

e-ISSN: 2716-6546

**International Journal of  
Instruction, Technology &  
Social Sciences**



ISSN: 2716-6546

**International Journal of  
Instruction, Technology & Social  
Sciences**  
[www.ijitss.net](http://www.ijitss.net)

**THE IMPLEMENTATION OF  
BALANCED SCORECARD (BSC) IN  
MEASURING PERFORMANCE IN  
MALAYSIA HIGHER EDUCATION  
INSTITUTION**

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**To cite this article:**

Yusof, M.M.S., Habidin, N.F., Arjunan, L. (2020). The implementation of balanced scorecard (BSC) in measuring performance in Malaysia higher education institution. *International Journal of Instruction, Technology, and Social Sciences (IJITSS)*, 1(2), Page 24-35.



## THE IMPLEMENTATION OF BALANCED SCORECARD (BSC) IN MEASURING PERFORMANCE in Malaysia HIGHER Education Institution

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### Article Info

#### Article History

Received:  
03 June 2020

Accepted:  
01 July 2020

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#### Keywords

Balanced scorecard,  
Higher education  
Institution,  
Performance assessment,  
Ministry of Education  
Malaysia

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### Abstract

Higher Education Institutions (HEIs) under the Ministry of Education Malaysia (MOE) are considered as the catalysts for excellence in the national education sector. The education sector has always enjoyed the highest national development budget and this has proven that the government's commitment to the education is paramount. Growth rates for researching output and quality are among the highest in the world, and higher education institutions in Malaysia has achieved a strong ranking among their Asian counterparts. Malaysia must make adjustments, including transforming higher education systems to thrive in an increasingly challenging global economic environment. Therefore, a form of performance assessment mechanism needs to be developed to evaluate on the performance and quality of services delivered in line with the goals set. The Balanced Scorecard (BSC) is one of the most widely used assessment instruments in assessing the performance on the institution. Therefore, the purpose of this study is to highlight the importance of BSC in the measuring performance in the Malaysia HEIs. Many previous studies have been conducted to evaluate the effectiveness of BSC especially in corporate companies and the results of these studies show that BSC has a positive and beneficial impact on the organization. However, there are still fewer studies which involve the Malaysia HEIs in conducting BSC-based performance evaluations. In addition, a strategic map will be developed to guide the implementation of BSC in Malaysia HEIs. When implemented, it is hoped that the BSC can be used by management to assist in the implementation of long-term strategies as a tool in monitoring and evaluating the performance of Malaysia HEIs in addition to preparing for future educational challenges.

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### Introduction

The Malaysia Education Blueprint 2015-2025 (Higher Education) or MEB (HE) 2015-2025 was first introduced in 2013 by the Ministry of Higher Education (previously known as the Ministry of Education) has certainly made a huge impact on the Malaysian higher education system. Prior to the implementation of this vision, various responses from Malaysian and international education experts, local HEIs, and the public has been obtained to ensure that Malaysia HEIs' performance and capabilities are met at an impressive level. HEIs in Malaysia comprises public universities, private universities, community colleges, polytechnics, private colleges, private university colleges and Higher Institutions Center of Excellence (HICoE). The number of Higher Education Institutions (HEIs) in Malaysia is shown in Table 1 below:

Table 1. Number of HEIs in Malaysia

HEIs	No of HEIs
Public Universities	20
Polytechnics	33
Community Colleges	91
Private Universities	70
Private Colleges	410
Private University Colleges	34

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Higher Institutions' Centre of Excellence (HICoE)	14
TOTAL	672

Source : Ministry of Education, 2015

Undeniably, good academic performance is closely related to the facilities provided (Wentworth & Middleton, 2014), teaching system and teacher role (Rusilah Jais, Norzaini Azman, & Mohammed Sani Ibrahim, 2011), student and teacher's emotion (Pekrun, Lichtenfeld, Marsh, Murayama, & Goetz, 2017), financial management (Al-Hosaini & Sofian, 2015) and so on. In this era of globalization the changing landscape of ecosystems among HEIs has demanded that these changes need to change globally Meeting the challenges of the Industrial Revolution 4.0, the World Economic Forum (WEF) outlines the importance of the 4C elements of Critical Thinking & Problem Solving, Communication, Collaboration and Creativity at all levels of its student studies (P. M. D. A. Ahmad, 2017). In this regard, modern HEIs around the world including Malaysia are said to have become transnational businesses operating in a competitive global knowledge economy. Based on previous studies on issues and challenges in HEIs, much discussion has been made on aspects of work culture (Musah, Ali, Hussain Vazhathodi Al-Hudawi, & Hamdan, 2014; Rahman, Voon, & Firdaus, 2016) leadership and governance (Inayatullah & Milojevic, 2016), efficiency and quality of lecturer education (Ghasemy et al., 2018; Hanapi & Nordin, 2014; Nadarajah, Kadiresan, Kumar, Kamil, & Yusoff, 2012), innovation and political response (Hasan Al-Banna, Ab. Mumin, & Siti Arni, 2014; Woo, 2015), expatriate academic staff (Austin, Chapman, Farah, Wilson, & Ridge, 2014; Hoque et al., 2010) and academic and academic globalization (Osman & Marimuthu, 2010; Rostan & Antonio Ceravolo, 2015; Tan & Goh, 2014). However, there are still less from the previous studies that address issues related to the measurement performance by HEIs in Malaysia.

Based on one study by Mishra (2007) which suggested seven reasons why HEIs should be concerned about the programs and qualities they offer. These seven reasons are:

- (1) Competition, for both students and funds. This is due to the increasing number of new HEIs each year as well as the more diverse field / course offerings especially from private HEIs
- (2) Customer satisfaction. Customers for educational institutions are students, parents, the community, providers, alumni and sponsoring agencies. These parties certainly need a 'return' on the time and money they have contributed to the institution.
- (3) Maintaining standards. By ensuring the quality of educational transactions, educational provisions, and facilities are improved
- (4) Accountability: Institutions should be accountable for their stakeholders by managing the financial aspects efficiently and effectively.
- (5) Improve employee morale and motivation. A good training and management system is required for all staff.
- (6) Credibility, prestige, and status. With continuous quality maintenance it will enhance individuals and institution credibility and loyalty
- (7) Image and visibility. This quality of concern has to do with acceptance and reputation in attracting national and international students.

Based on the planning of the framework within the MEB (HE) by Ministry of Education (2015) in establishing the best system of higher education that enables Malaysia to compete in the world economy, several criteria have been targeted:

- a. Creating an education system that gives birth to entrepreneurship, not just a job;
- b. Develop a system that not only focuses on the regular academic path, but also emphasizes the TVET path;
- c. Focus on success, beyond input, while using technology and innovation to meet the needs and enhance the student learning experience;
- d. To harmonize the regulation between public and private HEIs, and to shift from the current centralized governance system to a more autonomous model of HEIs within the prescribed legal framework;
- e. Ensuring financial sustainability of the higher education system by reducing reliance on government resources, and ensuring that all stakeholders contribute

As a management, it is important for them to adopt different approaches in focusing on the mission and developing strategies across organizational processes. From the research findings it is found that the performance measurement system is important and needs to be emphasized in educational institutions (Patro, 2016) and these need to be implemented in the education system in Malaysia. A performance measurement strategy needs to be comprehensive

and should consider the internal and external factors of the institution. In addition, the preparation of annual budgets is also essential in measuring and controlling revenue for both short and long-term (R. S. Kaplan & Norton, 1996).

Analysts and scholars suggest that one of the most effective ways in evaluating organizational performance is through the Balanced Scorecard (BSC), which includes four perspectives on financial growth, customer satisfaction, organizational internal processes and the fourth is learning and growth. These four dimensions are essential in providing an effective framework for performance management (A. R. Ahmad, Kim Soon, & Soon, 2015). In line with the MEB (HE) which has been the basis and backbone of the Malaysian HEIs' planning, it would be appropriate if this BSC-based performance assessment was used among these educational institutions. Almost all of the 10 shifts stated in the Malaysia MEB (HE) meet the criteria in the BSC as outlined in Shift 2 (Talent Excellence) stating that the quality of HEIs and the Malaysian higher education system will improve if the academic community is also in good performance. Shift 5 (Financial Sustainability) stipulates that Malaysia needs to move from a system that is highly dependent on government resources and focus on inputs to focus on success and that all stakeholders should contribute accordingly, Shift 6 (Empowered Governance) aims to make Malaysia need to move from a higher education system with the Ministry as the guard who makes all the key decisions to his role as policy maker and regulator and this certainly requires good governance and Shift 10 (Transformed HE Delivery) sets out the changes that need to start in the Ministry first, including leading changes in process, skills and work culture. Large-scale transformation programs require new methods of implementation either internally or with others

Unfortunately, much of the research published on BSC focuses on profit-driven organizations, and in Malaysia there are still less on BSC research that looks at the context of education. Therefore, this study reviews the different studies on the use of BSC in the context of performance measurement for the HEIs in Malaysia.

### Balanced scorecard

Balanced Scorecard (BSC) is a popular organizational performance measurement tool and has been widely accepted in most organizations since its introduction in the early 1990s. The introduction to the concept of BSC was first introduced by Robert S. Kaplan and David P. Norton (1992). In this model, all aspects of the organization will be analysed, in contrast to traditional performance evaluation methods that focus only on specific elements (Atafar, Ameri Shahrabi, & Esfahani, 2013). Robert S. Kaplan and David P. Norton (1992) has proposed measures to be developed that include four perspectives: (1) financial perspective; (2) customer's perspective; (3) business process perspective; and (4) learning and growth perspectives. With these perspectives, organizations can develop more comprehensive guidance on the internal or external processes of the organization. This can be illustrated in Figure 1 below.

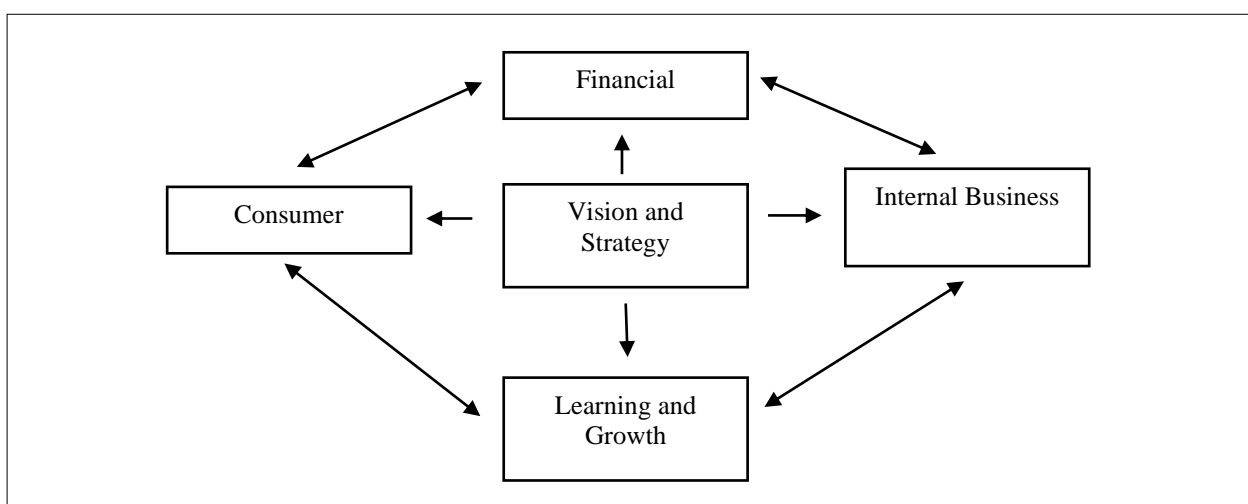


Figure 1. Balanced Scorecard perspectives

The advantage of BSC is that it provides a comprehensive balance between: (1) internal and external processes; (2) the advantages and disadvantages of the user; (3) short-term plans and long-term plans; and (4) financial and non-financial elements. It also enables upper management in the organization's vision, mission and goals (Kassahun, 2010).

Basically all four of the aforementioned perspectives have a significant relationship. For example, satisfaction in teaching and learning (business process perspective) enhances customer reaction (customer perspective) and then redirected to organizational financial perspective. Therefore, if one of the issues can be addressed and the solution can be implemented in accordance with the BSC, it will lead to increase the levels of other perspectives as well (A. R. Ahmad et al., 2015).

Although the BSC concept has been widely adopted and are used in most business sectors, the education sector does not seem to have adopted the BSC concept widely. For example in its study of S. M. Othman (2012) has stated that BSC has proven to be an effective tool for measuring performance in the education sector. Same as the study by Zhang, Gao, Jiang, & Xing (2014) believes that the BSC is beneficial in developing a scientific and effective, practical and reasonable performance management system for college teachers.

## **BALANCED SCORECARD PERSPECTIVES**

### *3.1 Financial Perspective*

A financial perspective describes how an intangible asset can be converted into real value. Its purpose is to regulate an organization to manage their finances and the involvement of stakeholders in their operations. These include operating income, operating costs, return on investment, net profit rate, cash flow and so on (Wu, Lin, & Chang, 2011). For higher education, these perspectives may include measures such as leverage, program funding, human capital investment, registration trends and endowments (A. R. Ahmad et al., 2015). Indeed, the BSC helps organizations to achieve the best financial results, making their financial goals clear and adapting their financial objectives to various stages of its life cycle. In this perspective the aim is to obtain 'the best price' and a good quality based on the financial provision of the institution with the simple fact that financial results can only be achieved when the customer is satisfied. For example, funds from student fees can only be increased if the customer is satisfied with the reputation and quality of service offered by the institution.

### *3.2 Customer Perspective*

This perspective refers to a performance appraisals based on customer needs and requirements. The customer's perspective is also closely related to the academic or parent context, faculty or staff, alumni, and student community (A. R. Ahmad et al., 2015). This includes identifying customers, customer needs, and target segments, as well as analysing performance in these segments (Niven 2006). Organizations would then strive to improve their performance by providing products and services to their customers' needs, thereby attracting new users and retaining existing users. The focus of this perspective is customer and its measurement, goals and objectives will be shaped according to customer needs.

### *3.3 Internal Process Perspective*

The process of internal business refers to the satisfaction of both shareholders and customers (Binden, Mziu, & Suhaimi, 2014). It is used to measure all processes used in production and operations. This perspective is important because organizations can analyse their current internal capabilities and respond to the market needs. BSC helps organizations identify the types of business processes that satisfy customers and shareholders. In the context of educational institutions, the goals of business processes refer to effective learning processes and excellent curriculum design. It also measures things like productivity, accuracy, cycle time, core competencies and capacity of people and effective use of information, technology capabilities, and other factors (Kassahun, 2010). The improvement of this strategy is expected to have a significant impact on customers.

### *3.4 Learning and Growth Perspective*

The fourth and final perspective is developed to monitor the organization's ability to change and make improvements. Organizations need to think about improvements in their products, services, and processes. The value of an organization can be summed up based on its ability to innovate, improve and learn (R. S. Kaplan & Norton, 1992). This perspective also focuses on employees' training and education to enhance their knowledge and skills. Meanwhile, organizations must also know how to maintain their competitive advantage in the market through human capital development (Binden et al., 2014). In the context of education the focus should be on the motivation of the development of staff and curriculum innovation.

Learning and Growth Perspectives identifies institutional infrastructure that can create growth to enhance long-term performance. Kaplan and Norton (1996) proposes three main categories for this perspective: 1) worker competence,

2) information system capabilities, and the 3) conditions for action (motivation, empowerment, and alignment). In employee competencies, most organizations have three common steps, namely employee satisfaction, employee retention, and employee productivity. These core steps associated with employee satisfaction can drive sustainability and productivity. Information system capabilities are another factor that organizations must monitor. This information system includes customer information, internal business processes, and financial decisions. The last category is motivation, ability, and alignment. This category helps organizations to improve. Examples of steps include recommendations made and implemented, improvement steps, individual and organizational alignment, and team performance measures.

All three of these main categories are interrelated as one category will depend on the other. Figure 2 shows the learning and growth framework.

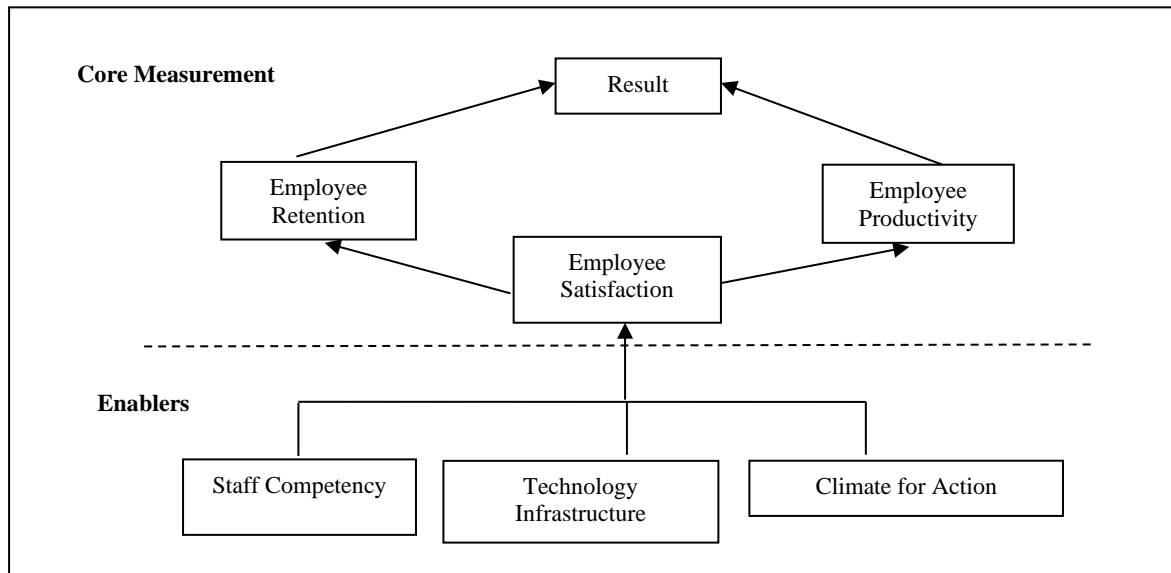


Figure 2. Learning and Growth Perspective Framework  
Source : Kaplan and Norton (1996)

### Implementation of BSC in HEIs

The education sector has become an important agenda for producing quality student, research, and services in fostering economic and human capital development. Malaysia has begun to move towards a knowledge-based society since the transformation of its education system into a more holistic approach through the introduction of various initiatives and approaches in the Malaysian Education Development Plan 2013-2025 (Grapragasem, Krishnan, & Mansor, 2014) in line with the technological and industrial developments in the Industrial Revolution 4.0 (IR 4.0) which will influence the education system towards the Education Revolution 4.0 because in this revolution, management and administration as well as teaching and learning in educational institutions will increasingly involve the Internet of Things (IOT) in competition (Malaysia, 2016).

In the context of higher education as well as in business there are conventions that can measure excellence. In addition to the emphasis on financial performance, higher education should also emphasize academic measures. These measures are usually based on such aspects as student pass percentages and dispersion of scores, percentile scores, percentage graduates employed on graduation, class rank, faculty / student numbers (ratios), faculty research / publications, graduation rates, faculty teaching load and so on (Wahba, 2016). The education system is facing new challenges in efforts to improve the quality of education services. The pressures from the internal and external environment in academic and restructuring require the right strategy and direction. Various approaches, models and frameworks have been developed to evaluate the performance of institutions. Therefore, to translate strategy into action, the concept of BSC is considered appropriate to use by the HEIs in this challenging era.

The study by Papenhausen and Einstein (2006) has shown how the BSC approach to performance management systems can be implemented in a college of business and as a result has found that implementing strategies requires active participation by all levels of the organization. Every college staffs needs to understand this strategy to contribute to the success of the strategy. But in its turn successful implementation of BSC can provide feedback to

everyone that can begin a virtuous cycle which can foster individual growth and thus lead to improved organizational performance. Traditional valuation methods that typically emphasize financial and operational outcomes have been replaced by a more comprehensive assessment that integrates performance with the overall strategy of the organization. The differences in the valuation approach between the profit-driven business sector and the education sector in applying the BSC are shown in Table 1 below:

Table 2. Comparison of Performance Evaluation for Education and Business in BSC Evaluation

EDUCATION	BUSINESS
Student learning - The results should be based on a variety of assessment methods, reflect the organization's overall mission and objectives, and represent a holistic assessment of student learning.	Customer Focused - A measure of customer satisfaction with specific product and service features, delivery, relationships, and transactions that bear upon customers' future actions.
Student and stakeholder-focused - Measurement focuses on educational programs and service features, presentations, delivery, interactions, and transactions that bear upon and future student development and learning	Focus on products and services - Critical benchmarks and performance indicators of important products and services to customers.
Budgetary, financial, and markets - Instructional and general administration expenditures per student, tuition and fees, academic cost per subject, resource allocation towards education, scholarship increase.	Finance and markets - Return on investment, asset utilization, operating margin, profitability, liquidity, value added per employee
Department and staff - Innovation rate; successfully completed educational courses or programs; learning; improved performance in the workplace; cross training rate; cooperation and teamwork; knowledge and sharing of all functions, units, and locations of work; employee well-being, satisfaction, and dissatisfaction	Human resources - Innovation rates; course completed; learning; improved performance in the workplace; cross training rate; measures and indicators of performance and effectiveness of the work system; cooperation and teamwork; knowledge and sharing of all functions, units, and locations of work; employee well-being, satisfaction, and dissatisfaction
Organizational effectiveness - including key internal operations performance measures, ability to improve student performance, student development, educational climate, responsiveness to student or stakeholder needs, supplier and partner performance, organizational strategy achievement indicators and action plans	Organizational effectiveness - including key internal operations performance measures, productivity, cycle time, supplier and partner performance, key measures or indicators of accomplishment of organizational strategy and action plans
Governance and social responsibility Results Fiscal, accountability, internal and external; measures or indicators of ethical behavior and of stakeholder trust in the governance of the organization; regulatory and legal compliance; organizational citizenship.	Governance and social responsibility Results Fiscal, both internal and external, accountability; measures or indicators of ethical behavior and of stakeholder trust in the governance of the organization; regulatory and legal compliance; organizational citizenship.

Source: Patro (2016)

The rapid changes in the global and technological environment has made educational institutions need to focus on organizational performance to improve the quality of education (Al-Zwyalif, 2012). BSC's approach is not for profit-driven organizations but also for other organizations and sectors such as government administration organizations, non-governmental organizations and the education organizations. A systematic financial plan is essential in education to create value at the minimum cost of ongoing aid fund management, especially in the event of government financial constraints (Umashankar & Dutta, 2007). Therefore, it is very important to develop effective strategies that ensure the sustainability of educational institutions.

In education, academic excellence is the key to measuring organizational performance. These measurements are usually based on aspects such as a student numbers (ratios), demographics; percentage of students graduating and distribution of scores; class rank, equality score; the burden of teaching teachers; physical facilities (libraries, computer labs, etc.) (Umashankar & Dutta, 2007). The implementation of BSC can be used as an instrument in the Strategy Map to enhance clarity in implementation. This is particularly useful in guiding the middle management

and operations staff of the institution, as well as other non-technical stakeholders and thus each can reflect on how their activities contribute to strategic goals of the institution.

Daryush, Mehran, and Heydar (2008) states that providing quality services to students is a key element in attracting students while retaining existing students. Failure to attract potential students or satisfy existing students will have a negative impact on student enrollment where there is a possible decline in the number of those who wish to enroll in the program, lack of stakeholder funding, job assurance against graduates of the program and institutional viability among other institutions, whether public or private. The implementation of the BSC in HEIs requires the cooperation of the support and administrative staff. It starts with the supervisor responsible in the policy making and implementation in the top-down hierarchy. Eventually through the BSC it will create a cause-and-effect relationship that involve feedback from staff members and communication between related functions (Daryush et al., 2008).

### **BSC Framework in HEIs**

Customization and application of BSC in organizations has been widely described in most studies. However, little research has been done on adaptation and application in the context of education. What is certain is the emphasis in the academic process is more important than assessing the financial performance of the education industry that receives government funding. There are five basic principles involved according to R. Kaplan and Norton (2001) in the implementation of the BSC as a part of the organization's strategic core:

- (1) Translate strategies into operations
- (2) Align strategies to the organization
- (3) Develop strategies as a part of the daily work of each employee
- (4) Developing a strategy is a continuous process
- (5) Encourage change through leadership

Original BSC which is introduced by R. S. Kaplan and Norton (1996) comprises four perspectives namely finance, customer, internal process and learning and growth but to adapt these four perspectives according to education in HEIs, a slight change and modification has been made in the perspective of financial stability and stakeholder perspective. Whereas the terms for internal process perspective and a learning and growth perspective will remain in use.

For each BSC there are several strategic objectives and performance measures that need to be evaluated based on the objectives set. Performance targets for each performance measure will be determined and its results achieved will be aggregated at the end of each period. An overview of the evaluation of the performance measurement using the BSC of the HEIs is shown in Table 3 below. This measurement was developed based on the existing model which was established by Yüksel and Coşkun (2014) in his study "Strategy for Educational Services". However, some changes have been made to adjust the situation-based assessment and management in the HEIs. In addition, the Financial Perspective has also been transformed into a Financial Stability Perspective where as a non-profit institution, the measurement will include an assessment of the institution's efficiency and ability to administer and obtain funding sources. Meanwhile, the other two perspectives, which are Internal Process Perspective and Learning and Growth Perspective, are left with the same term.

From a stakeholder perspective, there are five strategic objectives in measuring performance among HEIs iaitu To promote institution images, Parent satisfaction, Students loyalty, Increase quality of service and Encourage partnership with related institutions. In the strategic objective of promoting institution images, performance measurement is a reputation ratio among stakeholders, taking into account the actions of stakeholders in bringing about the good reputation of HEIs and the evaluation of alumni. Institutional ranking as stated in the QS World Universities Ranking also increases the image of HEIs and thus enhances the performance of HEIs. The second is parent satisfaction. Parents' satisfaction ratings can be based on customer satisfaction ratings that are often passed on to parents every year. The more satisfied your parents are, the better the reputation of a HEIs. This assessment is based on the graduation job offered by the employer. In addition, students 'acceptance rate compared to other institutions is also an indicator of parents' level of satisfaction with HEIs. Third is student loyalty. This objective will be measured based on institution leaving rates where a student is said to be loyal if he / she can remain and continue his or her education from the first day of study until he or she graduates. This data can be obtained from the number of students who have dropped out of their institution for obtaining educational / employment offers from other organizations. The fewer students who leave the institution, the better the quality and performance of the educational institution. In the fourth objective which is to improve the quality of service then quality assessment is based on the audit by MS ISO, MQA and rating in SETARA, My QUEST and so on depending on the quality



assessment of each HEIs. The fifth objective is to encourage partnership with related institutions. This performance evaluation will be evaluated based on the involvement of HEIs with projects and activities with other organizations.

For the internal process perspective there are four strategic objectives to be evaluated. The first is related to student academic performance improvement that will be evaluated based on the results of the exams and the tests that have been performed. The second is to achieve improvement in teaching excellence which will be evaluated based on the budget allocated on staff development especially in organizational training. The third is related to increasing student involvement in sport activities organized by HEIs. The assessment is based on the number and percentage of students engaged in sports activities both inside and outside the organization such as sports involvement representing the country. The fourth is about increasing student engagement to social activities involving the organization of HEIs and its measurement is also based on the number and percentage of students engaged in community activities with off-campus communities

The third perspective is related to learning and growth where three strategic objectives will be addressed The first being staff satisfaction improvement, which will be based on satisfaction surveys to staffs regarding management and utilities of HEIs. The second is technology implementation. This assessment will take into account the number of courses in a HEIs that uses new technology in the day to day work of staff. The third is knowledge enhancement that will be evaluated based on the number of seminars / training the staff has attended. For government employees, the standard of training that each staff must attend is a minimum of 7 days a year.

The fourth perspective is financial stability. The first strategic objective is cost structure improvement whereby performance measurement is based on how much HEIs can save on operating costs. The second is to increase asset utilization by measuring the extent to which HEIs can use their assets, facilities and resources efficiently. The usual calculation is always based on the Return on Asset formula. The third strategic objective is to expand revenue opportunities which is the rate of enrollment or enrollment of students into HEIs based on tuition fees. The more students enroll, the higher the HEIs. In addition, fund raising from stakeholders such as alumni donations, corporate sponsorships and more.

Table 3. Performance Measurement Evaluation of HEIs Based on BSC

BSC Perspectives	Strategic Objectives	Performance Measurement
Stakeholders Perspective	Promote institution images	Reputation ratio, alumni evaluation, institution ranking
	Parent satisfaction	Graduation job offering, institution acceptance rate compared to other institutions
	Students loyalty	Institution leaving rates
	Increase quality of service	Quality assessments (e.g. ISO, SETARA, MQA)
	Encourage partnership with related institutions	Joint activities and projects.
Internal Process Perspective	Improve the student academic performance	Exam results of students
	To achieve improvement in teaching excellence	Budget on staff development
	Increase students participation to sport activities	Number and percentage of students attending the sport activities
Learning and Growth Perspectives	Increase students participation to social activities	Number and percentage of social activities
	Improve staff satisfaction	Customer satisfaction surveys
	Technology implementation	Number of courses using new technology
Financial Stability Perspectives	Knowledge enhancement	Number of seminars/training attended
	Improve cost structure	Saving in cost of service
	Increase asset utilization	Efficient use of resources and facilities

Expand revenue opportunities      Level of student enrollment  
 Fund raising from stakeholders.

To see a clearer picture of the Strategy Map of the BSC in HEIs, shown in Figure 3 below. Financial Stability Perspective is a core or trigger factor in all four BSC perspectives where it is broken down into Productivity Strategies which include efficiency in the increase cost of the structure as well as enhancement in asset utilization and secondly the Growth Strategy which includes expanding revenue opportunities, value adding customer and fiscal stability.

In the Learning and Growth Perspective, the three criteria to focus on are Staff (staff satisfaction, teacher training, work environment and knowledge), Institutions (organizational culture, collaboration, leadership, and innovation) and Infrastructure (physical facilities, technology investment, sports and transport facilities).

In the Internal Process Perspective, four criteria will be considered in the performance evaluation namely Teaching Excellence, Student Engagement in Sports, Student Engagement in Social Activities and the last is Student Academic Achievement.

The Stakeholder (Customer) Perspective will look into items such as Institutional Images, Parent Satisfaction, Student Loyalty, Alumni, High Quality Services, Accessibility and Collaboration that may be from within or outside the institution.

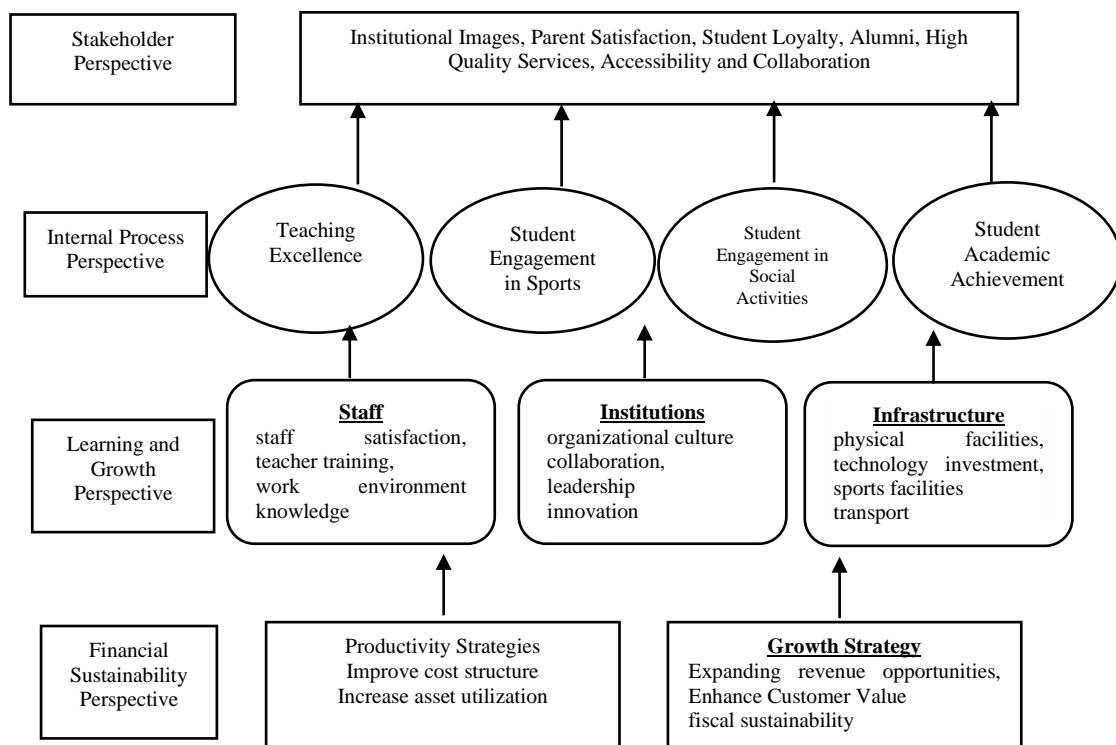


Figure 3. Strategy Map of the BSC in HEI

## Conclusion

In the growing competition with the rapid technological change in an era of the Educational Revolution 4.0, many educational institutions, especially from abroad, have allocated a number of investments and funds to achieve their goals of excellence. It is hoped that with the performance measurement and management in this HEIs system will enhance accountability as it is more sensitive to environmental change and can compete with other educational institutions both locally and abroad.

BSC in education enables the HEIs to streamline its management process and focus the entire institution on implementing long-term strategies. In this study, the BSC can assist the management with a centralized framework in which management can change the design of each part of the institutional management system. To ensure this to be achieved, there are various performances measurement approaches with the target in assessing whether their goals and objectives are being met. BSC is one of the most widely used assessment approaches in most organizations and it has been proven in many previous studies. In addition, there are still very few previous studies that have examined the effectiveness of BSCs in educational institutions in Malaysia. Without the BSC, most organizations would not be able to achieve the same vision and action as they try to change direction and introduce new strategies and processes. BSC provides a framework for managing strategy implementation while enabling the strategy itself to evolve in response to changes in competition, markets, and the educational technology environment. It is clear that BSC is an effective system of performance assessment and strategic management tools in achieving institutional goals.

However, there are some limitations in this study where this study only involved Malaysia HEIs and not all other educational institutions such as matriculation programs (foundation program), vocational colleges and even secondary and primary education systems. In addition, there is no clear comparison in performance evaluation with other educational programs that are comparable to HEIs. The comparison provided only involves comparisons between the education sector and non-educational organizations (business organizations).

## References

- Ahmad, A. R., Kim Soon, N., & Soon, N. K. (2015). Balanced Scorecard in higher education institutions: what should be consider? *International Synposium on Technology Management and Emerging Technologies*, 89–93. <https://doi.org/10.1109/ISTMET.2015.7359002>
- Ahmad, P. M. D. A. (2017). Industri 4 ubah cara kerja, hidup. *Berita Harian*.
- Al-Hosaini, F. F., & Sofian, S. (2015). A Review of Balanced Scorecard Framework in Higher Education Institution (HEIs) Fahmi. *International Review of Management and Marketing*, 5(1), 26–35.
- Al-Zwyalif, I. M. (2012). The Possibility of Implementing Balanced Scorecard in Jordanian Private Universities. *International Business Research*, 5(11), 113–120. <https://doi.org/10.5539/ibr.v5n11p113>
- Atafar, A., Ameri Shahrabi, M., & Esfahani, M. J. (2013). Evaluation of university performance using BSC and ANP. *Decision Science Letters*, 2(4), 305–311. <https://doi.org/10.5267/j.dsl.2013.06.004>
- Austin, A. E., Chapman, D. W., Farah, S., Wilson, E., & Ridge, N. (2014). Expatriate academic staff in the United Arab Emirates: the nature of their work experiences in higher education institutions. *Higher Education*, 68(4), 541–557. <https://doi.org/10.1007/s10734-014-9727-z>
- Binden, W., Mziu, H., & Suhaimi, M. A. (2014). Employing the Balanced Scorecard (BSC) to Measure Performance in Higher Education Malaysia. *International Journal of Information and Communication Technology Research*, 4(1), 38–44.
- Daryush, F., Mehran, N., & Heydar, M. (2008). Balanced Scorecard in Universities and Higher Education Institutes : Implementation Guide in an Iranian Context. *Annals of University of Bucharest, Economic and Administrative Series*, 2(2), 31–45.
- Education, M. of. (2015). *Executive Summary Malaysia Education Blueprint 2015-2025 (Higher Education)*. Ministry of Education Malaysia. <https://doi.org/10.5923/j.ijis.20120206.05>
- Ghasemy, M., Hussin, S., Megat Daud, M. A. K., Md Nor, M., Ghavifekr, S., & Kenayathulla, H. B. (2018). Issues in Malaysian Higher Education: A Quantitative Representation of the Top Five Priorities, Values, Challenges, and Solutions From the Viewpoints of Academic Leaders. *SAGE Open*, 8(1). <https://doi.org/10.1177/2158244018755839>
- Grapragasem, S., Krishnan, A., & Mansor, A. N. (2014). Current Trends in Malaysian Higher Education and the Effect on Education Policy and Practice: An Overview. *International Journal of Higher Education*, 3(1), 85–93. <https://doi.org/10.5430/ijhe.v3n1p85>
- Hanapi, Z., & Nordin, M. S. (2014). Unemployment among Malaysia Graduates: Graduates' Attributes, Lecturers' Competency and Quality of Education. *Social and Behavioral Sciences*, 21(11), 868–871. <https://doi.org/10.1016/j.sbspro.2014.01.1269>
- Hasan Al-Banna, M., Ab. Mumin, A. ., & Siti Arni, B. (2014). Sistem Pengurusan Kualiti Menurut Perspektif Islam MS 1900 di Institusi Pengajian Tinggi Malaysia: Suatu Cabaran Masa Kini. *Gjat*, 4(2), 99–113. <https://doi.org/2232-0474>
- Hoque, K. E., Alam, G. M., Shamsudin, F., Akbar, S. Z. A., Mokhtaruddin, R. N., & Fong, Y. S. (2010). The Impact of Foreign Lecturers' Recruitment on Higher Education: an Analysis from the Malaysian Standpoint. *African Journal of Business Management*, 4(18), 3937–3946.

- Inayatullah, S., & Milojevic, I. (2016). Leadership and governance in higher education 2025: can Malaysian universities meet the challenge? *Foresight*, 18(4), 434–440. <https://doi.org/10.1108/FS-03-2016-0011>
- Kaplan, R., & Norton, D. (2001). Transforming the balanced scorecard from performance measurement to strategic management : Part II. *Accounting Horizons*, 15(2), 147–160. <https://doi.org/10.2308/acch.2001.15.2.147>
- Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard-Measures That Drive Performance. *Harvard Business Review*, 71–79.
- Kaplan, R. S., & Norton, D. P. (1996). Focusing Your Organization on Strategy-with the Balanced Scorecard, 2nd Edition. *Harvard Business Review*, 37–43. Retrieved from [www.hbr.org](http://www.hbr.org)
- Kassahun, T. (2010). Rethinking institutional excellence in Ethiopia: adapting and adopting the balanced scorecard (BSC) model. *JBAS*, 2(1), 210.
- Kementerian Pendidikan Malaysia. (2015). *Pelan Pembangunan Pendidikan Malaysia 2015-2025*.
- Malaysia, K. P. (2016). *Pelan Strategik Pembastarian Sekolah 2016 – 2020*. (K. P. M. Bahagian Teknologi Pendidikan, Ed.) (Pertama). Bahagian Teknologi Pendidikan, Kementerian Pendidikan Malaysia.
- Mishra, S. (2007). *Quality Assurance In Higher Education: An Introduction*. (D. (Mrs. . K. Rama & P. M. Menon, Eds.), *Higher Education* (1st ed.). National Assessment and Accreditation Council (NAAC). <https://doi.org/10.1080/0260293990240402>
- Musah, M. B., Ali, H. M., Hussain Vazhathodi Al-Hudawi, S., & Hamdan, A. R. Bin. (2014). An empirical validation of excellent work culture scales: Evidence from selected established higher education institutions in west Malaysia. *Asian Social Science*, 10(19), 96–106. <https://doi.org/10.5539/ass.v10n19p96>
- Nadarajah, S., Kadiresan, V., Kumar, R., Kamil, N. N. A., & Yusoff, Y. M. (2012). The Relationship of HR Practices and Job Performance of Academicians towards Career Development in Malaysian Private Higher Institutions. *Procedia - Social and Behavioral Sciences*, 57, 102–118. <https://doi.org/10.1016/j.sbspro.2012.09.1163>
- Osman, K., & Marimuthu, N. (2010). Setting new learning targets for the 21st century science education in Malaysia. *Procedia - Social and Behavioral Sciences*, 2(2), 3737–3741. <https://doi.org/10.1016/j.sbspro.2010.03.581>
- Othman, S. M. (2012). Implementing Balanced Scorecard in Higher Education Management. *International Journal of Business and Social Science*, 3(18).
- Papenhause, C., & Einstein, W. (2006). Implementing the Balanced scorecard at a college of business. *Measuring Business Excellence*, 10(3), 15–22. <https://doi.org/10.1108/13683040610685757>
- Patro, A. (2016). Using Balance scorecard in Educational institutions. *International Journal of Business and Management Invention ISSN (Online)*, 5(11), 2319–8028. Retrieved from [www.ijbmi.org](http://www.ijbmi.org)
- Pekrun, R., Lichtenfeld, S., Marsh, H. W., Murayama, K., & Goetz, T. (2017). Achievement Emotions and Academic Performance: Longitudinal Models of Reciprocal Effects. *Child Development*, 88(5), 1653–1670. <https://doi.org/10.1111/cdev.12704>
- Rahman, N. A., Voon, B. H., & Firdaus, A. (2016). Identifying the Dimensions for Culture of Excellence in Higher Education. *Procedia - Social and Behavioral Sciences*, 224(August 2015), 84–92. <https://doi.org/10.1016/j.sbspro.2016.05.406>
- Rostan, M., & Antonio Ceravolo, F. (2015). The internationalisation of the academy: Convergence and divergence across disciplines. *European Review*, 23, S38–S54. <https://doi.org/10.1017/S1062798714000763>
- Rusilah Jais, Norzaini Azman, & Mohammed Sani Ibrahim. (2011). Tahap Kualiti Pelajar Sekolah Dan Pensyarah Matrikulasi Dalam Menghadapi Meritokrasi Di Kolej Matrikulasi Kementerian Pelajaran Malaysia. *Jurnal Teknologi*, 55(1), 15–35. Retrieved from <http://www.jurnalteknologi.utm.my/index.php/jurnalteknologi/article/view/79>
- Tan, Y. S., & Goh, S. K. (2014). International students, academic publications and world university rankings: the impact of globalisation and responses of a Malaysian public university. *Higher Education*, 68(4), 489–502. <https://doi.org/10.1007/s10734-014-9724-2>
- Umashankar, V., & Dutta, K. (2007). Balanced scorecards in managing higher education institutions: an Indian perspective. *International Journal of Educational Management*, 21(1), 54–67. <https://doi.org/10.1108/09513540710716821>
- Wahba, D. M. (2016). Balanced Scorecard in Higher Education Applied case study on “Arab Academy for Science, Technology and Maritime Transport,” 1–30.
- Wentworth, D. K., & Middleton, J. H. (2014). Technology use and academic performance. *Computers and Education*, 78, 306–311. <https://doi.org/10.1016/j.compedu.2014.06.012>
- Woo, K. H. (2015). Recruitment Practices in the Malaysian Public Sector: Innovations or Political Responses? *Journal of Public Affairs Education*, 21(2), 229–246. <https://doi.org/10.1080/15236803.2015.12001830>
- Wu, H. Y., Lin, Y. K., & Chang, C. H. (2011). Performance evaluation of extension education centers in universities based on the balanced scorecard. *Evaluation and Program Planning*, 34(1), 37–50. <https://doi.org/10.1016/j.evalprogplan.2010.06.001>

- Yüksel, H., & Coşkun, A. (2014). Strategy Focused Schools: An Implementation of the Balanced Scorecard in Provision of Educational Services. *Procedia - Social and Behavioral Sciences*, 106, 2450–2459. <https://doi.org/10.1016/j.sbspro.2013.12.282>
- Zhang, J., Gao, S., Jiang, J., & Xing, H. (2014). Application research of BSC theory in the salary design of teacher in college and university. *Proceedings - 2014 6th International Conference on Measuring Technology and Mechatronics Automation, ICMTMA 2014*, 144–150. <https://doi.org/10.1109/ICMTMA.2014.39>

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