PERFORMANCE EVALUATION USING KEY PERFORMANCE INDICATORS AND BALANCE SCORECARD FOR DISTANCE EDUCATION

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ABSTRACT

Key Performance Indicator is a measurement tool that focuses on critical performance aspects to ensure present and future success of an organisation. It is embedded within Balanced Scorecard as a strategic management system derived from the visions and the strategies that depicts important aspects of an organisation. Balance Scorecard has four different perspectives of an organisation's activities: (1) financial perspective, (2) customer perspective, (3) internal business process perspective, and (4) learning and growth perspective. This study aims to develop Key Performance Indicators at the Open University Indonesia or UT in accordance with the Strategic Plan of UT 2010-2021 and the Operational Plan UT 2013-2014. This research shows the use of Key Performance Indicators and Balance Scorecard for developing the Strategy Map for the Open University Indonesia. The map can be used to identify variables that can be used to evaluate the performance academic services towards achieving the vision and the mission of the university.

Keywords: *Performance Evaluation, Balance Scorecard, Key Performance Indicator, Distance Education*

INTRODUCTION

Performance is a common term used to partially or fully measure the activities of an organisation within a period of time that refers to standards, e.g., past expenses, projected efficiencies, management accountabilities, etc (Rivai, 2005). High performance is the result of appropriate behaviour, especially discretionary behaviour, and the effective use of the required knowledge, skills and competencies (Armstrong, 2006). The performance of an organisation requires evaluation in order to find out the extent of its achievements and the impact on the organisation. Performance evaluation is associated with assigned working standards for assessing whether or not an employee performs activities and achieve the assigned performance standards. One of the performance evaluation instruments that can be used is Balanced Scorecard (BSC). BSC is a performance evaluation instrument that aims to enable the organisation to evaluate the achievements of strategic goals. The BSC concept was initially developed as a performance evaluation system by Robert Kaplan and David Norton in 1992 at Harvard Business School.

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As educational institutions, universities possess business cores in the teaching and research fields. These two business cores serve as key variables that contribute to the success of the organisation. Academic service is an important pillar for any university. A lot of universities have tried to develop programmes in order to provide academic services for their students. BSC can be applied in order to periodically measure and evaluate the effectiveness of the academic services. Shelton (2006) described the application of Balanced Scorecard in measuring the higher education performance, in particular the distance education model. They pointed out that the balanced scorecard supports the performance evaluation of the institution and the Balanced Scorecard can be used to measure the online learning quality element of a college, as well as support strategic planning and programme development.

One of the measurements used in the BSC is Key Performance Indicators (KPI). KPI are a set of measurements that focus on the most critical performance aspect to the success of the organization, both in the present and in the future (Parmenter, 2010). Most indicators correspond with input and process (Powar, Panda, & Bhalla, 2000). Chandrashekhara (as cited in Powar et al., 2000) identified three types of KPI for distance education: micro indicators, macro indicators and mega indicators. Micro indicators are associated with certain operations in sub-systems that have an impact on overall performance. Macro indicators cover fundamental areas of performance, such as student entry-exit performance. Mega indicators are related to the performance of the subsystem, and interaction between subsystems as a unit, for example the ratio between formal and non-formal education programmes and the excesses and interactions of institutions with the industrial world (Powar et al., 2000).

The indicators developed by Rao (Powar et al., 2000) became one of the references in the development of KPIs at the Open University, in addition to those developed by Indrajit and Djokopranoto (2006) and Shelton (2006).

The Open University Indonesia (*Universitas Terbuka Indonesia* or UT) identified five keystones that are crucial for the university's development, which are: (1) Quality, (2) Accessibility, (3) Relevance, (4) Integrity, and (5) Accountability. UT goals to be achieved in the year 2021 are: (1) Becoming a world class distance education (PTJJ); (2) Having 250,000 students, of which 50% of the students are not student teachers; (3) Providing a variety of learning support services based on highly accurate technology, information, and communication; and (4) Applying a management and learning system based on technology, information, and communication. In order to achieve those goals, 15 target items within 3 focus groups have been created. The 3 focus groups are (1) Focusing on Improving and Developing Academic Services; (2) Focusing on Affordability and Quality of the Services; and (3) Managing the organisation. Evaluation of the university's distance education performance using BSC can illustrate detailed its achievements from every perspective.

LITERATURE REVIEW

Balanced Scorecard in Public Sector

BSC was originally designed for business organisations, and later it was used in public organisations and non-profit organisations. The difference between the public and private sectors are their goals. The public sector's main concern is providing public services, while the private sector's main concern is making profit. Even though public organisations do not seek profit, there is still a need to measure the effectiveness and efficiency in its service provision to the people. Several studies were focused on the modification of the BSC concept to suit the needs of the public organizations. The suggested modifications include: 1) Framework modification in which the motivation in a BSC for public organisations is their

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mission to serve the people; 2) Position modification between financial perspective and customer perspective; 3) Customer perspective is modified into customer & stakeholder perspective; and 4) Modifying learning and growth perspective into employees and organisation capacities perspective (Rohm, as cited in Imelda, 2004). The comparison between the public and private BSC perspectives by Mahmudi (2010) is shown in Table 1.

Table 1: BSC Comparison between Public and Private Sectors

Perspective	Private Sector	Public Sector
Financial	How do we view the stakeholders?	How do we increase earnings and decrease costs? How do we view the taxpayer?
Customer	How do the customers view us?	How do the people using the public services view us?
Internal Process	What superiority should we get?	How do we build superiority?
Learning and growth	How do we keep on creating new values and improving?	How do we keep adding and improving our values to the stakeholders?

BSC in public sector modifies the priority to focus its goals based on customer perspective in directly supporting the achievement of the organisation's mission. Conversely, strategy remains as the main activity controller that influences the stipulation of all four perspectives. Niven (2008) describes the main difference between public and private organisations as the placement of the mission of the organisation within the BSC framework. The mission of the public organisation underlines the main concern for the customers, and not financial aspects. Public organisations should decide who (within the population) will be served and how to satisfy their needs. Figure 1 shows the four public sector perspectives. The customer perspective is placed at the top and every initiatives and work carried out by a public organisation, whether from the financial perspective, the internal process perspective, or the development of the organisation, should be intended to support the customer perspective (Niven, 2008).

Figure 1: Balanced Scorecard in Public and Non-Profit Organisation/Sector

The main focus of the public organisation is its mission. Generally, the mission of the public organisation is to serve and improve the well-being of society. With that in mind, strategies can be formulated in order to achieve the goals stated by that mission. Those strategies will then be put into 4 perspectives: customer perspective, financial perspective, internal process

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perspective, and employee learning and growth perspective. The customer perspective describes the quality of service to the people. Financial perspective identifies the efficiency of services. The internal process perspective describes the essential processes to improve the people's quality of life. Employee learning and growth perspective portrays the ability and competency of each member of the organisation (Niven, 2008).

Balanced Scorecard in Education

Universities whether it is a government, non-profit, or profit-oriented private institutions, has an obligation to prioritise its goal to serve its customers by improving their life through education. Therefore, the use of the BSC concept of BSC can be related to the use of BSC in public sector. Tilaar (2012) states that the underlying difference between the world of business and education is that the world of education has a clear vision and mission with high idealism to contribute to the process of humanizing or civilizing a human. Educational culture embodies dense value of humanity. Nevertheless, the humanizing process is often omitted from the business vision in order to maximize profits. The application of business management into the world of education should be reviewed. Students fall under the customer category for universities, yet students are also involved in the internal process due to their deep involvement in the main process of provision and acquisition of education that occurs in universities. These involvements affect the product quality of the university. This obscures the boundaries of product and customer. Indrajit and Djokopranoto (2006) clarifies that the role of students as customers and society as stakeholders to whom the graduates are obliged to contribute (directly and indirectly).

Financial perspective of a public organisation can be analysed by measuring net income, gross revenue, net assets, timeliness of financial reports, income (or expense) per employee, and budget or forecasting accuracy (Niven, 2008). But these measurements cannot be fully applied to the educational sector. Income and earning components in the educational sector are mostly derived from the students. The earning principle in the field of education means that there is sufficient fund to sustain the implementation of its mission.

The internal process perspective of universities is similar to the business sector. The process consists of three phases: operational process, innovation process, and after-market service process. Nevertheless, the evaluation of the processes involved requires deliberations on the criteria that must designed to improve the level of education and thereby improving people's quality of life similar to the internal process perspective of public sectors.

The learning and growth perspective in universities chiefly aims to increase the human resources capacities. There are three principal categories in this perspective, which are employee capabilities, information system capabilities, motivation, empowerment, and coordination capabilities (Indrajit & Djokopranoto, 2006).

Similarly, BSC could help distance education providers to improve their services. According to Santovec and Lou (2004), BSC tool is "a catalyst for linking today's distributed learning actions with tomorrow's goals". BSC can link programmes and their operational objectives with the institution's vision and mission. The scorecard can effectively identify strategic questions and actions used to increase the value of the education provided, as well as help the institution to clarify its vision and its strategy so that both of them can be translated into actions. BSC provides a clear picture on how the institution should measure in a balanced perspective.

BSC is used to track Key Performance Indicators (KPIs). KPIs are non-financial measureable values that indicate how well an organisation achieve its targeted objectives. It is a type of performance measure. Parmenter (2010) define performance measurements as indicators used by management to gauge, report, and improve performance. Performance

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measures are grouped in the following way: 1) Key Result Indicator (KRI), which comprises of measurements such as customer satisfaction, net profit before taxes, customer profitability, ratio of customer satisfaction and the return on capital employed; 2) Result Indicator (RI), which refers to financial measure; and 3) Performance Indicator or Key Performance Indicators (KPI), which focuses on critical performance aspects of an organisation required for success. Performance is about upholding the values of the organization. This is an aspect of behaviour that focuses on what people do to realize core values such as concern for quality, concern for people, concern for equal opportunity and operating ethically. It means converting espoused values into values in use: ensuring that the rhetoric becomes reality (Armstrong, 2006). Performance is the manifestations of behaviours and results. Behaviours are created with abstract performance transforming into measured activities. Behaviours are also the result of appropriate choices, both mental and physical work applied to the assignment that can be evaluated according to the result in each phase. The definition of performance not only exclusively considers managerial target achievements, but also examines the input (behaviour) and its results. High performance is the result of appropriate behaviour, especially discretionary behaviour and the effective use of the required knowledge, skills and competencies (Armstrong, 2006).

The usage of performance indicators in higher education was published in the Jarratt Report in 1985 in England. The report which reports the inquiry into British higher education identified large numbers of indicators. The main purpose of performance indicators is to evaluate the performance of the system and the institution. The main purpose of performance indicators in an academic institution is to improve the quality of learning, research, and services given by the institution. In distance education, there are six indicators and sub indicators that are measured: (Powar et al., 2000)

(1) Administration and Management
- Management of student registrations
- Management of learning material developments and distributions
- Management of Student Support Services
- Management of Grading and Evaluations

(2) Development of Learning Materials

(3) Production of Learning Materials
- Production of printed learning materials (module)
- Production of non-printed learning materials (audio and video)
- Storage, stock management and inventory control

(4) Delivery Mechanism
- Distribution of learning materials
- Marketing of learning materials

(5) Student Support System
- Regional Student Support Centre System (UPBJJ)
- Student Support System in the Central Office
- Student Support System in the Student Learning Centre

(6) Student Registration and Evaluation
- Publication of Information before Registration
- Evaluation
- Tabulation of Grades

Examples of performance evaluation using KPIs refers to studies by Indrajit and Djokopranoto (2006), Powar et al. (2000) and Shelton (2006).

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RESEARCH METHOD

This research is a conceptual research that uses Balanced Scorecard for the development of Key Performance Indicators (KPI) in distance education for Open University Indonesia. KPIs were developed in reference to the Open Plan Strategic Plan (Renstra UT) 2010-2012 and the Operational Plan (Renop) 2013-2014. The developed KPIs are used to construct a strategic map that can help the university to identify variables to evaluate performance achievement within each BSC perspectives.

RESEARCH FINDINGS

Open University Indonesia is concerned about its Strategic Plan to emphasise its academic and non-academic services for the students as its core business. The university's academic services comprise of: a) registration, b) face to face tutorial and distance tutorial through television, radio, and internet, and c) academic consultation. Its non-academic services comprise of: a) information services, b) learning aid, c) academic guidance, d) academic administration, e) customer feedback, and f) library.

The business processes of the Open University Indonesia depicted in Figure 2 has four quadrants. The first and second quadrants are non-academic services that are provided by the university. The second quadrant refers to services provided to support academic processes. In the third quadrant, all activities focus on supporting the learning and teaching process in the form of tutorial services, both face to face and online tutorials. Independent learning processes are also included in this quadrant. The fourth quadrant comprises of the evaluation of the learning process.
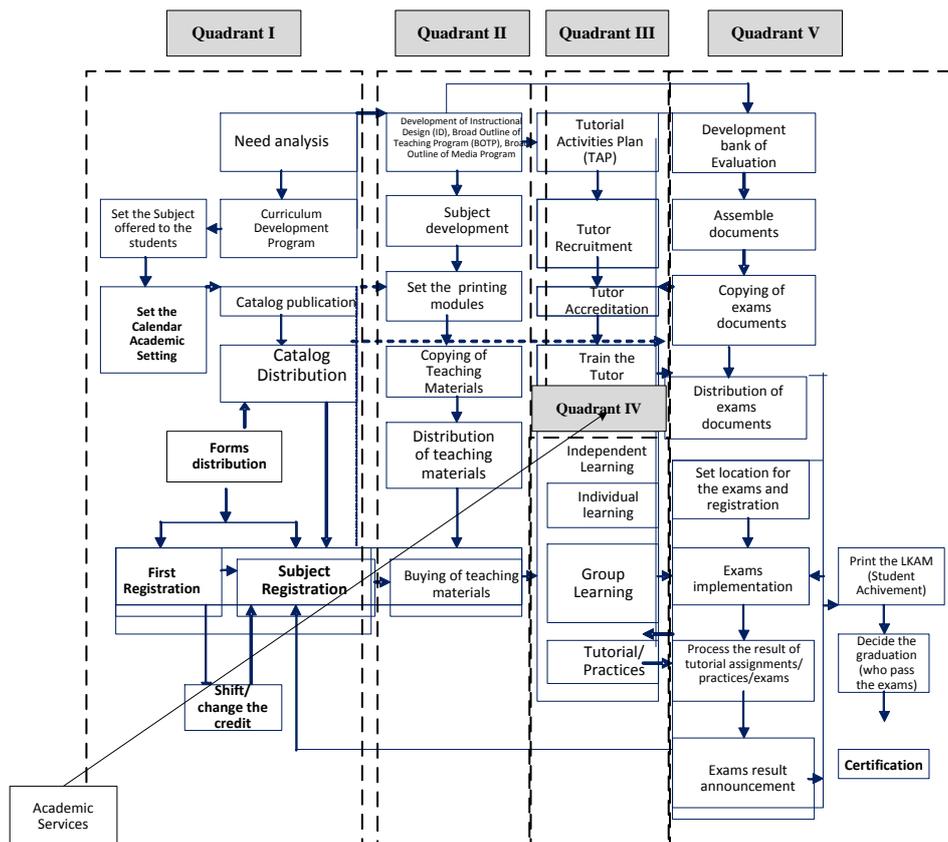

Figure 2: The Open University Business Process (Renstra Universitas Terbuka 2011 – 2013)

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The processes identified in Figure 2 are used to develop the Focus and Sub-focus KPIs presented in Table 2. These KPIs are developed based on the list of KPIs developed by Indrajit and Djokopranoto (2006), Powar et al. (2000) and Shelton (2006).

Table 2: Key Performance Indicators of Open University

No	BSC Perspective	Sub Perspective	
1	Performance of the Open University from Customer Perspective	1.1	**Usefulness for the customers**
		1.2	Quality of Student Development
		1.3	Study Result Evaluation
		1.4	Quality of services offered
		1.5	Price of services offered
		1.6	Time rendering of services
2	Performance of the Open University from Internal Business Perspective	2.1	Teaching Excellence
		2.2	Excellence in the development of learning and learning skills
		2.3	Curriculum excellence and innovation
3	Performance of the Open University from Learning and Growth Perspective	3.1	Development of faculties
		3.2	Technology utilization, development, and application
		3.3	Quality of Supporting Facilities
		3.4	Quality of Human Resources
4	Performance of the Open University from financial perspective	4.1	Funding source
		4.2	Earnings from academic activities
		4.3	Financial management

The KPIs in Table 2 are used to develop the following Strategy Map for Open University Indonesia in order to conduct performance evaluation to measure the achievement of the university's vision, mission and goals.

Strategy Map of Open University Indonesia

The strategy map in Figure 3 is the visualization of the correspondence between strategic objectives in the form of causality. The Strategy Map illustrated in Figure 4 details out the academic services criteria from every Balanced Scorecard perspectives, and the relation between criteria with the perspectives.

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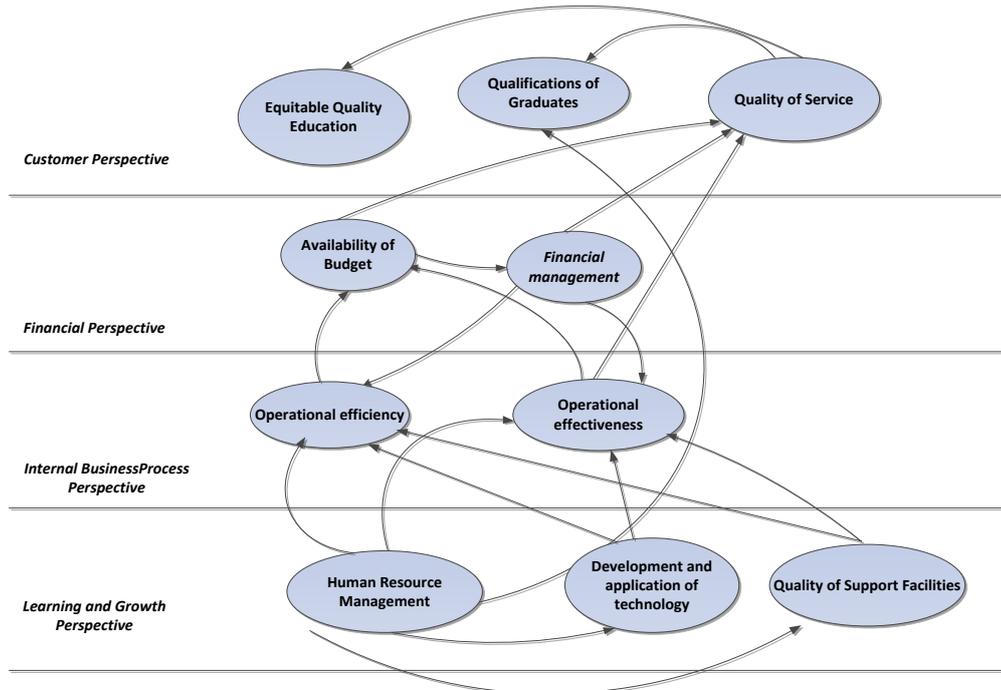and Balance Scorecard for Distance Education.

Figure 3: Strategy Map of the Open University from the Perspective of Balanced Scorecard
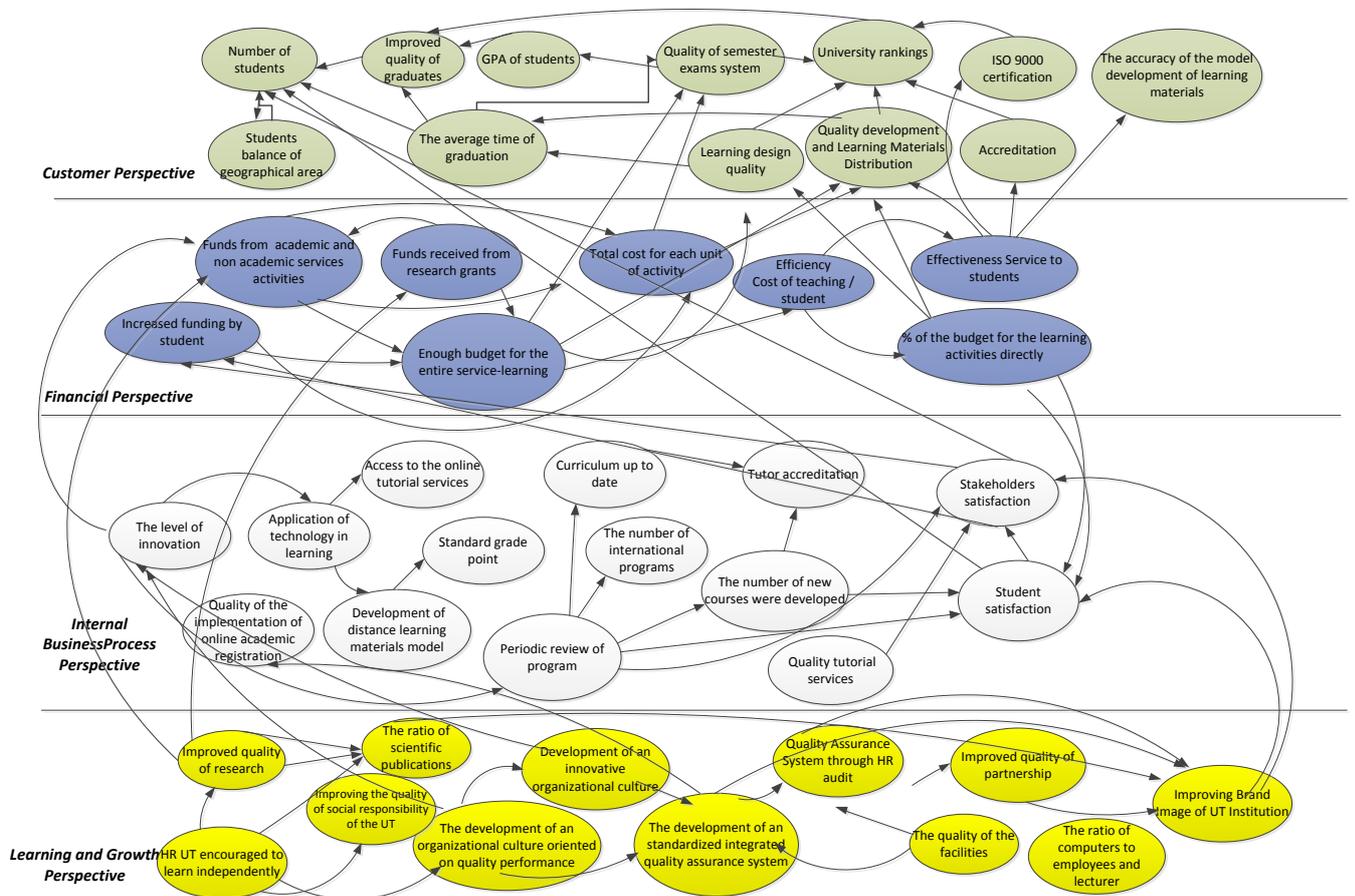
Figure 4: Details of Strategy Map of the Open University from the Perspective of Balanced Scorecard

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The Sub-Perspectives in the BSC are used as a basis for analysing the influencing variables. Learning and Growth Perspective is a perspective that affects other perspectives. Human resource is important for providing services to students. Improvements in human resources will affect operational efficiency, financial management and will ultimately improve the quality of students and graduates. For example, the quality of graduates can be improved by increasing the human resources the university, especially its lecturers. Increased human resources will affect the improvement and application of technology both in learning and other academic services. It will further improve operational efficiency, and service quality.

The strategy map will enable the Open University Indonesia to analyse and improve the variables that affect the achievement of performance at each perspective. The university can also focus on improving the variables that are considered key variables and affect two or more other variables at each perspective. The university's performance evaluation of its academic services using developed KPIs within the context of BSC can be applied to evaluate its performance.

CONCLUSION

Key Performance Indicators can be used as performance indicators in Balanced Scorecard to evaluate the performance of distance education institutions. The KPIs for Open University Indonesia were developed in this study. The KPIs were then used to develop the Strategic Map for the university. The map can be used to identify variables that can used to evaluate the university's performance in achieving its educational goals. The map describes the causal relationship between indicators, thus enabling the organization to visualise the variables in each indicator that can affect the performance of the university within the assessed perspective.

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