

## **A Review of Balanced Scorecard Framework in Higher Education Institution (HEIs)**

**Fahmi Fadhl Al-Hosaini**

Department of Accounting and Finance,  
Faculty of Management, Universiti Teknologi Malaysia,  
81310 UTM Johor Bahru, Malaysia. Email: fhyemen@gmail.com

**Saudah Sofian<sup>1</sup>**

Department of Accounting and Finance,  
Faculty of Management, Universiti Teknologi Malaysia,  
81310 UTM Johor Bahru, Malaysia. Email: Saudah@utm.my

**ABSTRACT:** Many studies have been conducted to investigate the effectiveness of the BSC in organisations. It is observed that many organisations adopt different perspectives suitable for their functions in line with their vision, mission and strategic themes. Some researchers have highlighted its relevance to Higher Education institutions. However, previous studies have not defined which perspectives are most relevant for public HEIs, which are not for profit by nature. Higher Educational Institutions (HEIs) are involved in routine processes of providing tertiary education in colleges, universities, and institutes including both undergraduate and postgraduate programmes, vocational and education training. One of the aims of HEIs is to achieve results in terms of products and services for the customers and other stakeholders. In this paper, we review recent studies in top journals using the Balanced Scorecard Framework in HEIs. The paper identifies the relevant perspectives for HEIs and presents its contextual analysis. When implemented, this can be used to monitor their performance and enable them to adjust to emerging challenges that come as a result of implementing key strategies.

**Keywords:** Balanced Scorecard; Higher Educational Institutions

**JEL Classifications:** M1, M41

### **1. Introduction**

Higher education is the education leading to academic qualifications such as degrees and diplomas awarded by universities, colleges and other higher institutions of learning. This level of education encapsulates undergraduate, college and post graduate levels. Most higher education programs provide professional education which primarily caters for vocations and professions. Higher education graduates have an opportunity to select from a multitude of jobs compared to those who are high school graduates, and they generally have better salaries compared to their non-graduate counterparts. Higher education generally enhances an individual's quality of life as universities continue to exist to enhance knowledge and understanding. However, owing to the sector's expansion over the last twenty years, higher education has become a primary contributor to a country's economy, facilitating employment, enhancing productivity infrastructure, increasing export earnings and significantly contributing to the development of cities and regions.

The higher education systems are under pressure because there is a gap between skills demanded by the labour markets and skills acquired by graduates from the Higher Education Institutions (HEI's). The unemployment rate among university graduates in many countries has become continuously higher during the past decade (Issa and Siddiek, 2012). The recent financial crisis has made this problem even more serious. One of the solutions to this was offered in Briqa'an and Alqurashi (2012), based on World Bank study in 2012, that university needs to resort to innovative ways in order to produce educated graduates who are more competitive and thereby contribute to the economic and social growth of their countries.

---

<sup>1</sup> Corresponding author.

However the education sector in general and higher education in particular, did not respond to these changes at the same pace with the rapid development of modern communication technologies in the world. This status became the main concern for universities conducting daily business without having clear visions of the future, prior planning, or having a good mechanism to respond to the issues facing universities and other education institutions (Briqa'an and Alqurashi, 2012). It is imperative Universities' administrators to adopt a different approach in focusing on their missions, relaying their strategy across the organizational processes. Such efforts should include laying down accountability measures, relating strategic objectives to the vision and mission of the university, re-aligning annual budgets, and more importantly, gauging and monitoring outcomes in both the short and long terms. It is recommended by practitioners and scholars that, through the Balanced Scorecard (BSC), the balancing of the four perspectives of a University performance can be accomplished. These perspectives are financial growth, customer satisfaction, internal business operations, and learning and growth, which address continuous improvement with the help of human resources. These dimensions are crucial to provide an effective framework for performance management (Archer, 2007; Carr, 2005; Jones, 2004; Lee, 2006; Syfert *et al.*, 1998). The conceptualisation of the BSC was done with an underlying goal of linking business activities with the strategy, all directed towards achieving the ultimate end result which is organizational performance (Dkhili and Noubigh, 2013). Thus, this study reviews the different studies on using Balanced Scorecard Framework (BSC) in the Context of Higher Institutions Perspective.

## **2. The Balanced Scorecard**

The BSC's uses financial measures to determine the performance of organisations basing on important dimensions and indicators. These include: customer relationships, core competencies, and organizational capabilities. This makes the BSC measurements to be based on a cause and effect relationship, connecting interdependent processes, such as those elements of the non-financial aspects (current customer, internal process, employee, and system performance) to a long-term financial success. These are geared towards achieving the strategic goals and objectives of the organisations, such as Higher Education Institutions.

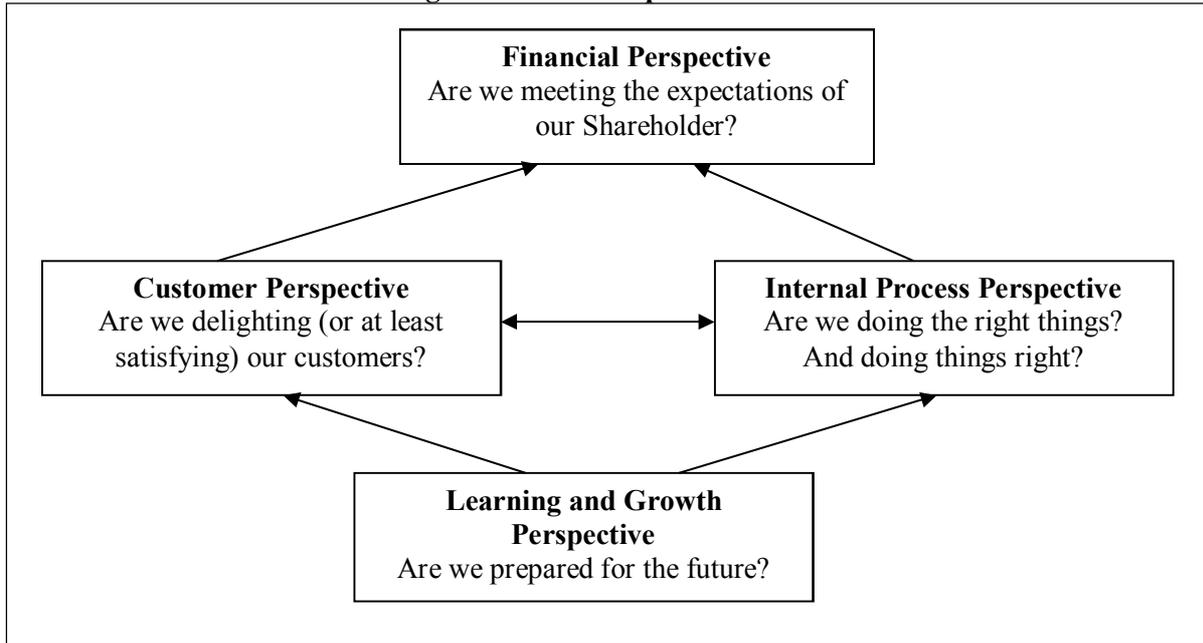
To achieve these trends, the classical Kaplan and Norton (1992) BSC based on a sets of four parameters. It is considered as an assessment tool that enables top management to monitor the improvements in one area of the organization or the other, and usually, at the expense of other performance measurements (Ali, 2007; Kaplan and Norton, 1993). Thus, the quest for the means of measuring performance in form of indicators necessitated the incorporation of the four perspectives of performance, which are: Financial, Customer, Internal Process, and Employee Learning and Growth. These form the basis of developing measures to be used in assessment of the organisations' performance. Furthermore, by requiring managers to select a limited number of critical indicators within each of the four perspectives, the scorecard helps to focus this strategic vision (Ali, 2007; Kaplan and Norton, 1993).

Measuring performance also implies the monitoring of the effects and influence by tracking the overall financial results while monitoring the progression. The BSC is a comprehensive framework that helps in translating the organization's strategic objectives into a coherent set of performance measures. This is done so that effective measurement becomes an integral part of the management process.

## **3. Four Perspectives of Balanced Scorecard**

The BSC framework is a tool that reveals the cause and effect scenarios in the adopted strategic management structure in an organization in respect of the four perspectives of BSC (Kaplan and Norton, 2001b): financial, customer, internal process and learning and growth (Figure 1). Parts of the implications of these perspectives is the effect of the organizations' internal process and learning and growth innovations have on the creation of new services and products that will satisfy the needs of the customers and enable better and prosperous financial achievements. Thus, the internal structures of an organization have a direct relationship to the outcomes that are being offered to the outside customers (Kaplan, 2004). A brief description of the various perspectives is given in the following sub-sections.

**Figure 1. Four Perspectives of BSC**



Source: Kaplan and Norton (1996a)

### 3.1. Financial Perspective

The financial perspective is considered as the most important perspective among the others, particularly in relation to key strategy implementation and assessment of organizations' performances. Usually, it occupies the topmost part of the BSC. This is usually actualized through the provisions of the organisations' mission and vision statements and the transformation of financial issues into sustainable goals and minimal cost (Niven, 2011). The cause and effect trend can be seen through the financial index, irrespective of whether they are tangible or intangible. In addition, there should be ways by which the financial perspective can be used for raising the long-term stakeholder values, expanding the market and reducing costs.

In light of this, Ronchetti (2006) argued that the financial perspective, defines financial strategic objectives and financial performance measures that provide evidence of whether or not the company's financial strategy is yielding increased profitability and decreased costs. This view also captures how the organization must look to customers in order to succeed and achieve the organization's mission; thus, achieving financial strategic objectives is the primary means to realize the company's mission. To achieve this, however, the other three perspectives are very crucial.

### 3.2. Customer Perspective

According to Kaplan and Norton (1992), there are two measurement standards. First is the "core measure group", which includes customer retention, market share, customer satisfaction, customer acquisition, and customer profitability. The next performance driver guides the organisation to the customer value position, and include lead times, quality, attributes of product and quality, image and relationship. It was therefore argued in Kaplan and Norton (2001b), that these will be achievable with the right choice of customers with highest value propositions. These values, according to Niven (2011), can be achieved in any of the following three ways: (i) operational excellence concentrates on reasonable price and quick response, (ii) there are turn around innovate drives by product leadership towards improving both products and services qualities of the organisation, (iii) creating an enabling customer intimacy based on long-term relationship due to vivid understanding of customer needs.

From the report of research by Ittner and Larcker (1998) it is revealed that customer behaviour and financial results are relatively constant over broad ranges of customer satisfaction, changing only after satisfaction moves through various "threshold" values, and diminishing at high satisfaction levels. Thus, supporting the argument as in Kaplan and Norton (1996a) and Ittner *et al.* (1997) to include customer satisfaction indicators in internal performance measurement systems and compensation plans.

### **3.3. Internal process perspective**

Kaplan and Norton (2004) stated that organisations should continue to conduct innovation in products, services and internal processes for the creation of more customer value. A process of innovation guided by the needs of customers encapsulates four major processes; identification of the opportunities for new products and services, managing the R&D portfolio, designing and developing new production and service, bringing novel products and services to the market. Hence, the internal process can be referred to as a supply chain which develops services to customers. The institution should keep on adding value to the processes in order to offer better service. The case institution should conduct four operations; innovation process, quality service process, customer management process, and regulatory and social processes.

### **3.4. Learning and Growth perspective**

Learning and growth are two major features that every organization's strategy should incorporate. There are different varieties of leading indicators and intangible assets that can be used to depict these features. These include (Chuang, 2007): human, information, and organisation capital, culture, alignment, and teamwork. Thus, the organization must adopt a measurement method that they want as opposed to what they can. In Kaplan and Norton (2004), the importance of this perspective is measured through the ability of organisational capital, employees, and knowledge systems on one hand, as well as their importance in communicating value creations to the organisations on the other.

Human capital attempts to emphasize the investment on the employees who are responsible for critical internal processes to achieve an extraordinary level. The information capital backs up the infrastructure and strategic to assist the performance of human capital. The four elements of organisational capital namely culture, alignment, leadership, and teamwork facilitate and transform the behaviour of a successful organisation that is focused on strategy (Kaplan and Norton, 2004).

According to Park and Gagnon (2006), the learning and growth perspective (organization's employees, infrastructures, and environment, and reflects employee satisfaction, motivation, empowerment, and the capabilities of employees and information systems) are argued to facilitate the performance of the other three perspectives. Whereas, the model used in Al Bento *et al.* (2012), showed the influence of the financial dimension on the other three perspectives, it is always being directly affected by continuous improvements. In addition, Kaplan and Norton (2001a) considered the learning and growth perspective to be related to the organisations' internal skills and capabilities.

## **4. The Implementation of the Balanced Scorecard in Higher Education**

Examining existing literature, one finds few works exploring application of the BSC to HEIs. Previous studies have addressed the applicability of the BSC to non-profit organisations, thereby highlighting the need for such organisations to utilise the BSC in improving performance effectiveness and enhancing service value to their customers. In general, Schools are regarded as not for profit organizations, although in some cases private schools may be driven by business objectives. Their vision and mission normally focus more on customer satisfaction rather than profitability concerns. These institutions can align their core values to address any emerging issues for improving performance measurement (Rohm, 2002).

- i. To provide a clear structure for continuous quality improvement;
- ii. To establish a culture of Academic Quality;
- iii. To evaluate the efficient use of resources for each of the academic programs;
- iv. To document the contribution of each activity towards the mission of the HEI as well as promoting personal and academic excellence; and
- v. To determine priorities on future planning and needs assessment.

Researchers have underscored the importance of availability of financial resources as key drivers of performance in HEIs (Al-Zwyalif, 2012). Relating to the dimensions of the BSC, the Financial Perspective focuses on generating targeted financial results. Subsequently, HEIs pay more attention to cash flow consequences in their respective departments (Neely and Adams, 2003). It was suggested that this proposition holds for both public and private educational institutions. Once an institution's financial strategy is clearly defined and purposely implemented to focus on the educational outcomes, this will translate into overall success of the academic institution (Schobel and Scholey, 2012).

On the other hand, implementation of the BSC can utilise existing tools such a Strategy Map to enhance clarity. This is especially useful to guide the middle management and operational staff of the institution, as well as other non-technical stakeholders. Using a strategy map, each one is able to visualize how their activities contribute to the institutional strategic goals and final outcomes.

A strategy map is a handy tool that is used to give a graphical snapshot of the strategy of the institution so as to clarify the linkages among the strategic objectives, the initiatives and specific actions to be accomplished. (Kaplan and Norton, 2000), the originators of the BSC have written the most authoritative synthesis on the tools and supporting applications that may assist in implementing the BSC in educational institutions. They demonstrate that a Strategy map provides a visual insight into how individual actions of employees contribute to strategic objectives and subsequently the overall organizational performance of the institution. This enables workers to collaborate and coordinate their actions in order to achieve maximum efficiency and effectiveness while executing the institution's mission. A strategy map is developed following the cause and effect relationships in the BSC. It is structured in a top to bottom style, mapping out a destination and thereby clearly showing the route to be taken to achieve it. Once implemented, the monitoring by the institution's board and top management will be easier (de Waal, 2003).

A Strategic map is made up of five basic components, usually from bottom to top: Financial Perspective, Learning and Growth Perspective, Internal Process Perspective, Stakeholders Perspective, in addition to the Vision, Mission and Strategic Thrusts; providing a visual framework that illustrates patterns of the cause and effect chain connecting the desired outcomes with the key drivers that are essential to achieve them. As such it provides a more practical way of implementing the BSC framework in higher education.

##### **5. BSC Framework in Higher Education Institution (HEIs)**

Many HEIs are seeking to establish management systems that can monitor their performance and enable them to adjust to emerging challenges that come as result of implementing key changes. One key element of HEIs is achieving results in terms of products and services for the customers and other stake holders. These include concerned government departments, the ministry of Higher Education, and this is where the BSC becomes such an essential tool (Rahman and Hassan, 2011). Kaplan and Norton, the key promoters of the BSC concept, argue that it can play a key role in driving organisational change and transformation (Kaplan and Norton, 1996b). Such change comes as a result of ongoing innovations that are done to improve service delivery. Innovative organizations are increasingly using the BSC to transform their strategic objectives into Key Performance Indicators (KPI's), which are regarded as the determinants of where the institution is going (Kaplan and Norton, 1996b; Rahman and Hassan, 2011). If Institutions are to survive in a competitive environment, they must develop measures that are generated from analysis their strengths, weaknesses, opportunities and threats. Subsequently, the BSC is seen as a tool that can enable HEIs to convert their vision, mission and strategies into KPI's that can be communicated to management and employees, there by channeling their energies to key result areas. By measuring organizational performance in the BSC perspectives, it complements traditional methods with measures for customers, internal processes, innovations and improvement processes, which are in turn linked to the overall institutions' strategic vision. Azizi *et al.* (2012) in a detailed review studied on which perspectives in the balanced scorecard are appropriate for the universities. They conducted an extensive survey on different perspectives adopted by a number of universities and higher education institutes around the world. They indicated that universities and higher education institutions as non-profit organizations are able to apply four main perspectives of BSC by replacing customer perspective with financial perspective at top of scorecard. This paper presents presents a contextual anlysis of more recent literature reviewed with respect to BSC in the Context of Higher Education Institutions as seen in Table 1.

**Table 1. BSC in the Context of Higher Education Institutions Perspective**

<b>Authors</b>	<b>Title of Papers</b>	<b>Perspectives</b>
Beard (2009)	Successful applications of the balanced scorecard in higher education	Student learning results, Student-and Stakeholder –focused results, Budgetary, financial, and market results Faculty and staff results Organizational effectiveness Results, Governance and social Responsibility results
Ballentine and Eckles (2009)	Dueling scorecards :how two colleges utilize the popular planning Method	Financial, Constituent Internal processes Human and organizational Development
Yu <i>et al.</i> (2009)	The e-balanced scorecard (e-BSC) for measuring academic staff performance excellence	Customer, Financial, Internal business processes, Learning and growth
Weisensee <i>et al.</i> (2009)	Integrating financial and non- financial information to enhance strategic decision-making capabilities at McMaster University	Stakeholder Financial Internal Learning and Growth
Eltobgy and Radwan (2010)	Monitoring Egyption Higher Education Institutions Performance Development, The Balanced Scorecard Approach	Educational and learning excellence, Scientific research excellence, Community Participation, environment development and stakeholders, Financial resources, Institutional capacity and quality management
Nistor (2010)	An empirical research about the contain of Balanced scorecard concept in public sector	Customer and stakeholders Financial, Internal business Learning and Growth
Wu <i>et al.</i> (2011)	Performance evaluation of extension education centers in universities based on the balanced scorecard	Financial, Customer, Internal processes, Learning and growth
Negash (2011)	Resource allocation challenges in South African universities: A management accounting perspective	Customer and stakeholder, Financial, Internal, Business Process, Organizational learning and Development
Zangoueinezhad and Moshabaki (2011)	Measuring university performance using a knowledge-based balanced scorecard	Financial, Customer satisfaction, internal business processes, and the learning and grow ability
Philbin (2011)	Design and implementation of the Balanced Scorecard at a university institute	Financial, people development Institute capability, Research output
Al-Ashaab <i>et al.</i> (2011)	A balanced scorecard for measuring the impact of industry–university collaboration	Competitiveness, sustainable development, Innovation, strategic partnership, Human capital, Internal business processes
Li (2011)	Performance Evaluation for Private Colleges and Universities Based on the Balanced Scorecard	Goals school, stakeholders satisfaction, Internal business processes, Organization developing ability
(Rahman and Hassan, 2011)	Implementing the Balanced Scorecard to Facilitate Strategic Management in a Public University	Resource, Learning and growth, Internal processes, Customer and Stakeholders
Sayed (2012)	Ratify, reject or revise: balanced scorecard and universities	Stakeholdersf, Internal businessprocesses, Learning and growth, Financial

Aljardali <i>et al.</i> (2012)	The implementation of the balanced scorecard in lebanese public higher education institutions	Customer, Internal processes, Innovation and Learning, Financial
Al-Zwyalif (2012)	The Possibility of Implementing Balanced Scorecard in Jordanian Private Universities	Financial , Customer, Internal business processes, Learning and growth
Taylor and Baines (2012)	Performance management in UK universities: implementing the Balanced Scorecard	Financial , Customer, Internal processes, Organisational development
Schobel and Scholey (2012)	Balanced Scorecards in education: Focusing on financial strategies	Customer, Financial, Internal processes, Learning and growth
Chen <i>et al.</i> (2012)	Innovative Operation in a Private University of Technology - An Application of Strategy Map on Balanced Scorecard	Customer, Internal procedure, Learning and Learning, Finance
Zolfani and Ghadikolaei (2013)	Performance evaluation of private universities based on balanced scorecard: empirical study based on Iran	Financial, Customer, Internal process, Learning and growth
Franceschini and Turina (2013)	Quality improvement and redesign of Performance measurement systems: an application to the academic field	Financial ,Customer Internal process Innovation and Learning
Jairak and Praneetpolgrang (2013)	Applying IT governance balanced scorecard and importance-performance analysis for providing IT governance strategy in university	Corporate contribution; Stakeholders; Operational excellence; Future orientation.
Atafar <i>et al.</i> (2013)	Evaluation of university performance using BSC and ANP	Financial , Customer, Process, Learning and growth
Weerasooriya (2013)	Adoption the Balanced Scorecard (BSC) Framework as a Technique for Performance Evalaution in Sri Lankan Universities	Financial , Customer , Internal Business processes, Learning and growth
Pineno (2013)	Sustainability reporting by universities And corporations: an integrated approach Or a separate category within the Balanced scorecard	Financial , Customer , processes, Internal Business, Innovation and Learning
Chalaris <i>et al.</i> (2014)	A holistic approach for quality assurance and advanced decision making for academic institutions using the balanced scorecard technique	Financial, Internal business processes, Innovation and Learning, Customer
Libing <i>et al.</i> (2014)	Application of the Balanced Scorecard In The University Budget Management	financial enterprise, customer, internal business processes and learning and growth
Zhang <i>et al.</i> (2014).	Application research of BSC theory in the salary design of teacher in college and university	Client, Teacher's Contribution, Teaching and research , Personal ascension
Beard and Humphrey (2014)	Alignment of University Information Technology Resources With the Malcolm Baldrige Results Criteria for Performance Excellence in Education: A Balanced Scorecard Approach	Student learning and process results, Customer-focused results, Leadership and governance results , Budgetary-financial and market results

The result shows that different organisations employed different BSC perspectives, while the others used the traditional ones with a slight modification in title and order, for example, the stakeholder perspective was used in some studies rather than the customer perspective.

As shown in Table 1, the BSC has been implemented in a variety of situations in the context of HEIs, producing tangible outcomes. Although there is no clear agreement about which perspectives are more suitable for HEIs, some researchers give prominence to the customer perspective, where as others emphasise the financial perspective. There is need to explore cross fertilization of the BSC

other models to deal with the Unique environment in Private Universities, as opposed to Public ones. Perhaps the same consideration can be made to deal with different countries and cultures. A further discussion and conclusion is presented here after.

## **6. Discussion and Conclusion**

This review provides valuable information on the use of the BSC in Higher Institutions of Learning, providing a justification for the suitability of this tool, and the importance of linking the vision, mission with a mapping of goals and objectives, performance. Although Higher education is concerned with academic qualifications such as degrees and diplomas awarded by universities, colleges and other higher institutions of learning. In this paper, we have reviewed the use of the Balanced Scorecard (BSC) in order to identify the most suitable perspectives to consider in order to assess the performance of higher education institutions. Although, the main four conventional perspectives are: financial, customer, internal business process, and learning and growth, the findings of this paper indicate that universities and higher education institutions as non-profit organizations are suggested to apply other non-financial perspectives such as community participation, innovation, strategic partnership and scientific research excellence.

This review reveals the applicability of the BSC in HEIs and the which BSC perspectives are relevant for HEIs. As part of its contribution some benefits of using the BSC in HEIs, namely, such as; determining priorities on future planning and needs assessment, providing a clear structure for continuous quality improvement, establishing a culture of Academic Quality among the institutions, evaluating the efficient use of resources for each of the academic programs, and documenting the contribution of each activity towards the mission of the HEI so as to promote personal and academic excellence.

The Balanced Scorecard is presented as a prominent tool that can be used to strategize and monitor organisational performance, continuously benchmarking this with key elements of the strategic plan. The review addresses the question of applicability of the BSC in HEIs, similarities as well as significant differences between the BSC as applied to Education and the BSC applied to business. These are highlighted as part of contribution the contribution. Overall the strength of the BSC is seen to be that it establishes an evaluation system which generates appropriate performance Indicators in HEIs.

## **References**

- Al-Ashaab, A., Flores, M., Doultsinou, A., Magyar, A. (2011). A balanced scorecard for measuring the impact of industry–university collaboration. *Production Planning & Control*, 22(5-6), 554-570.
- Al-Zwyalif, I.M. (2012). The Possibility of Implementing Balanced Scorecard in Jordanian Private Universities. *International Business Research*, 5(11), p113.
- Al Bento, Regina Bento and Lourdes Ferreira White. (2012). Validating Cause-and-Effect Relationships in the Balanced Scorecard. *Cambridge Business & Economics Conference*.
- Ali, M. N. A. S. (2007). Performance Evaluation of Palestinian Telecommunication Corporations by using Balanced Scorecard approach. *The Islamic University- Gaza*.
- Aljardali, H., Kaderi, M., Levy-Tadjine, T. (2012). The Implementation of the Balanced Scorecard in Lebanese Public Higher Education Institutions. *Procedia-Social and Behavioral Sciences*, 62, 98-108.
- Archer, J. (2007). Districts tracking goals with balanced scorecards database. *Academic Search Premier*, 26(24), 10.
- Atafar, A., Shahrabi, M., Esfahani, M. (2013). Evaluation of university performance using BSC and ANP. *Decision Science Letters*, 2(4), 305-311.
- Azizi, F., Behzadian, M., Afshari, A. J. (2012). Which Perspectives in the Balanced Scorecard are Appropriate for the Universities? *European Journal of Scientific Research*, 74(2), 164-175.
- Ballentine, H., Eckles, J. (2009). Dueling Scorecards: How Two Colleges Utilize the Popular Planning Method. *Planning for Higher Education*, 37(3), 27-35.
- Beard, D. F. (2009). Successful applications of the balanced scorecard in higher education. *Journal of Education for Business*, 84(5), 275-282.

- Beard, D.F., Humphrey, R.L. (2014). Alignment of University Information Technology Resources With the Malcolm Baldrige Results Criteria for Performance Excellence in Education: A Balanced Scorecard Approach. *Journal of Education for Business*, 89(7), 382-388.
- Briqa'an, A.M.A., Alqurashi, A.A. (2012). *Governance and role of universities in the face of challenges*. Paper presented at the International Scientific Conference, Lebanon.
- Carr, N. (2005). Process meets progress: Borrowing from business in Charlotte-Mecklenburg. *American School Board Journal*, 24(2), 14-17.
- Chalaris, I., Chalaris, M., Gritzalis, S. (2014). *A holistic approach for quality assurance and advanced decision making for academic institutions using the balanced scorecard technique*. Paper presented at the Proceedings of the 18th Panhellenic Conference on Informatics.
- Chen, Y.-F., Lee, S.-C., Mo, H.-E. (2012). Innovative Operation In A Private University Of Technology--An Application Of Strategy Map On Balanced Scorecard. *International Journal of Asian Social Science*, 2(11), 1877-1891.
- Chuang, M. (2007). *The Balanced Scorecard: Creating a management system for private technical universities in Taiwan*. (3243815 Ed.D.), Spalding University, Kentucky, United States. Retrieved from <https://vpn.utm.my/docview/304741860?accountid=41678> ProQuest Dissertations & Theses Full Text database.
- de Waal, A.A. (2003). The future of the balanced scorecard: an interview with Professor Dr Robert S. Kaplan. *Measuring Business Excellence*, 7(1), 30-35.
- Dkhili, H., Noubbigh, H. (2013). Management Control System and the Case of CSR in the Tunisian Industrial Companies: What Findings by the Method of Structural Equation? *International Review of Management and Marketing*, 3(2), 86-92.
- Eltobgy, H., Radwan, M. (2010). Monitoring Egyptian Higher Education Institutions Performance DEVELOPMENT, The Balanced Scorecard Approach. *Higher Education Enhancement Projects Management Unit, Ministry of Higher Education, Egypt*.
- Franceschini, F., Turin, E. (2013). Quality improvement and redesign of performance measurement systems: an application to the academic field. *Quality & Quantity*, 47(1), 465-483.
- Issa, A., T. E. and Siddiek, A. G. (2012). Higher Education in the Arab World & Challenges of Labor Market. *International Journal of Business and Social Science*, 3(9).
- Ittner, C.D., Larcker, D.F. (1998). Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of accounting research*, 36, 1-35.
- Ittner, C.D., Larcker, D.F., Rajan, M.V. (1997). The choice of performance measures in annual bonus contracts. *Accounting Review*, 231-255.
- Jairak, K., Praneetpolgrang, P. (2013). Applying IT governance balanced scorecard and importance-performance analysis for providing IT governance strategy in university. *Information Management & Computer Security*, 21(4), 228-249.
- Jones, K. (2004). A balanced school accountability model: An alternative to high-stakes testing. *Phi Delta Kappan*, 85(8), 584-590.
- Kaplan, R., Norton, D. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes* (Boston, MA: Harvard Business School Press).
- Kaplan, R.S. (2004). *Strategy maps: Converting intangible assets into tangible outcomes*: Harvard Business Press.
- Kaplan, R.S., Norton, D.P. (1992). The balanced scorecard--measures that drive performance. *Harvard business review*, 70(1), 71-79.
- Kaplan, R.S., Norton, D.P. (1993). Putting the balanced scorecard to work. *The performance measurement, management and appraisal sourcebook*, 66-79.
- Kaplan, R.S., Norton, D.P. (1996a). Translating strategy introduction the balanced scorecard.
- Kaplan, R.S., Norton, D.P. (1996b). Using the balanced scorecard as a strategic management system. *Harvard business review*, 74(1), 75-85.
- Kaplan, R.S., Norton, D.P. (2000). *Having trouble with your strategy?: Then map it*: Harvard Business School Publishing Corporation.
- Kaplan, R.S., Norton, D.P. (2001a). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*: Harvard Business Press.
- Kaplan, R.S., Norton, D.P. (2001b). Transforming the balanced scorecard from performance measurement to strategic management: Part I. *Accounting horizons*, 15(1), 87-104.

- Lee, N. (2006). Measuring the performance of public sector organisations: a case study on public schools in Malaysia. *Measuring Business Excellence*, 10(4), 50-64.
- Li, W. (2011). *Performance evaluation for private colleges and universities based on the balanced scorecard*. Paper presented at the Management Science and Industrial Engineering (MSIE), 2011 International Conference on.
- Libing, Z., Xu, Z., Ruiquan, Z. (2014). *Application of the Balanced Scorecard In The University Budget Management*. Paper presented at the 2014 Conference on Informatisation in Education, Management and Business (IEMB-14).
- Neely, A., Adams, C. (2003). The new spectrum: How the performance prism framework helps. *Business Performance Management*, 2, 39-47.
- Negash, M. (2011). Resource allocation challenges in South African universities: a management accounting perspective. *International Journal of Critical Accounting*, 3(2), 265-292.
- Nistor, C.S. (2010). An empirical research about the contain of Balanced scorecard concept in public sector. *Studia Universitatis Babeş Bolyai-Negotia*(3), 51-68.
- Niven, P.R. (2011). *Balanced scorecard: Step-by-step for government and nonprofit agencies*: Wiley.
- Park, J.A., Gagnon, G.B. (2006). A causal relationship between the balanced scorecard perspectives. *Journal of Human Resources in Hospitality & Tourism*, 5(2), 91-116.
- Philbin, S. P. (2011). Design and implementation of the Balanced Scorecard at a university institute. *Measuring Business Excellence*, 15(3), 34-45.
- Pineno, C.J. (2013). Sustainability Reporting By Universities And Corporations: An Integrated Approach Or A Separate Category Within The Balanced Scorecard. *Journal of Business and Accounting*, 6(1), 51-70.
- Rahman, A.A., Hassan, M.A.A. (2011). Implementing The Balanced Scorecard To Facilitate Strategic Management In A Public University.
- Rohm, H. (2002). Improve public sector results with a balanced scorecard: nine steps to success. *Washington, DC: US Foundation for Performance Measurement*.
- Ronchetti, J.L. (2006). An integrated Balanced Scorecard strategic planning model for nonprofit organizations. *Journal of practical consulting*, 1(1), 25-35.
- Sayed, N. (2012). Ratify, reject or revise: balanced scorecard and universities. *International Journal of Educational Management*, 27(3), 2-2.
- Schobel, K. and Scholey, C. (2012). Balanced Scorecards in education: focusing on financial strategies. *Measuring Business Excellence*, 16(3), 17-28.
- Syfert, P., Elliott, N., Schumacher, L. (1998). Charlotte adapts the 'balanced scorecard.'. *American City & Country*, 113(11), 32.
- Taylor, J., Baines, C. (2012). Performance management in UK universities: implementing the Balanced Scorecard. *Journal of Higher Education Policy and Management*, 34(2), 111-124.
- Weerasooriya, R.B. (2013). Adoption the Balanced Scorecard (BSC) Framework as a Technique for Performance Evaluation in Sri Lankan Universities. *Available at SSRN 2223933*.
- Weisensee, D., McInnis, A., Hult, L. (2009). *Integrating Financial and Non-Financial Information to Enhance Strategic Decision-Making Capabilities at McMaster University*. Paper presented at the SAS Global Forum 2009 proceedings.(paper section: Business Intelligence User Applications).
- 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.
- Yu, M.L., Hamid, S., Ijab, M.T., Soo, H.P. (2009). The e-balanced scorecard (e-BSC) for measuring academic staff performance excellence. *Higher Education*, 57(6), 813-828.
- Zangouinezhad, A., Moshabaki, A. (2011). Measuring university performance using a knowledge-based balanced scorecard. *International Journal of Productivity and Performance Management*, 60(8), 824-843.
- Zhang, J., Gao, S., Jiang, J., Xing, H. (2014). *Application Research of BSC Theory in the Salary Design of Teacher in College and University*. Paper presented at the Measuring Technology and Mechatronics Automation (ICMTMA), 2014 Sixth International Conference on.
- Zolfani, S.H., Ghadikolaei, A.S. (2013). Performance evaluation of private universities based on balanced scorecard: empirical study based on Iran. *Journal of Business Economics and Management*, 14(4), 696-714.