

## IMPACT OF INFORMATION SYSTEMS IN SATISFYING STUDENTS OF THE UNIVERSITY: CASE STUDY FROM EPOKA UNIVERSITY

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### ABSTRACT

**N**owadays, information systems are an integral part of every institution, having a positive impact in increasing the customers' satisfaction. As universities are "student focused", their satisfaction becomes very important for the university. Information systems are an added value and can help universities offer simple and effective different services to their students. These systems enable a simpler communication, enable the staff to be more effective and satisfy students.

The purpose of this study is to explain how information systems can be used in managing student relationships in higher education, by analyzing Epoka University, as a case study for this paper.

**Keywords:** high education, information systems, student satisfaction, servqual, Albania

## 1. Introduction

Education and preparing of the students with the necessary knowledge and information for their professions is one of the main basic aim of a universities. To successfully complete this process, universities should create the necessary physical, academic and administrative infrastructure, which is what students need.

In the case of Albania, because of the high number of universities, the lack of qualified staff, low potential of number of students, and because of the fact that universities are not legally qualified as non-profit institutions, etc. there are serious problems that affect the quality of education but also the level of students satisfaction from the university.

In this paper, I will be focused on the impact of Information Systems in satisfying students from the university, as nowadays, information systems are a very important instrument to manage students and all their needs and requests during their education process.

Already all private universities in Albania are using information systems in their academic process. But, it can't be said the same thing for public universities, which still use only grade books, which are a legal requirement and are used also by private universities, even for the same purpose they use information systems. The lack of information systems in public universities is closely related to the lack of funds for this purpose and of IT staff. In most public universities, there are only IT staff that take care of the local network and staff computers, and no software engineer is employed. Till now, the government didn't fund any project of public higher education institutions to develop information systems. The new reforms in the educational system, which are in their final phase of planning, are supposed to be the start of computerizing public universities, something that can change the way universities function and shorten the administrative procedures within universities.

Epoka University was selected for this study based on interviews with different IT staff from universities in Albania, Epoka University is considered as one the first private universities in Albania and is the only one which used integrated modules of student information systems from the beginning of its academic activity. Such fact, gives the university a big advantage and also shows that there is already an experience of using these systems.

The following pages explain the Information Technology and Information Systems used at Epoka University.

The next part, includes a literature review in terms of understanding the issue of student satisfaction in universities from the researchers' point of view.

After that, we will be focused on research methodology used in this study. We have used an online survey questionnaire to collect data and analyzed those using SPSS.

At the end, a conclusion and suggestions will be drawn from the study.

### **Aim of the study**

Several studies have shown that technological facilities at universities affect students' academic achievement, so it is important to investigate the effect of service quality on student's perceptions. (Al Khattab&Fraj, 2011)

This study defines which dimensions of service quality are most important to students, by stating the research question as follows: What is the impact of the Student Information System (SIS) on students' satisfaction from the university?

The main aim of this study is to identify and evaluate the factors that influence student satisfaction in Albanian private educational environment, by analyzing one of them.

### **2. IT and IS used at Epoka University**

Epoka University has a state-of-the-art ICT infrastructure. This infrastructure includes a well-established computer network, PCs that are allocated to administrative and academic offices and student laboratories. Moreover, the university is equipped with main servers and the required software packages.

Epoka has software to satisfy administrative needs and to manage academic ones. One of the student-oriented systems is the Student Affairs Information System (SAIS). The SAIS was mainly established to provide students with web-based services. Student Affairs Information System (SAIS) is an interactive system where students can manage most of their procedures within the computer medium.

Students using SAIS can follow their grade performance, messages and enrolled courses; can access Registration, Transcript, Grade Calculation, Weekly Schedule, Attendance and similar things which are related to the student academic status.

On the other hand, the university uses software to manage academic and administrative needs. Academic and administrative staff uses Staff Information System (SIS), which is an interactive system where staff can manage most of their procedures within the computer medium. They can add courses and syllabuses, approve student applications, register students, add grades, generate transcripts, etc.

Furthermore, the university is seeking excellence in implementing the services to provide students the quality services in an effort to attract more. To facilitate the management of teaching and learning process, Epoka has customized an open license and freely available software, named Moodle. It is a standalone application and accessed from two brief cases, the student briefcase and the instructor briefcase and aims to support e-learning. Through this application, the instructor can post the syllabus of his or her course and the corresponding PowerPoint presentations, handouts, and homework. The student is provided with the ability to browse the available material and upload the corresponding solutions of the home work.

Epoka University also uses Educational Information Systems (EIS), which is an open site where students and public can get detailed information about all offered academic programs. In this software, university publishes course programs of departments and related documents to the courses, such as syllabuses, course descriptions etc., which are loaded on the system by academic and administrative staff using Staff Information System (SIS). The system also offers information about institution, programs, the evaluation process, and Erasmus Life-learning Program.

### 3. Literature review

#### 3.1. Student Satisfaction and Service Quality

Service quality in higher education has been a topic of interest for many researches (Alves&Raposo, 2010; Arambewela& Hall, 2009; Elliott & Shin, 2002; Mulalic, 2012; Oldfield & Baron, 2000; Usman, 2010). The service quality is called the better and standardized output delivered by a service. In the educational sector, service quality is considered the fundamental aspect of educational excellence. (Dyson et al., 1996)

Zammuto et al. (1996) defines the perceived quality as the ones' justification about the excellence of a product or service. So, when students experience the service quality of their institution and standardized learning environment facilitated with appropriate facilities of learning and infrastructure, their interest in their organization will be retained. (Alridge and Rowley, 2001)

Nowadays, universities are becoming more aware of the importance of student satisfaction, because of an increasingly competitive and dynamic educational environment, as well as numerous challenges. (Altbach, 1998; Arambewela and Hall, 2009). This attention to student satisfaction helps universities adapt and fulfill student needs, and to develop a system which can monitor this process effectively. (O'Neill, 2003).

Today, as Kotler et al. (2001) mentioned, any business that is looking for success must be customer-centered and offer superior value to its customers. So, for many universities, student satisfaction is going to be more important, through which competitive advantage can be gained (Kevin and Dooyoung, 2002).

In the last decades, researches on customer satisfaction frameworks have been very popular.

Petruzzellis et al. (2006) defined customer satisfaction as a result of students' assessment of a service based on comparison of the perception of service delivery with their prior expectations. While, Oliver (1997) understands it as the perception that a product or service provides a pleasurable fulfillment of a service.

During the review of the literature, there were identified different determinants of customer satisfaction. Some of these determinants are: the easiness in obtaining information (Oliva, Richard, & Ian, 1992), prior experience (Bolton & Drew, 1991), attributes level performance (Oliva et al., 1992), and search time in choosing the service (Andersen & Sullivan, 1993). Parasuraman et al. (1986) says that the satisfaction level is determined by the difference between service performance as perceived by the customer and what the customer expects.

One of the most known models on Information System success is the model of DeLone and McLean (1992), which is used by many researchers as a base to measure the success of different information systems. The first model of 1992, examines the relationship between information quality, system quality and user satisfaction, and later on, the model is extended by using the perceived ease of use, perceived usefulness and information quality as determinants of user satisfaction to investigate Information System usage and success. (DeLone& McLean, 2002, 2003)

The full model of DeLone and McLean's (1992), known as "The DeLone and McLean Model of Information Systems Success" proposes six major dimensions of IS success: (1) system quality, (2) information quality, (3) use, (4) user satisfaction, (5) individual impacts, and (6) organizational impacts.

While, the extended model (DeLone& McLean, 2002, 2003) includes also service quality as the third quality dimension and intention to use and net benefits as the other new dimension. (Ramayaha&Leeb, 2012)

Parasuraman, et al. (1988) proposed to include service quality as a measure of user satisfaction, while Pitt, et al. (1995) concluded that SERVQUAL is appropriate in measuring information system service quality and added service quality in its success model.

Later, McKinney et al. (2002) developed a model of measurement of Web-customer satisfaction. According to this model, the perceived performance was examined in terms of information quality and system quality.

#### **4. Methodology**

This study was adopted from Parasuraman's SERVQUAL dimensions (1986). The dependent variable in this study is the overall student satisfaction, measured by the overall satisfaction with the university, while the independent variable is service quality in higher education that measures the level of satisfaction with service performance. Included dimensions in this variable are tangibility (the physical evidence of the service), assurance, responsiveness, reliability, and empathy.

This survey gathers feedback from students on their experience using information systems at Epoka University. It covers student perceptions of IT services; Information Systems simplicity, functionality, transparency, privacy, accessibility and the e-Library facilities.

The survey targets a representative sample of 43 students from the first cycle (bachelor) and 19 students from second cycle (master), in total 62 students. As noticed earlier, questions and types are selected from different surveys conducted by the university, which later are used to improve service quality and become a better user experience for students.

The feedback from these surveys helps us to better understand students' satisfaction and needs from information systems, and will help to improve services provided to the University students. This survey analysis describes the overall responses for each of the asked questions, issues raised by the questions, the major findings based on the responses.

The survey was realized during the fall term of 2013/2014 Academic year at Epoka University. The questionnaire was prepared to measure the student satisfaction on university's information system. It consists of 11 questions and the last one is an open question which aims to get different views of students regarding these systems.

The questionnaire requests the following information; (a) satisfaction with the University's IT facilities for students, (b) student related content of webpage, (c) functionality and simplicity of Student Affairs Information System (SAIS), (d) the transparency role of SAIS during the students' evaluation by the lecturer, (e) the grades' privacy on SAIS, (f) the ease accessibility of personal information regardless of time and place, (g) the contribution of student information system in shortening student's administrative procedures and (h) the E-Library facilities.

## 5. Research Framework and Data Collection Method

Questions and types of questions are selected from different surveys conducted by the university, which later are used to improve service quality and better user experience for students.

To collect data, 90 questionnaires have been distributed to undergraduate (bachelor) and second (master) cycles' students, but just 62 questionnaires were accepted. Out of these, 28 questionnaires were not accepted, because it was considered that those respondents were uninterested to cooperate and surveys were incomplete, therefore were considered unusable for this research.

SBSS statistics 22 version was utilized to analyze the data and to obtain results. The reliability of the scale was tested using Cronbach alpha. The coefficient alpha resulted to be higher than 0.8 for all SERVQUAL dimensions, which is considered to be a good result (Nunnally, 1978). Also alpha coefficient for student satisfaction is 0.83 so this confirms the internal consistency of this model (Nunnally, 1978).

## 6. Results and Findings

**Table 1** shows that student's satisfaction and the value of Pearson Correlation Coefficient between students' evaluation of quality of services dimensions (SERVQUAL) is 0.753. This value shows that there is a statistical significance, or saying it in other words there is a positive and significant relationship between service quality offered to the students at the university and their satisfaction. This means that more qualitative services offered to the students will generate better results and more satisfaction to them.

		Satisfaction	SERVQUAL
<b>Satisfaction</b>	Pearson Correlation	1	.753**
	Sig. (2-tailed)		.000
	N	62	62
<b>SERVQUAL</b>	Pearson Correlation	.753**	1
	Sig. (2-tailed)	.000	
	N	62	62

*Table 1. Pearson coefficient between students' satisfaction and SERVQUAL*

**Table 2** is a summary of the survey, showing the coefficient of standard deviation which is close to zero. This means that there is a strong and positive correlation between the variables. It means that students almost have the same level of satisfaction about the quality of SAIS offered by Epoka University.

	Cycle of studies	IT Facilities	Content of webpage	Rate SAIS	Functionality and simplicity of SAIS	Transparency role of SAIS	Grades privacy on SAIS	Accessibility of SAIS	Shortening of procedures by IS	Overall satisfaction from IS	E-Library facilities
Valid	62	62	62	62	62	62	62	62	62	62	62
Missing	0	0	0	0	0	0	0	0	0	02	0
Std. Deviation	.46478	.97835	.87037	.86059	1.32303	.80404	.49106	.62556	.83802	.74870	.79278

*Table 2. Summary of Survey*

### **7. Limitation of the study**

The main limitation of this study is that the number of respondents is limited to only one private university, which means that these results may not represent all the universities.

### **8. Conclusions**

This study analyzed the students' perceptions on Information Systems used at Epoka University, with special focus on Student Affairs Information System (SAIS). The dimensions of the student satisfaction are tangibility (the physical evidence of the service), assurance, responsiveness, reliability, and empathy. In general, the study found that students are satisfied by the SAIS services and that more qualitative services offered to the students will generate better results and more satisfaction to them. Also, the study revealed that students almost have the same level of satisfaction about the quality of SAIS offered by Epoka University.

The findings of this study cannot be generalized for all universities in Albania, but may help universities to enhance and allocate more resources to improve the education quality as it is proportionally related to the overall student expectation in relation with service quality.

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