reporting standards announcement before disseminating such information to their students. The system need to be designed in a way that information related to changes in financial reporting standards could be instantly delivered to academics. This would eventuate to the quality of the graduates as they are updated with new pronouncements endorsed by the professional bodies.

Does the system facilitate collaboration between the industry and the faculty?

The faculty has a need to create collaboration with the industry as it will help to provide opportunities for academics as well as students in gaining practical knowledge and skills. This could be done by providing industry placement and sabbatical training for the academics and students. In addition, collaboration could also be done in organising conferences that allow networking between the practitioners and the academics. The system should be designed to support such linkages between the industry and the faculty.

Issue 3: Does the system support the faculty in meeting the expectation of the industry?

There are reports that have noted the existence of expectation gap between the practitioners and the academics. The faculty is striving hard to ensure that the expectation gap is minimised in order to meet the expectation of the practitioners. The system should be designed in a way that allows the practitioners to convey their expectations on the graduates to the faculty. By this way, academics can play their role in providing knowledge and skills to the students to ensure that they know what to do when embark into the practical world.

4.5 Human Capital

The faculty is responsible to promote human capital accumulation and technological in determining current and future individual earnings and economic growth. The university through the faculty could accelerate the region's capital accumulation and technological change, thereby having a persistent effect on the growth of the economy (Schultz, 1971). One way to enhance the human capital is to promote continuous professional development to the faculty community and this can be done through proper monitoring and control. Therefore, the integrated information management system service should be able to assist the faculty to meet its goal in fulfilling the quality of human capital in its community. Of consequence, the following issues need to be addressed when designing the model:

Issue 1: Does the system assist in managing the competency level of academics?

The faculty has a need to continuously improve the competency level of their administrators and academics in enhancing their knowledge and skills. Keeping track of possible courses to be attended by administrators and academics, managing the ratio of staff attended courses and training needs analysis are necessitate to ensure the quality of the human capital. The system should be designed to assist the faculty in managing the continuous professional development of the administrators and academics.

Issue 2: Does the system provide information for succession planning purposes?

The faculty also needs to have a succession planning program in order to ensure that the going concern of the faculty. Succession planning program can be done by having the details of the administrators and academics in the faculty. The details include their curriculum vitae, research expertise and job scope among others should be made available to top management. The system should be designed to incorporate the database for all the information relevant to succession planning in order to ease the burden of choosing successors.

Issue 3: Does the system facilitate the faculty in managing academics' performance?

The faculty has to ensure that the quality of their human capital is consistently maintained. One of the ways for the faculty to maintain the quality of academics is by developing and monitoring the academics' teaching portfolio. The monitoring of teaching portfolio would help the faculty to determine whether the teaching practices of the academics are of the state of the art. The system should be able to provide a database that allows the academics to place their teaching portfolio from their entrance as lecturers to current.

In summary, the integrated information management system needs to address the issues discussed above to ensure that the effectiveness and efficiency of the system materialises. However, it is important to note that general issues related to all the components should also be addressed when designing the system. These issues include the followings:

- Does the system being delivered in a user-friendly manner?
- Does the system provide information in a systematic and consistent manner?
- Does the system being managed in a cost-effective way?
- Does the system being delivered in a simplified way?

5. Conclusion

This study presents the development process of an integrated information management system service quality model to address the problems of efficiency and effectiveness in managing a faculty in meeting both internal and external customers' satisfaction. The study demonstrates that the integrated information systems service could be used as an appropriate tool which has been classified into five components. Within these components, issues that may affect the effectiveness of the model developed were provided. The model developed in this study could be used as a guideline for other faculties in the universities to develop their integrated information management system service quality. This model however is developed based on the observation and interviews on an exploratory case study in accounting faculty of a public university in Malaysia. The suitability of this model may be inappropriate and therefore, needs to be tested in other faculties.

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Figures

Figure 1: Framework used in this study

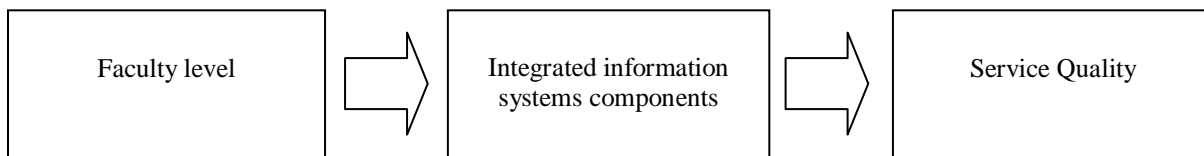


Figure 2: Research operational framework

