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QUALITY OF CONSTRUCTION PROJECT INTERNSHIP LEARNING THROUGH CUSTOMER SATISFICATION INDEX (CSI) MEASUREMENT AND IMPORTANT-PERFORMANCE ANALYSIS

Fahmy Hermawan[1], Popi Puspitasari[2*], Julia Damayanti[3], Lisa Oksri Nelfia[4], Endah Kurniyaningrum[5], Giraldi Fardiaz Kuswanda[6]
Departement of Architecture Program, Faculty of Civil Engineering and Planning, Universitas Trisakti, Jakarta
*e-mail: popi@trisakti.ac.id

ABSTRACT

Link and match between the world of business—industry and the flexibility—adaptability to rapid changes in the future, are some of the reasons why higher education equipped with the Merdeka Belajar-Kampus Merdeka or MBKM system is necessary. Internship is one of the MBKM programs, which provides opportunities for students to gain professional work experience in the business world or industry. Civil Engineering Study Program, Universitas Trisakti is organizing an Internship program on Construction Projects in the Odd semester of 2021/2022 academic year. This study is an attempt to share knowledge about stakeholder perceptions (students, lecturers, staff, and cooperation partners) regarding the success and failure of the implementation of MBKM. The measurement was based on the priority and satisfaction levels, with the variables of educational infrastructure, reliability, responsiveness, empathy, treatment of students and information systems. This is a quantitative descriptive study using a questionnaire distributed to 217 students, 26 permanent lecturers and 12 civil engineering administration staff as respondents. Cartesian diagram Importance Performance Analysis (IPA) is used to map the value of Customer Satisfaction Index (CSI) which shows the level of stakeholder satisfactions. The results show that the CSI values (satisfaction level) are as follows: students has reached 75.67% as it is for administration staff 75.15%, whereas lecturers show a quite higher level which is 81.75%. In order to develop a well-organized MBKM in the future, institutions need to establish and manage programs in terms of: coordinating between lecturers and field supervisors, adjusting field course materials to student needs, socializing the amount of MBKM funds to students participating in internships, and organizing remedial mechanisms. Based on the data analysis, 100% of cooperating partners support the continuation of MBKM program and propose that qualified apprentices would become employees in their companies.

Keywords: Construction Project, Internship Learning, Customer Satisfaction Index, Important-Performance Analysis.

INTRODUCTION

Independent Learning – Independent

Campus (MBKM) is a program of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia which provides opportunities for students to gain practical/professional learning experience in the business and industrial world or community organizations. Students can choose one type of programs ranging from Internship, Village Development Project, Teaching on Campus, Student Exchange, Research, Entrepreneurship, Independent Projects and Humanitarian Projects according to their interests. These programs are then recognized as equivalent to 20 credits each for 3 semesters. Undergraduate Civil Engineering Study Program, Faculty of Civil Engineering and Planning, Universitas Trisakti organized a Construction Project Internship program in collaboration with State-Owned Enterprises/BUMN Partners (PT Waskita Karya Tbk, PT Angkasa Pura-1, PT Semen Indonesia and PT. Adhi Karya Tbk.).

Previous research stated that with project-based learning, students are able to explore knowledge in relaxing and unrestricted manners. In addition, competency-wise, students experience an increase in their ability to categorize the level of importance of types of work, to solve complex problems, to increase activity, to work collaboratively and independently, to share knowledge, to develop communication skills, as well as practical skills in project organization and improvisation and to create working in teams. (Ida Ayu Kade Sastrika, Wayan Sadia, 2013; Sumarni, 2020; Al-Ayubi, 2018; Effrisanti, 2015). The effectiveness and efficiency of apprenticeship learning increases when using Web-based knowledge for students, supervisors, and apprentice managers (Muhammad Rusli Baharuddin 2021). Student work readiness is significantly influenced by positive future orientation and student competency in the final year (Agusta, 2014). Project-based learning has weaknesses in terms of incompatibility of learning topics with students' needs; incompatibility of learning facilities and materials in the field with the course syllabus; incompatibility of lecturer; and time management of field supervisor (Priyono, 2020). Project-based learning takes a long time to solve problems, and requires a lot of money, besides students often find it is difficult to grasp the overall learning topic (Purnama 2014). Aforementioned explanation underlines that synchronization of management and substance between two parties (educational institutions and cooperation partners) is one of the problems in implementing project-based learning, apart from substance issues. The online learning system (Learning Management System) is an obstacle, in fact field instructors are more comfortable with traditional classes.

During the implementation of MBKM, the Bachelor of Civil Engineering Study Program, Faculty of Civil Engineering and Planning, Universitas Trisakti has faced problems, among others: in synchronizing the internal learning system with the national learning management system (Spada); in synchronizing study program's curriculum and types of learning with time management of partner supervisor's; and in synchronizing project operational schedules with academic schedule. As an effort to improve services and the implementation performance of the Internship Program, it is necessary to identify stakeholder perceptions regarding what aspects are considered priorities and what the institution's performance is like. To determine the quality of products/services (Servqual), the variables that are considered important are: tangible, reliability, responsiveness, assurance, empathy. Each aspect is analyzed in terms of expectation (priority level) and facts of service

performance through the Importance Performance Analysis (IPA) and quadrant Cartesian approach (Parasuraman, Zeithhaml, and Berry,1985).

CONCEPTUAL FRAMEWORK

Measuring the level of customer satisfaction that is related to services or products, this study uses the Servqual Model by identifying the actual performance and expectations of the service provider's performance. The gap between customer expectations and actual performance indicates unfulfilled customer expectations (Astuti, 2012). Measurements of customer expectations and perceptions, as well as the gaps between the two, use potential dimensions, such as: (Parasuraman et al,1985): Tangible, Reliability, Responsiveness, Assurance, Empathy, and each is complementary. Analysis of the level of service quality, which is identified through customer perceptions, can be mapped through a Cartesian diagram to produce an Importance Performance Analysis Model (Martilla and James, 1977).

METHOD

The aim of the study was to identify the level of priority and performance in implementing the internship program through evaluating tangible aspects (educational infrastructure), reliability of lecturers, responsiveness, assurance (treating students), empathy and information systems in Civil Engineering Undergraduate Study Program, Faculty of Civil Engineering and Planning, Universitas Trisakti, in the Odd Semester of 2021/2022Academic Year. The research used a quantitative descriptive approach, applying the Customer Satisfaction Index (CSI) method to determine the level of stakeholder satisfaction and the Importance Performance Analysis (IPA) method to determine the level of service performance. The following is a Cartesian diagram (Fig. 1) of expectation level and the four quadrants of performance (reality).

Figure 1. Distribution of priority category quadrants

The research population was undergraduate students from class 2015 to class 2021, permanent lecturers, educational staff, and cooperating partner companies. The total population consisted of 450 students, and based on the calculation of the Slovin formula, the minimum number of student respondents was 212. The respondents in this study consisted of 217 students (it means confirmed). The research confidence level was 95%, with a known population size, so that the calculation of samples followed the Slovin formula, i.e.:

$$n = \frac{N}{1 + Ne^2}$$

n = Sample Size
N = Population Size
e = 5% (significance level), confidence level 95%

The data gathered in the form of a questionnaire through an online platform using google form. Each of the six variables determining the quality of services/products above contained the

following indicators: 2 indicators for educational facilities/tangibles; 7 indicators for lecturer reliability/reliability, 3 indicators for responsiveness, 5 indicators for student treatment/assurance, 7 indicators for understanding students' interests/empathies and 4 indicators for information systems. Each statement asked for the level of importance (expectations) and level of satisfaction (perceptions) on the performance of the study program. The respondents rated each item on a five-point Likert scale ranging from "very dissatisfied" to "very satisfied." Some items of this scale are as follows:

Table 1. The scale of the level of satisfaction/performance value and the level of interest/expectation

Value	Satisfaction/Performance Level	Priority/Expectation Level
1	Very Dissatisfied	Very unimportant
2	Not satisfied	Not important
3	Quite satisfied	Quite important
4	Satisfied	Urgent
5	Very satisfied	Very important

DISCUSSION

On student perceptions (fig. 2), show a map of the expected priority level and assessment of the study program's performance as follows:

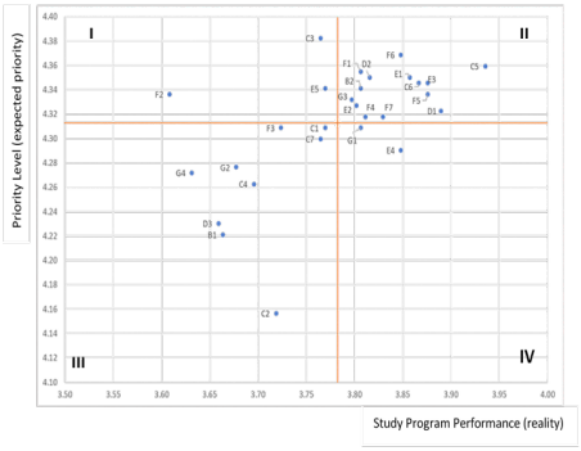

Figure 2: expected priority level map and assessment of study program performance according to student perceptions

In quadrant I, students expect that the implementation of the MBKM Internship needs to prioritize:

1) completeness of teaching materials in the form of hand-outs, modules and videos (C3) using the Learning Management System platform;
2) funds that are in accordance with higher education standards and are currently considered not in accordance with the needs of students (F2); and
3) the need for dissemination of remedial programs and their costs (E5).

Meanwhile, students think that study programs need to do the following:

1) evaluate the suitability of project-related learning materials for student needs (C3);
2) formulate the amount of MBKM funds at the faculty and university level (F2); and
3) reconsider costs for MBKM courses so that they are in line with student expectations (E5).

Quadrant-II shows students' high expectations that the implementation of MBKM learning will maintain the following:

1) The laboratories are considered to have supported MBKM activities (B2);
2) The institution has provided coordinating and supervisory lecturers (D1); already understand the students' interests and difficulties (F1); has monitored the progress of MBKM students' activities through the coordinating lecturer (F4); already understand student's competence and strive for its development (F7); has responded positively to every student complaint (G3);
3) Lecturers and supervisors deliver courses according to their expertise (C5);

be communicative in conveying material (C6); fully guide during the learning process (E3); willing to help students in solving academic difficulties (F5); and be open and cooperative (F6);

4) Guardian lecturers help MBKM students who face academic problems (D2);
5) The academic administrative staff is courteous and friendly in providing services (E1).

Quadrant-III shows the student's perception that the institution does not need to improve the following things because they are not considered a priority:

1) The library, according to the students, is in complete condition. (B1);
2) Providing time for parents to consult MBKM activities is considered not a major concern (D3), It is not a priority for institutions to socialize the development of MBKM participant acceptance. (F3), Institutions have informed academic substance and non-academic services through the official website (G2), and has been transparent in explaining the use of MBKM student funds, so attention to other things will be better (G4);
3) Lecture materials have been delivered clearly (C1), discussion forums and questions as well as the answers have been provided through the Learning Management System (LMS) platform (C2); students have received feedback final assessment (C4); and
4) Administrative capabilities and services by academic staff are considered sufficient.

Whereas in quadrant IV, students show that they are very satisfied with the performance of the study program and they think that it is not a priority for institutions to improve are as in the following:

1) imposing sanctions for students who violate regulations (E4); and
2) providing information via the LMS or official web (G1).

According to the lecturer's perception (fig. 3), the MBKM learning has a positive impact on the implementation of Higher Education Community Service (D3) and has been supported by the Study Program through appropriate facilities (F2). What needs to be maintained are as in the following: socialization and information dissemination activities have been held intensively (B1), seminar/workshop activities as a stimulus for increasing student competence (B3), the positive impact of MBKM on research activities (D1), the availability of national journals and international (D5), togetherness motivation, completeness of facilities and a conducive work environment (E2, F1, F3). What is considered a low priority is the MBKM

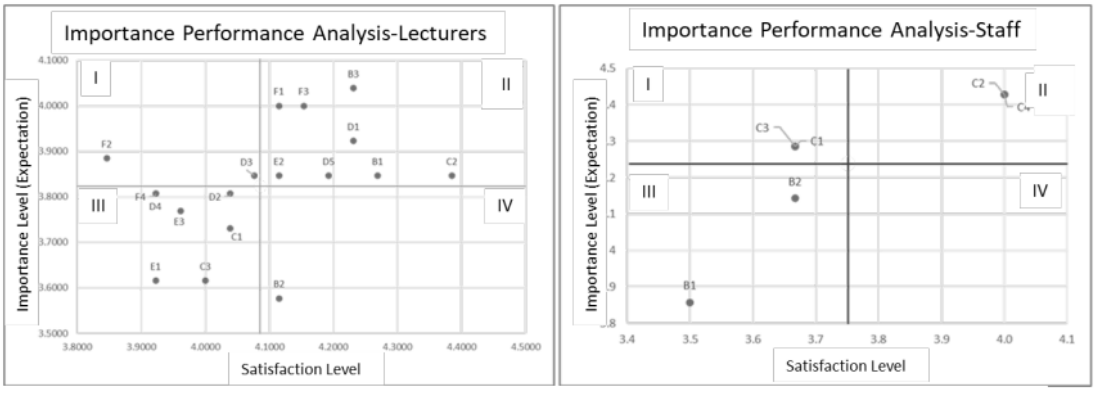

Figure 3. Analysis of the Importance of Performance based on the Perceptions of Lecturers and Education Staff

participant selection system (C1); provision of infrastructure for research and community service (D2, D4); providing guarantees for work places related to the implementation of MBKM (E4, F4). However, there are certain issues that have been fulfilled and held intensively are those related to the suitability of the competence and expertise of lecturers as well as loyalty to their duties and responsibilities.

According to the staff, the Civil Engineering Study Program has provided a work environment and facilities that comply with occupational health and safety standards (C1). In addition, the study program has provided adequate lecture facilities and information technology (C3). Both are considered a priority for organizing MBKM. What is deemed necessary to maintain is the availability of infrastructure and security guarantees (C2, C4). The respondents consider it is less priority for institutions to pay attention to the following: providing information and socialization MBKM program (B1); assigning tasks and responsibilities of staff according to the level of each competence and expertise, because they consider themselves capable and accustomed on these matters.

In implementing the internship program, 10% of partners positively support its sustainability. Partners are satisfied with the performance of Bachelor of Civil Engineering Study Program students during the internship program, and are willing to cooperate again for the next internship. Through their testimonies, they suggest that apprentice students with good grades become employees of their companies. However, the weakness is that during the Covid-19 pandemic, the partners had difficulties in providing incentives for internship mentoring activities, both incentives for students and the partner's mentors. Based on these difficulties, the Study Program decided to fund the partner's mentors with the consideration that if this was not the case, the partner might consider not supporting the implementation of the apprenticeship program. The MBKM internship program should be managed by a specific field within the study program institution, because it is related to different characteristics of partners which is complicated in its implementation.

CONCLUSION

The Bachelor Students of Civil Engineering Study Program at Universitas Trisakti believe that the issue of dissemination of funds and the completeness of learning instruments as the priority for improving the MBKM Internship Program. Several issues that need to be maintained because their performance is considered just satisfactory are: service and provision of human resources (course lecturers, partners' mentors, coordinating and guardian lecturers) who are responsive, accommodative, communicative, cooperative, and helpful. The staff hospitality also supports the satisfaction of conducting the MBKM, so this encourages high student interest in taking the MBKM internship courses. Lecturers, staff and students agree that socialization and information about MBKM learning had been carried out well, so it is considered not a priority. In addition, the three parties consider that lecturers are in accordance with their competence, and work in an environment and facilities that meet their needs. Partners support sustainability and are ready to accept good quality internship students as employees in their companies. The availability of funds for the implementation of the MBKM internship program needs to be agreed upon by the cooperation parties.

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