# Income generating activity in higher education: A case study of a public university in Indonesia

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## **ABSTRACT**

This study aimed to identify the income-generating activities and explore its management model using the case study method. In-depth interviews and documentation were used to collect data. The sample used purposive sampling from 26 study programs. Government subsidy, which is meant to cater to tuition and operational expenses, has been inadequate. Therefore, activities in the laboratory can be optimized as an income generator. The results of mapping activities in the laboratory and study programs are seminars, conferences, workshops, building rent, ballroom rent, laboratory services, vehicle rent, and scientific consulting services. Income-generating supplemented the budget of the university. The income is beneficial to hire additional project personnel, purchase supplies, materials and equipment, and improve facilities needed for instruction, research, extension, training, and productive activities. The development pattern of income-generating management through partnership and cooperation between the rector, head of the business development agency, deans, and head of a study program also laboratory so that all forms of activities that become financial sources can be monitored and evaluated. Moreover, the preparation of the accountability report must be transparent and accountable.

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#### 1. INTRODUCTION

Education plays a vital role not only for individuals but also for society. Education funding has become a joint partnership between the government and other development partners [1]. However, government subsidies intended to meet tuition fees and operational costs turned insufficient. In this case, universities must overcome the dynamics of macroeconomics without having to submit budget adjustments to parents. The budget for state universities and colleges reduction and the increasing number of students occurs almost in all universities in Indonesia. Nowadays, the university autonomy issue, particularly state universities, is funding that relies on the disbursement of the state budget [2]. In comparison, private universities were forced to set high fees collected from the community to support their operations. This reality shows that higher education products from science results cannot produce income-generating that can support university funding [3], [4].

Indonesia's low quality of education represents by weak personnel, low incentives, limited resources, facilities, and other factors [5]. The state budget has supported financing for higher education services, which is insufficient, yet maintaining national quality standards and increasing access to tertiary institutions requires more significant funding. Public institutions, including universities, apply the public service agency (*Badan Layanan Umum*) pattern to reduce bureaucracy and at the same time improve the quality of government

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services to the public [6]. As part of a public service agency's financial management flexibility, public service agency income (the entire income is PNBP or Non-Tax State Revenues) can be used directly. According to the business and budget plan, they were first being deposited into the state treasury account. The operating income surplus becomes deposits that can be used in the following year's budget.

Through flexibility in financial management, tertiary institutions obtain incentives to make incomegenerating through the services provided and the use of assets, both physical and non-physical assets. From a financial perspective, the university performance appraisal seems to be most important after the customer's perspective [7], [8]. Hence, the university income is exciting to study because it is very diverse. Numerous business corporations and political authorities have highlighted the principles of good governance for public institutions. Still, the context in higher education, especially related to income-generating have not been examined yet.

According to previous studies, most schools are lack of supervision, so they cannot implement income-generating programs properly [9]–[11]. The role of staff and all academic community influences the implementation of the income-generating program. In addition, the personal qualifications of the team, supervision, and the amount of investment affect income-generating. The income-generating program can significantly increase school income, which is helpful for the academic and non-academic development of students, teachers, and all school academic communities. Several researchers stated that the universities play an essential role in providing competitive graduates for professional works [12], [13]. Therefore, education funding is needed to create competitive graduates. The unprofessional management of the income-generating projects, ineffective policy on income-generating projects, and inadequate central administration support and goodwill were also said to be affecting the efficiency of the income-generating projects [14]. Unprofessional management means that it requires the cooperation and commitment of employees to succeed in implementing the income-generating project. Thus, fulfilling university needs can be met by internal universities and not relying on government funding.

As an effort to improve the quality and quantity of academic business, management units, supporting business units and commercial business units at university need management to run professionally, effectively, and efficiently and accountable. University as a public service agency needs to explore resources funds that not only come from educational funding but also other funding sources [2]. Indonesia's income public university is divided into two categories: income received from academic and non-academic aspects. The revenues derived from academic aspects are single tuition (*Uang Kuliah Tunggal*/UKT), while non-academic income consists of grants and research grants [15].

Universitas Negeri Semarang is one of the most prominent public universities in Indonesia [16]. One way to increase university income from income-generating besides the single tuition or the institutional development agency managed by the business development agency is to utilize study programs through research centers and laboratory optimization. Optimizing the functions of the study programs and laboratory can increase income-generating. All forms of products produced by lecturers in learning methods, learning media, financial services, financial consulting, and appropriate technology can be illustrated to the public [17]. For instance, the activities of the study programs are accounting seminars, accounting workshops, auditing training, and professional certification training. The university research centers and laboratories can also be developed and utilized for income-generating because there are adequate human resources and facilities.

One of the scenarios carried out by the university to meet budgetary needs is to use a laboratory to increase the income of higher education [18], [19]. In addition, the government encourages the state tertiary-level institutions to run businesses to generate more revenue to reduce the government budget for universities. Therefore, the business units in higher education can increase financial resources to reduce dependence on the government budget. Furthermore, being able to meet the needs of financial resources, higher education institutions can also improve academic aspects from income-generating obtained, viewed from the neo-institutionalism perspective, college participation in expanding in the form of income and cultural changes to the condition individuals, organizations, and society. This view states that neo-institutionalism influences the norms and values of the education system and the economic goals of higher education, namely increasing income [20], [21].

From a financial perspective, the university performance appraisal seems to be most important after the customer's perspective [22]. Resources dependence theory is applied to describe the behavior of institutions in developing business ventures for additional income so that institutions can survive in meeting budgetary needs [23]. The characteristics of the resource's dependence theory are needed to determine the resources, financial, infrastructure needs, and information from an environment that depends on external resources. One postulate, in view, is that the organization relies on external resources so that the result is inadequate external environment control that can disrupt the achievement of organizational goals. As a result, it ultimately threatens the organization's existence [24], [25].

Furthermore, the resources dependence theory has been applied to explain how organizations can reduce dependency and uncertainty in their organizational environment. Understanding organizational behavior requires a suitable environment that can reduce external influences and increase their strength [26]. The resource dependence theory recognizes the impact of external factors. A manager in an organization can decide to reduce the uncertainty of the organization's environment as control over critical resources [27], [28]. Resource dependence theory is the study of how external organizational resources influence organizational behavior. The resources dependence theory explains that organizational actions, such as forming interlocks, alliances, joint ventures, and mergers and acquisitions, are some effort to overcome dependency and improve organizational autonomy and legitimacy [29], [30]. At the same time, the theory of resource dependence is one of many organizational theories that characterize organizational behavior.

This research focuses on identifying income generating in each study program and investigating laboratory services and finding the management model. To get autonomy to increase income other than funds from the government, one of the strategic sources is managing the excellence of study programs and managing laboratory services. Furthermore, the income-generating aims to improve learning facilities which at the same time will enhance the welfare of students, lecturers, and education staff.

This research contributes to the development of higher education institutions in public service bodies towards legal entities in Indonesia by strengthening exploration and identification of incomegenerating sources in each study program. This is because every study program has its characteristics and uniqueness to promote and generate income by offering its services to the community. In addition, this research contributes to strengthening the capability of income-generating sources so that good management is needed in managing income-generating. Furthermore, it can provide benefits for the development of Universitas Negeri Semarang towards Legal Entity State University (*Perguruan Tinggi Berbadan Hukum*) and realize excellent service for the community.

Mapping the advantages of the study program and the income-generating management model can be used as the basis for the implementation of better income-generating. This management model is derived from Resource Dependence Theory which explains the behavior of institutions to carry out business initiatives as additional income to make institutions able to survive in meeting budgetary needs and are not dependent on education funds from the government. Through the flexibility of financial management, universities get incentives to generate income either through the services provided or the utilization of assets, both physical and non-physical assets.

University performance measures from the financial perspective are the most important one after a customer perspective. Thus, university income generating is interesting because of its diversity among units. Business corporations and political authorities have put forward the principles of good governance for public institutions. However, there has been less discussion about income-generating in higher education. Therefore, the purpose of this study was to identify income-generating activities and explore management models.

# 2. RESEARCH METHOD

This was qualitative research employed a case study design. A case study is considered more flexible in helping researchers find essential factors that arise from real-life contexts that cannot be directly manipulated [10]. A case study was conducted at Universitas Negeri Semarang, Indonesia. Universitas Negeri Semarang was chosen because it will become a Legal Entity State University, which can generate additional income-generating the study programs and laboratory-based on the excellence of study programs. Universitas Negeri Semarang has 69 study programs that can be developed so that the knowledge produced at each study center can be helpful for all people. The data sources were 52, the head of the department, the head of the laboratory, the head of the program, and the head of the study center in each faculty obtained using purposive sampling from 26 study programs. Purposive sampling is a sampling technique of data sources with specific considerations or according to purpose.

This research refers to the development of the accounting science paradigm, which reflects the interpretative paradigm [31]. Its basic assumption is the knowledge explored by explaining human intention scientifically in a series of subjective interpretations and is confirmed by the people's common sense in daily activities. This study reveals various activities conducted in universities as additional sources of income and designs the management models from the perspective of activity doers and leaders who have been directly involved. A case study approach is applied. It aims to explore and describe the performance evaluation of revenue sources from the leadership perspective, identify, and analyze the types of outcomes and impacts.

The primary data sources in this qualitative research were words and actions [32]. Therefore, the main instrument in this study was the researchers through interviews who are expected to analyze more deeply the qualitative data obtained. The method of data collection was undertaken in two ways, following the purpose of the research. This research employed two collecting data proposed [31]; documentation and interview strategies.

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First, the documentation is gathered from the annual financial report of the university. Furthermore, an in-depth interview was conducted involving key informants. After all, data were collected, they are clustered based on the themes and sub-themes referring to the research topic. At this stage, researchers contemplate the mind content by remembering, perceiving, and designing the themes. Collecting data with documentation is carried out by taking existing data from the university annual financial report. This research was also carried out with an in-depth interview process (in-depth interview) to explore and collect data from informants. Based on the collected data, the compilation is carried out according to the theme, where the data is sorted into sub-themes according to the theme of this research. At this stage, the researcher understands contemplating the content of the mind by remembering, perceiving, and desiring activities leading to the research theme.

Comprehensive questions were made for the interview use, which covers types of excellence of the study program, laboratory, the main program, and the legality. The interview in this case study was conducted involving the laboratory management staff, the head of the laboratory, the head of the study program, and those in charge of activities. The selection of the person in charge of the action was meant to use the triangulation technique. According to Lukka [33], this technique usually refers to using various perceptions to clarify meaning and verify the possibility of repetition of observation or interpretation. It holds on the principle that no observation or interpretation is 100% repeatable. In addition, it was also in the form of literature studies, government regulations regarding the implementation of income-generating in the university environment, the rule of Universitas Negeri Semarang Chancellor, and scientific journals. This triangulation technique is applied to determine the amount of income-generating that will be obtained for universities, faculties, and majors/study programs.

#### 3. RESULTS AND DISCUSSION

#### 3.1. Profile of income generating sources in the study program

Based on the focus group discussion and in-depth interviews, a mapping of the excellent study programs and laboratories in Universitas Negeri Semarang was obtained. A total of 52 participants from the dean of faculty, head of the department, and laboratory chairpersons conveyed the readiness of the study program to sell goods and services that are intellectual products of lecturers. Table 1 shows the profile of income-generating sources in the study program.

The excellent product of each study program in Table 1 can be used as a business unit to manage business units, one of which is used to gain an income-generating to support academic and non-academic activities. In terms of the length of its establishment, the excellent of the product of study programs vary from one semester, more than five years up to 16 years. The research results revealed a significant relationship between long-term income-generating operations and income-generating implementation [1]. Thus, the longer the product stands should show more mature readiness in generating income so that the contribution toward the income-generating is also high. For example, legal aid services in the Law science studies program have been established for more than five years. This service has been institutionalized. In addition, psychology study programs have started to open services sixteen years ago, currently running a business unit in a central assessment which includes psycho assessment services, counselling, therapy, and training. Based on the focus group discussion results, informants concluded that the development of these services was felt to have met the targets set by the faculty and the university.

The study program that has not been maximizing the contribution toward the income-generating universities was the Department of Family Welfare Education. It was due to the average service user was only from the internal party. They were only the students, so there has been no contribution from the excellent of the study program toward university income generating. Indonesian literature study program was excellent in theatre, journalism, and Indonesian Language for Foreign Speakers (*Bahasa Indonesia bagi Penutur Asing/BIPA*). However, there has been no excellent coordination between the manager. The pattern of collaboration was still independent and personally (not yet institutionalized) and used only by students. Likewise, study programs with minimum income-generating contributions are Education Technology, Visual Communication Design, Guidance, Counselling, Early and Childhood Education, Geography, and Management. The participants felt that the gift of laboratories and products to the excellent study programs was still limited in contribution to income-generating universities.

The staff profile needs to be identified in assessing the readiness of the study center based on the excellence of study programs to support income-generating. It includes study program age, educational background, training and seminars, and workshops attended. These determinants affect staff professionalism in managing and developing the excellence of study programs in supporting income-generating universities. The results of previous studies [9], [18] revealed that personal qualifications and staff support positively affected the implementation of income-generating.

Table 1. Mapping the income generating sources of study programs and laboratories			
No	Study programs	Laboratories/Research center	Type of goods or services
1	Biology	Biology Laboratory	Cellular and molecular biology
2	Natural Science	Indonesian Journal of Science	Journal publication fee
	Education	Education	
3	Informatic Engineering	Informatic Engineering Education	Training media based on android
	Education	Laboratory	
4	Chemistry	Chemistry Laboratory	Alternative energy
5	Mathematics Education	Mathematics Education Laboratory	Math City Map Learning Media, mathematic olympiad, and seminar
6	Chemical Engineering	Chemical Engineering Laboratory	Instrumentation Laboratory
7	Electrical Engineering	Electrical Engineering Laboratory	The laboratory of integrated computer
8	Family Welfare Education	Family Welfare Education Laboratory	Batik production, Catering, and Makeup Services
9	Indonesian Language	Indonesian Language and	Journalism, Indonesian Language for Foreign Speakers (BIPA),
	and Literature Education	Literature Education Laboratory	Entrepreneurship
10	English Language and	Literacy Study Center	Indonesian Language for Foreign Speakers, Theater, Journalism,
	Literature Education		and Editor of Book
11	Law science	Law Science Laboratory	Legal assistance, legal services for making academic drafts per law, and recruitment services for prospective foreign workers
12	History Education	History Laboratory	Training of learning media and consultant of teaching, learning in history courses, and journal publication fee
13	Visual Communication	Visual Communication Design	Computer studio, ceramic studio, batik studio, and workshop
	Design	Laboratory	center of art
14	Art Education	Art Education Laboratory	Journal publication fee
15	Economic	Economic development Laboratory	Training in economic analysis, study, and development of
	Development	1	science tools, also journal publication fee
16	Psychology	Psychology Laboratory	The center assessment is in the form of psycho-mental services,
		,	counselling, therapy, and training
17	Educational	Educational Technology	Training services making learning media, film production
	Technology	Laboratory	training services, curriculum analysis services, and textbook, learning resource writing training, technopreneur training
18	Early Childhood	Early Childhood Education	services, and webinar-based training services Microteaching laboratory, dance laboratory, recording lab, and
10	Education	Program Laboratory	music laboratory for early childhood
19	Guidance and	Guidance and Counselling	Counselling services, educational testing services, center for
19	Counseling	Laboratory	education and community counselling, training services, and
20	Primary School	Primary School Teacher Education	continuing professional development program  Media learning and mentoring for elementary teachers
20	Teacher Education	Laboratory	ividua idanning and incinoring for elementary teachers
21	Non-Formal Education	Non-Formal Education Laboratory	Community learning activity center in the form of
_1	1.on I office Education	1.5 I office Education Educatory	homeschooling
22	Geography	Geography Laboratory	Mapping based on geographic information systems (GIS) and photogrammetry training, and remote sensing
23	Accounting	Accounting Laboratory	Tax center, brevet training center, and accounting, journal publication fee
24	Management	Management Laboratory	Capital market training, marketing, human resources training,
25	Foonomics Education	Integrated Office and	statistics and research methods training, journal publication fee Training and mentoring professionalism of teacher, study center
23	Economics Education	Integrated Office and Administration Laboratory	of archives.
		Bank Laboratory	Training of bank for teacher and students.
		Microteaching Laboratory	Development learning media and quality of teacher.
		Center for Accounting Education	
		Studies Studies	Training and mentoring accounting teacher, seminar and completion of accounting.
26	Physical Education and	Athletic Laboratory	Athletic room rent, swimming pool rent, training and services of
20	Recreation	Anneue Laboratory	sport
	Accication		sport

The research found that the average research center manager consisted of two to six people. The position includes the chairman of the research center and their staff. Besides, the laboratory consists of the chairman, laboratory staff, and laboratory assistants. The average educational background of the laboratory chairman is magister and doctoral. The undergraduates usually occupy a position as technicians and laboratory. The doctoral or professors typically hold the role of the head research center. Most of them are still attending the university in the 4-6 semesters in their respective study programs for laboratory assistants. Development competence of laboratory and research center staff made various efforts, such as attending management laboratory, finance, and administration [34].

On the other hand, the intensity of staff participation in seminars, workshops, or training is essential to know. The staff experience and insight can increase [35], [36]. The training was attended by laboratory staff varied enough from the International Standard Operations, the primary standard competency requirements for testing and calibration labs, international seminars with indexed proceedings, editorial workshops, book 308 □ ISSN: 2252-8822

writing workshops, and self-development. Self-development aims to upgrade laboratory staff a capability related to their expertise in their respective fields. For example, a seminar attended by the laboratory of psychology study program staff to update the psychology profession likes workshop about test mental and school health.

Furthermore, the result shows income-generating sources, namely seminars, workshops, training income, journal publication fees, and laboratory service income. The three sources of income with the most considerable nominal amount contributed IDR 2,349,400,469 in revenue are seminars, workshops, and training income. Meanwhile, journal publication contributed a revenue of IDR 437,501,272, and laboratory service income of IDR 329,547,100. Based on these data, it is seen that seminars, workshops, and training activities in the study program provide the largest contribution to the amount of income generating universities.

Based on the data, the second contribution is from the journal publication fee, and the third is in the laboratory service. Thus, it implies that the study program still focuses on these three fields as a generating source. Factually, based on the mapping of the identification of the advantages of the study program, many fields can generate additional income. However, other fields seem to be less managed in an optimum way. Therefore, it is necessary to develop management capacity, promotion, and policy support so that other fields can also be designed to generate additional income. Figure 1 shows the largest income-generating sources in the study program.

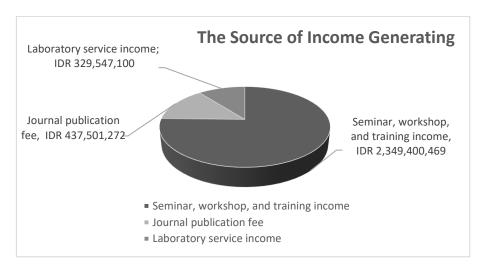


Figure 1. The source of income generating

The findings confirm that income-generating management between one unit and another is diverse. For example, in journal publication fees for journals ranked Second Grade (Sinta 2), the nominal amount in income-generating differs between departments. Likewise, the nominal is also different with journals ranked First Grade (Sinta 1). Thus, creating a system and mechanism for determining the income-generating journal publication fee to be equal among units could be necessary. It aims to avoid inequality in determining income generating. This will lead to benefit all parties without burdening others. Besides, the rates for workshops, seminars, and training activities also need to be reviewed according to the essence and characteristics of the activity outputs.

Finally, it is necessary to expand the development of laboratory services and product promotion. For example, laboratory services can establish cooperation with government agencies or companies in providing team member lunches or various activities. Likewise, for beauty and fashion, they collaborate with bridal makeup, graduation, or other ceremonies. Science laboratories can also expand their network. Students can enter the laboratory, but the general public or middle/high school students can also enjoy its services.

Furthermore, to further identify the readiness of the research center in supporting income-generating universities, it can be seen from the policy support. The result of the study shows that some of the policies that support income-generating universities are:

# i) Socialization and work meetings

The university socialization can be carried out and then delivered to the faculty and departmental and study programs. Work meetings are held to improve coordination between the chairman in discussing the management of research center excellence to contribute more to supporting income-generating universities.

#### ii) Building awareness

Professional building awareness is followed by many courses' certification. The competency upgrading program for all laboratory staff is also sought to improve their experience and expertise.

## iii) Collaboration with agencies

Some study programs have established relationships and cooperation. Department of art collaborates with small-medium enterprise offices, and the Department of Development Economics has collaborated with Indonesia Bank and Central Java Province. Department of Accounting has collaborated with Central Java Tax Office. Department of management has teamed with the Indonesia Stock Exchange, TICMI corporation, MARK PLUS corporation, and Brilliant Certification Institute for competencies test. All cooperation is accompanied by a memorandum of understanding or a memorandum of agreement.

## 3.2. Model of income generating management based on excellent of the study programs

The university study program and laboratory management model need to be considered a reference and guideline for each study program in developing program excellence (Figure 2). A model in the management of the study center aims to boost each study program to contribute to supporting incomegenerating universities. The management model is sourced from the resource dependence theory, which describes the behavior of institutions to carry out business initiatives as the additional income. The model can describe the behavior of institutions in developing business ventures for supplemental income so that institutions can survive in meeting budgetary needs and not depend on government education funds. Thus, the model in this study benefits the university development towards Legal Entity State University and the fundamental role of Universitas Negeri Semarang in realizing service excellence for the community.

The model that the author intends is illustrated through concrete steps taken by study programs and universities to implement income-generating universities. This step starts from establishing the study programs readiness to the implications for implementing an income-generating university. The following is a study center or laboratory management model that the researchers propose. The study program's first step is identifying advantages, including any goods or services that can be developed into marketable products based on the Rector Regulation of Universitas Negeri Semarang Number 25 of 2018. To increase university income from income-generating outside the UKT or the contribution of institutional development managed by the Business Development Agency. The Business Development Agency manages university assets, works the innovative products of lecturers to be used in the community, utilizes study programs through research centres and laboratory optimization. University business activities cover all productive activities organized by the university in business units and other business activities, whether directly coordinated by the Business Development Agency or not, to produce goods and services to gain profits to increase university service to the community. Therefore, identifying the product superiority of the study program should have been the focus of attention. Figure 2 shows the income generating management model based on the excellent of study programs.

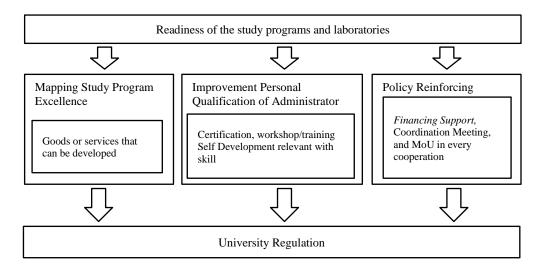


Figure 2. Model of income generating management based on excellent of the study programs

Furthermore, the staff qualifications need to be improved. Some ways that can be done require managers to have certification and include managers in workshops, which relates to the capacity building according to the demands of expertise in their respective study programs. Good manager qualifications can improve laboratory management as well. The relevance of higher education human resource management to work culture is inseparable [37]. The study program and tertiary institution are obliged to create an institutional culture and harmonize the differences between the various cultures brought by each individual to become a culture accepted in the college environment. For this reason, it is necessary to cultivate a work culture that is following the mission, vision, and objectives of the college work program and in harmony with the culture that grows and develops in its adaptive environment [17].

The determination of policy supporting gives the primary role [38], [39]. It is done so that income-generating activities can be a concern. It is in line with the resources dependence theory characteristics to determine the resources, financial, infrastructure needs, and information from an environment that depends on external resources [29]. Necessary policy support is one of which is supporting financing or funding [40], [41]. But unfortunately, funding support for the development of this laboratory has not been seen, so the effect of laboratory services tends to be slow. Limited resources will undoubtedly affect the study program in providing services or creating a sheltered product by the wider community. Another pursued policy is a memorandum of understanding in cooperation with agencies, but this is still done by several study programs and has not yet gone commercially. However, for almost all study programs, coordination meetings have been conducted. The rector regulations must strengthen the research centre management model based on the advantages of this study program. The rule of the rector is related to income-generating based on the superiority of the study program and is expected to be implemented in real terms in the following year.

#### 4. CONCLUSION

This finding confirms that income-generating management must implement a monitoring and evaluation system that can track the economic performance of each study program or laboratory excellence. Monitoring and evaluation activities are carried out by considering periodic financial reports and existing operational problems. A monitoring and evaluation team consisting of representatives from management staff, study program leaders, and the top management at university levels can be formed monitoring and evaluation. This team is expected to improve the system based on the actual condition and promote and create a more effective working atmosphere and collaborative mechanism among stakeholders. Since this was a qualitative study, future research needs to apply a quantitative approach. It is essential to determine the implementation of income-generating policies regarding staff support, head of department support, head of the laboratory, lecturers, and existing facilities.

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