Balanced Scorecard in Higher Education

Applied case study on

"Arab Academy for Science, Technology and Maritime Transport"

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Abstract:

This paper is aims to apply the balanced scorecard approach in educational institutions by replicate the strategic plan of the private university case study (**Arab Academy for Science, Technology and Maritime Transfer)** for years (2016-2021) in order to enhance its implementation through presenting the concept, strategy map for four perspectives. Also the conclusions presented which opens new direction for future research points.

Key words: BSC, Higher Education, Performance measurement

Introduction:

Educational institutions are non-profit organisations (Druker, 1990; Situ, 1999), but non-profit organisations can learn from businesses in the area of effective management. On the other hand, businesses can also learn from non-profit organisations in the area of managing with mission (Druker, 1990). Traditionally, non-profit organisations have not been faced with the pressures of survival, and the notion of external competition has been nebulous. It is therefore not easy to establish certain performance measure indicators (PMIs). However, as society has become more pluralistic and as competition has become increasingly intense, non-profit organisations have had to focus on mission, strategy, and performance management. Non-profit organisations require sustainable management (Situ, 1999). In introducing the BSC, Kaplan and Norton (1992) proposed that the instrument would assist in solving problems associated with measuring business performance. In the past, businesses had relied on financial indicators to develop appropriate strategic directions. However, financial indicators are lag indicators, and an emphasis on recent and present financial performance can cause businesses to focus on short-term performance leading to a relative neglect of long-term objectives in terms of forward investment and value creation (Kaplan and Norton, 2001b; Porter, 1992). Given their

status as non-profit organisations, educational institutions have been protected and restricted by government. This has meant that educational providers have become very conservative, and faculty performances have become quite inefficient. In view of the fact that they are now facing severe competition and that there is a need to reform their operations, universities need to develop strategic management tools if they are to turn strategy into action. Adopting the key performance indicators of instruments such as BSC would allow universities to develop and allocate resources in a strategically coherent manner. In turn, this can be translated into effective reorganization of such operational matters as daily staff tasks (Kaplan and Norton, 2001a).

Higher Education (HE) in Egypt refers to all types of academic, professional and technical education, which are offered at institutions like universities, colleges and institutes provided students enrolled have completed their secondary education and are 18 years old (Mina, 2001). In the current education system, there are 17 public universities, 51 public non-university institutions, 16 private universities and 89 private higher institutions. Of the 51 non-university institutions, 47 are Middle Technical Institutes offering two-year courses and four are Higher Technical Institutes offering four-five year courses (British Council, 2013).

The higher education is the backbone of the development in Egypt as the university considered as the factory produce outputs which are graduates, which in the future will build the country in all aspects, so they should be qualified to meet job market requirement, which in turn require the university to be updated with the changes in the market and environment.

So the educational institution must has a strategic plan with clear mission and vision, setting clear objectives with performance measurement indicators in order to assess its performance at any time of the strategic plan timeline.

Some universities even public or private during strategic plan development focusing on strategies setting stage only while in execution phase they face some shortcomings because of not determining the measures and focus.

So this article try to replicate the strategic plan of the university understudy by adding the balanced scorecard (BSC) to its plan.

The paper organized as following: presenting the balanced scorecard history and concept, then surveying the previous literature about the application of scorecard in education, case study, finally the paper ends with the conclusions.

1.1What is balanced scorecard?

The Balanced Scorecard is a widely-accepted organizational performance model that ties strategy to measurable results in four critical areas: finance, learning and growth, customers, and internal processes. (Mengel and Lewis, 2012).

The BSC is a performance measurement tool first developed by Kaplan and Norton for the business sector (Kaplan and Norton, 1992), that subsequently evolved into a broader strategic management system and has been customized to meet the needs of a variety of environments and markets (Kaplan and Norton, 2001b). By 2002, 60 percent of Fortune 1000 companies had experimented with the BSC (Moxham, 2009, Kaplan and Norton, 2005), and its implementations in such companies as Best Buy, Cigna, DuPont, Exxon Mobil, Hilton Hotels, Ricoh, Southwest Airlines, Sprint, UPS and Wendy's have been examined in detailed case studies (Kaplan and Norton, 2001b, 2009). By 2004, ithad been adopted by 80 percent of largeUScompanies, makingit the nation's "most popular" management tool for improving performance (Hillstrom, 2009). BSC use has since spread to the public and nonprofit sectors (Niven, 2003), including higher education (Beard, 2009; Dorweiler and Yakhou, 2005; McDevitt et al., 2008). The Mayo Clinic and the University of San Diego were early successful adopters in the non-profit and academic realms, respectively (Kaplan and Norton, 2009). Indeed, the BSC "was received and used so enthusiastically and effectively" in recent years that Harvard Business Review listed it as one of the "75 most influential business ideas of the twentieth century" (Bible et al., 2006,), while Kaplan and Norton's first BSC monograph (Kaplan and Norton, 1996a) was chosen as one of the "100 best books of all time" by business columnists Covert and Sattersten (2009).

The BSC model is distinct from previous performance measurement systems in that it includes financial and nonfinancial measures, reflecting a balance between leading and lagging indicators of performance (measures that drive performance and outcome measures). Specifically, it is designed to supplement financial accounting measures (lagging indicators) with performance criteria from three nonfinancial dimensions or

perspectives (those of the "customer," "internal business processes," and "employee learning and development") that provide leading indicators to support long-term planning. Companies can use the BSC to track financial results "while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they will need for future growth" (Kaplan and Norton, 1996c).

In addition to managing traditional fixed assets, the BSC process allows managers to transform organizations by leveraging their ability to exploit intangibles, such as customer relationships, product development, and intellectual capital (Bible et al., 2006). It claims a further advantage over traditional measurement systems in linking long-term strategy with short-term targets, allowing the budgeting process to result in a better allocation of resources (Norreklit, 2000). Not only are performance drivers and outcome measures to be seen as linked in cause and effect relationships that aid in predicting future financial performance (Kaplan and Norton, 1996b), but spreading the metrics across the four financial and nonfinancial perspectives can promote a shared vision and drive a single organizational strategy (Bible et al., 2006). The BSC is also intended as a straightforward reporting mechanism or dashboard that allows executives to quickly determine whether they have improved in one area at the expense of another (Kaplan and Norton, 1992). It is considered more effective as an aid to forecasting the overall health of an organization than traditional accounting-based models that tend to focus only on individual departments (Seraphim, 2006), or that provide data that are often "too aggregated to be of much help to management" in determining overall strategy (DeBusk and Crabtree, 2006). Other advantages include the capacity to monitor obligations to stakeholders and to produce transparent and reliable financial information that can be used to create effective internal control environments facilitating actions "based on integrity and ethical values" (Callaghan et al., 2007).

The scorecard provides executives with a comprehensive framework that translates a company's strategic objectives into a coherent set of performance measures. It represents a fundamental change in the underlying assumptions about performance measurement and helps focus the strategic vision. According to Kaplan and Norton (1993) local improvement programs such as process reengineering, total quality and employee empowerment lack a sense of integration. The BSC can serve as the focal point for the organizations efforts. ISO Model for excellence introduced in 1987 aims

to produce a product/ service "right first time" by standardizing the functions in different departments and performing regular audits and continuous improvement is observed but it does not take the customers into account. However scorecard takes customers as one of the perspective. It puts strategy and vision, not control, at the centre. It allows people to adopt whatever behaviour and whatever actions are necessary to arrive at these goals (Kaplan and Norton, 1992). Thus the whole arena is open for innovative ideas and action plans. The BSC is not just a measurement system; it is a management system to motivate breakthrough competitive performance and is most successful when used to drive the process of change (Kaplan and Norton, 1993). Kaplan and Norton (1996b) say that in BSC application the management shifts from reviewing the past to learning about the future. It retains the measures of financial performance – the lagging outcome indicators – but supplements these with measures and the drivers – the lead indicators – of future financial performance (Kaplan and Norton, 2001a).

An unpublished analysis carried out by the authors in 2001 of the types of questions asked about performance management in online discussion fora found "What is a balanced scorecard?" to be by far the most common. Intriguingly, in their writings Kaplan and Norton don't provide a clear definition of what a balanced scorecard is, focusing instead on how one might be used, or how it relates to other organizational attributes. However, across their several documents a number of attributes can be deduced. Drawing from Kaplan and Norton's publications prior to 1997 A substantial change in balanced scorecard thinking occurred during the mid- to late-1990s, and balanced scorecard has at least the following attributes:

- A mixture of financial and non-financial measures (Kaplan and Norton, 1992,1993, 1996a, b).
- . A limited number of measures (Kaplan and Norton, 1992), numbering between 15-20 (Kaplan and Norton, 1993) and 20-25 (Kaplan and Norton, 1996b).
- . Measures clustered into four groups called perspectives (Kaplan and Norton,1992, 1993, 1996a, b), originally called "financial", "customer", "internal process" and "innovation and learning", but the last two are renamed "internal business process" and "learning and growth" in the 1996 documents.

- . Measures chosen to relate to specific strategic goals – usually documented intables with one or more measure associated with each goal (Kaplan and Norton,1992, 1993, 1996a, b).
- . Measures should be chosen in a way that gains the active endorsement of the senior managers of the organisation, reflecting both their privileged access to strategic information, and the importance of their endorsement and support of the strategic communications that may flow from the balanced scorecard once designed (Kaplan and Norton, 1992, 1993, 1996a, b).
- . Some attempt to represent causality – though it is ambiguous in Kaplan and Norton's work what they mean by this: as noted earlier the 1992 and 1993 papers illustrate links between the four perspectives but do not discuss these links in the text. The Kaplan and Norton (1996a) paper illustrates and discusses the need to show causal links between measures across the balanced scorecard perspectives in a fashion that anticipates second-generation balanced scorecard features. But the 1996 book also suggests that causality should be between "performance driver [lead]" measures and "outcome [lag]" measures (Kaplan and Norton, 1996b).

The balanced scorecard (BSC) has been called one of the most important innovations in strategic management in the twentieth century (Steele, 2001). It is a strategic management approach to performance measurement and evaluation which is primarily derived from an organisation's vision and strategy.

The University of California, San Diego seems to be the first university within North America to adopt the BSC approach in 2001. Since then, a number of universities and ancillary departments have joined the BSC approach. While application of the BSC among non-profit and public sector organisations has been covered well in the literature, the focus on higher education has been limited. Specific literature on the application of the BSC among universities is even rare. Since universities, even among non-profit organisations, are unique, there is a question mark on the suitability of the BSC approach as adopted by universities. With a far less than successful track record of implementation and effectiveness, there is no clear verdict whether there is a

problem with the BSC model or the way universities have modified and implemented it.

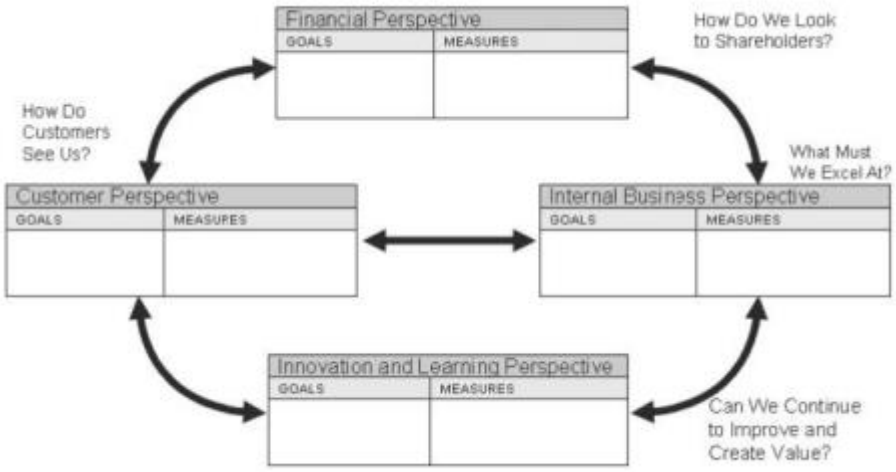


Figure (1): First Generation of Balanced Scorecard

Figure 1 shows a diagrammatic representation of Kaplan and Norton's original balanced scorecard design, based on that which appears in their 1992 article (Kaplan and Norton, 1992).

The lack of a clear definition from Kaplan and Norton has triggered several attempts by others to provide a definition (e.g. Mooraj et al., 1999; Olve and Sjo¨strand, 2002), which are consistent with the first-generation definition given above.

Performance measure indicators (PMIs)

Performance measures are at the core of the BSC system (Niven, 2002), and a strategic map is the best tool to operate a BSC (Kaplan and Norton, 2004). A complete and effective BSC must have proper key PMIs (Kaplan and Norton, 2001a; Niven, 2002). PMIs are used to assess the achievement of strategic targets and to ensure that the overall strategic operation is workable. They can also provide direction for staff members on how they can contribute to an organisation achieving overall targets (Niven, 2002). In the educational sector, each school will need to establish its core competencies on the basis of its mission and vision, and will also need to consider its current resources and state of competitiveness. Different strategic themes

will have different strategic targets and different PMIs. As more strategic themes or targets are developed, the nature and number of the relevant PMIs will also increase (Shiau, 2006).

2.2 Balanced Scorecard implementation in Education:

Performance measurement is not an end in itself, but a tool for more effective management. Performance measurement results indicate what happened, not why it happened, or what to do about it. In order to make an organization effective, the performance measurement outcomes must be able to transit from measurement to management. It must also be able to anticipate the changes needed in the strategic direction of the organization and have a methodology in place for accomplishing strategic change. Many methods and techniques have been suggested to evaluate the performance in universities or higher education institutions over the years. However, well-known financial measures such as return on investment (ROI), internal rate of return (IRR), net present value (NPV) and payback period have been demonstrated as inadequate (Fryer et al., 2009). In the assessment of university performance, it is critical to understand how teaching and research contribute to organizational and strategic goals, and evaluation methods that rely on mere financial measures alone are not suitable. Evaluation of the performance of a university can be diverse. Several previous studies on university performance measurement have employed various methods such as data envelopment analysis (Fandel, 2007), statistical methods (Park and Lohr, 2007), productivity indexes (Sarrico et al., 2009), and Malmquist indices (Worthington and Lee, 2008). Performance measurement systems (PMSs) in public sector and university context are accompanied by many problems (Kulatunga et al., 2007; Olsen et al., 2007) that include: . Lack of connection with strategy;. Focus on cost to the detriment of non-cost indicators; . Lack of a balanced approach; and. Lack of systematic thinking

The BSC has been widely used in manufacturing organisations, service organisations, non-profit organisations, and governmental organisations with excellent effects (Kaplan and Norton, 2001b). Kaplan and Norton (2001a) have pointed out that financial measurement alone does not reflect the organisational mission of governmental and non-profit organisations; rather the mission of government or non-profit organisation should be placed at top of the BSC in measuring whether such an

organisation has been successful. This can also help to keep the long-term mission of organisation clear and precise. Hence, the greatest difference between businesses and non-profit organisations lies in the achievement of the mission. To do this, both the financial perspective and the customer perspective must be used to enhance the perspectives of internal processes and learning and growth. Although financial performance is not the main target of most governmental and non-profit organisations, the original sequence of the BSC perspectives can be rearranged with the customer perspective moving to the top (Kaplan and Norton, 2001b) (Figure 9). The BSC can thus be adjusted according to the individual circumstances of any case. Indeed, some organisations focus on their key strategies to set up another perspective (Kaplan and Norton, 2001a). For example, some public sector organisations institute a social responsibility perspective or a cultural perspective. With respect to the implementation of the BSC in non-profit organisations, Kaplan and Norton (2001a) reported that United Way of Southeastern New England (UWSENE) was the first non-profit organisation to introduce BSC. In doing so, UWSENE focused on the financial and customer perspectives treating donors as target customers'. According to Kaplan and Norton (2001b), non-profit organisations tend to structure their BSC with mission as the top perspective, followed by the customer perspective, the internal process perspective, the learning and growth perspective, and finally the financial perspective. However, Lawrence and Sharma (2002) have pointed out that the BSC constructed by a corporate university, the DXL university, was based entirely on a BSC that had mission and strategic targets on the top, followed by the financial perspective, and then other concepts. Wilson et al. (2003) observed that the BSC established by the Canada National department of British Columbia Buildings

Source: Kaplan and Norton (2001a)

Figure (9): BSC framework of non-profit organization

Corporation (BCBC) changed a financial perspective into a shareholder perspective, and placed this BSC system on the same level as the customer perspective. Wilson et al. (2003) also noted that three national departments, the Norwegian Directorate of Public Construction and Property, the US General Service Administration (GSA), and the Nation Property Board of Sweden (NPB), all had BSC or strategic map as business type (with the financial perspective at the top), but Wilson et al. (2003) did not explain that the BSC established by these three departments might have been related to the organisational culture of these departments which expected them to emphasise financial performance management as do corporations. The above literature review reveals that the four major perspectives of the BSC can be adjusted according to the individual needs of the organisation. Nevertheless, some public sector and non-profit organisations adopt a similar BSC structure to that of business organisations.

The BSC strategy map for the college (Figure 10) uses a generic architecture to describe each strategy. In this way, each measure is rooted in a chain of cause-and-effect logic that connects the desired outcomes from the strategy with the drivers that will lead to the strategic outcomes. The strategy map illustrates how intangible assets are transformed into tangible customer and financial outcomes.

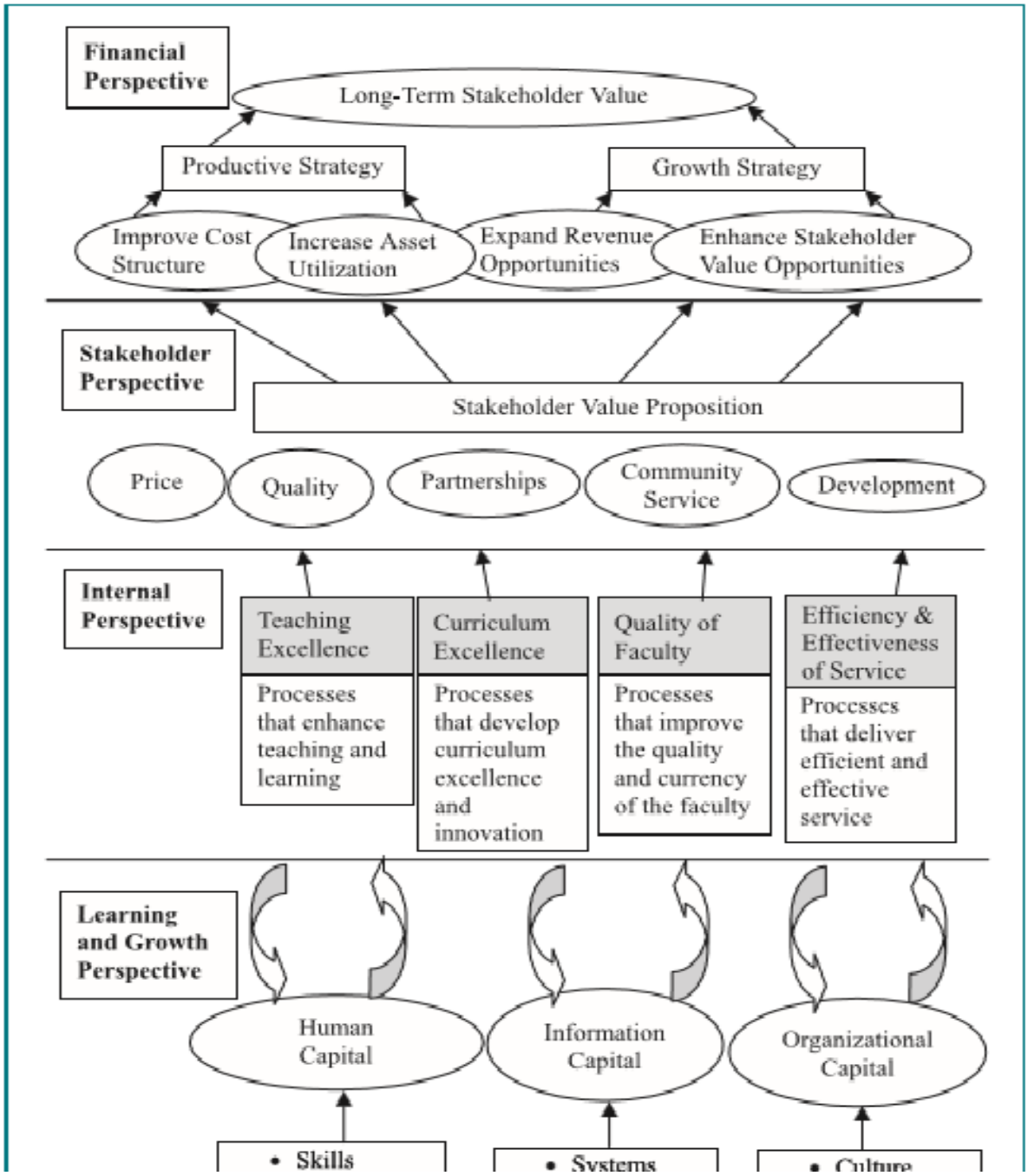


Figure (10): Strategy map

It is evident that the BSC has been widely adopted in the business sector but the education sector has not embraced the BSC concept widely as indicated by the dearth of published research on this topic (Karathanos and Karathanos, 2005). Cullen et al., (2003) proposed that BSC be used in educational institutions for reinforcement of the importance of managing rather than just monitoring performance. Sutherland (2000),

(cited in Karathanos and Karathanos, 2005) reported that the Rossier School of Education at University of Southern California adopted the BSC to assess its academic program and planning process. Also Chang and Chow(1999) reported in a survey of 69 accounting departments heads that they were generally supportive of the BSC applicability and benefits to accounting education programs. Ivy(2001) studied how universities in both UK and South Africa use marketing to differentiate their images in the higher education market. At a time when higher educational institutions around the globe face declining student numbers and decreasing funding grants it becomes imperative for them to determine their images in the eyes of their various publics. Karathanos and Karathanos(2005) describe how the Baldrige Education Criteria for Performance Excellence has adapted the concept of BSC to education and discuss significant differences as well as similarities between BSC for Business and BSC for education. In higher education as in business there are acceptable conventions of measuring excellence. Rather than emphasizing financial performance, higher education has emphasized academic measures. As in the case of business the demands of external accountability and comparability, measurement in higher education has generally emphasized those academic variables that are most easily quantifiable (Ruben, 1999). These measures usually are built on and around such aspects as faculty/student numbers (ratios), demographics; student pass percentages and dispersion of scores; class rank, percentile scores; graduation rates; percentage graduates employed on graduation; faculty teaching load; faculty research/publications; statistics on physical resource (see library, computer laboratories etc.). Ruben(1999) indicates that one area deserving greater attention in this process of measurement is – the student, faculty and staff expectations and satisfaction levels. He opines that in most higher education centres very little attention is paid to systematically measuring students', faculty and staff satisfaction despite sharing the widely accepted viewpoint that attracting and retaining the best talent/people is the primary goal and critical success factor for institutions of higher learning. In a study conducted by Ewell, (1994) (cited in Ruben, 1999), the measures used in 10 states in the USA in performance reports of higher education institutions, were: . Enrolment/graduation rates by gender, ethnicity and program. . Degree completion and time to degree. . Persistence and retention rates by gender, ethnicity and program. . Remediation activities and indicators of their effectiveness. . Transfer

rates to and from two and four year institutions. . Pass rates on professional exams. . Job placement data on graduates and graduates' satisfaction with their jobs.

Chen & Shiau (2006) study to examine how the balanced scorecard (BSC) can be used for performance evaluation as a strategic management tool in the Taiwanese higher education sector. Based on a case study" Chin-Min Institute of Technology (CMIT) is a private university situated in central Taiwan." That should carry appropriate mission and vision. With the existing resources and targets, five major strategic themes are constructed, including an adequate financial structure, an accord with customer expectations, an excellent learning environment, organizational learning and management, and high quality staff. The study revealed that to achieve strategic themes it is necessary to propose specific and effective strategic targets. To evaluate progress and performance towards these strategic themes and targets, quantified performance measure indicators (PMIs) must be established in a specific and simple manner that allows all staff members to understand the orientation of the BSC in fulfilling their daily tasks. While Umashankar and Dutta(2007) study aimed at looking at the balanced scorecard (BSC) concept and discuss in what way it should be applied to higher education programs/institutions in the Indian context. The BSC approach offers an institution the opportunity to formulate a cascade of measures to translate the mission of knowledge creation, sharing and utilization into a comprehensive, coherent, communicable and mobilizing framework – for external stakeholders and for one another.

Chris and Einstein (2006) study to show how the Balanced Scorecard approach, a performance management system, could be implemented at a college of business the results revealed that the implementation of a strategy requires active contributions by everyone in the organization. Each member of the college needs to understand this strategy and, beyond that, to conduct day-to-day business in ways that contribute to the success of the strategy. Communication and education are key factors in realizing these initiatives. But in its turn, a successful BSC can furnish feedback to each member of the college that can begin a virtuous cycle that can foster individual growth and the improvement of organizational performance.

Philbin (2011) study identify how the management of university institutes can be improved through adoption of an integrated performance measurement system based

on the Balanced Scorecard. The study revealed Specific benefits arising from the operational use of the scorecard within the Institute include the following:

- Access to a central source of data and information that was previously located in dispersed areas across the Institute.
- Scorecard reports provide specific information on the development of the Institute research and teaching capability and this contributes to improved decision making, e.g. decisions on which training courses to be developed in the future.
- Identification of the monetary value of financial leverage is used by the Institute's industrial sponsor to justify the value for money case for its investment.
- The ability to track and measure performance of the Institute systemically, which includes consideration of finance, people development, institute capability and research output, contributes to the sustainability of the Institute through identification of tangible outcomes and evidence to support the Institute's business case.

Scholey(2012) study to demonstrate the use of the Balanced Scorecard in a higher education distance learning environment, and to highlight the importance of financial strategies. The study revealed that Higher education organizations with well-defined financial strategies that are linked to educational outcomes will be well positioned for success even as their funding models change.

Sayed(2013) study examine the use of the Balanced Scorecard (BSC) in universities. Initially directed toward profit-oriented businesses, the BSC has since been adopted by many non-profit organisations with seemingly diverse objectives. A number of primarily publicly funded universities and institutions, which are part of these universities, also embarked upon this strategic management approach. They soon discovered that the classical BSC approach and, for that matter, a modified approach suited for non-profit organisations had to be further modified to suit their unique circumstances. As universities struggle to adapt the BSC approach to fit their needs, questions have been raised whether BSC is an appropriate strategic management tool for universities. It was found that concerns regarding suitability of this approach for universities are not only serious but most universities, by nature or circumstances, are

ill positioned to mobilise substantial resources, lay the necessary groundwork and develop systems in order to benefit from this initiative. It was found that universities, which did adopt BSC, have diverse expectations, understanding and implementation strategies. Lack of understanding, an unclear success rate, slower new adoptions and subsequent abandonment of this approach by some of the universities suggest that the BSC approach may have failed to meet expectations.

Case Study Background:

The idea of AAST began in 1970 as a regional center for training in the maritime transportation business. In the ninth of November, 1974, representatives of the governments of the Arab countries was signed at the headquarters of the Arab League, the establishment of the Arab Academy for Maritime Transport specializes belonging to the Arab League as an organization agreement. The agreement contained commitments on the joint Arab countries in the project. And then released following the decision to the President of the Arab Republic of Egypt No. 532 of 1975 approving the agreement on May 29, 1975.

It was a historic turning point in the academic procession is the decision of the Arab Republic of Egypt with the support and continuing academic and carrying construction of its new costs in the light of the Baghdad Summit 1979 decisions which ruled the transfer of the academy's headquarters to the Emirate of Sharjah in the United Arab Emirates and stop financial contributions to Arab countries with the exception of the State of Sudan. Under the application of self-financing policy and the response from the academic management of the developments in the work resulting from the decrease in the number of students the next two to work in the maritime transport and the dramatic rise sector in maritime education and training and the direction of the Arab fleet costs and ship owners to Asian labor costs low, it had to make the academy can look for sources new financing, and then he went to the

academy to provide new activities and courses of education and training updated to maintain its core business to support maritime education and training service in the face of the Arab reality and global variables.

Strong launch of the Academy began in 1979 with the creation of the examinations system in collaboration with the International Maritime Organization, International Maritime Organization and the United Nations Development aimed at the rehabilitation of masters, officers and marine engineers to obtain certificates of eligibility to work on the high seas ships afternoon. As a result, the need to face the academic self-relying on resources.

n an important strategic step and academic management it decided to expand the offer to grant university degrees in engineering and business management in the context of full belief in providing excellent quality of educational and training services. Academy of Management in achieving those paradigm shift has relied on its holdings of the strengths and the Arab and international reputation. That strategy step necessitated amendment academic indefinitely and expand the fields in order to represent a magnet for scholars and check the sources of funding required to support maritime education high costs. At the same time has the certificates granted by with those granted in the universities of the Arab Republic of Egypt and got on the Arab and international recognition of the reality of high excellence and acclaimed equation.

The academy offers 33 bachelor's degrees and 33 master's degree in various disciplines such as maritime transport, engineering and technology, management, computing and information technology, and international transportation and logistics, language, media, technology and fisheries and aquaculture. The system includes graduate specialized college graduate in management along with nine specialized

institutes provide scientific programs such as master's and PhD in quality, as well as various consulting and training courses.

The number of students studying in the academy 19,479 undergraduate scholars during the academic year 2013/2014 compared to the number reached 17,756 during the year 2011/2012, an increase of 9.7% is justified by the new media, such as colleges, language and new branches, such as the academic branch of the Smart Village. In terms of nationalities represented by students, during the period from 2011-2014, the number of students reached the academy 56,288 students representing 47 different nationalities from all over the world. Reached Egyptians proportion of which 85%, as well as many Arab students: Qatar 1729 scholars and Saudi Arabia 1168 scholars, along with also significant numbers from Libya, Sudan, Jordan and Palestine, as well as African countries such as Nigeria, represented by 1268 scholars, Kenya, Djibouti and Eritrea, and states Europe such as France, Italy, Britain and others, along with 40 scholars from the Americas

It was - and remains - Arab Academy for Science and Technology and Maritime Transport since its inception proactive in providing outstanding scientific programs across the educational philosophy of the basic aim is to provide the best educational service and to provide the Egyptian and Arab market the best graduates in engineering and management and marine science. Academy head start among all Egyptian educational institutions to obtain ISO certification in education since 1999 and have continued since that date in the adoption of systems for monitoring and evaluation, analysis and study of the problems with a view to continuous improvement of the quality of services provided, and at the same time, the expansion of credit and the partnership with donors to certifications, including the Department local, such as the national Authority for quality assurance and accreditation "purity" in management

science and engineering, including international, such as the American Association for accreditation of Engineering and Technology.(Academy strategic plan,2016)

BSC framework

Four major perspectives of a BSC:

As a result of the SWOT analysis, the AAST faces some problems as: difficulties in financial resources, Excellence in education service delivery problems; Problems impede the excellence in the scientific research and innovation, Excellence in student life problems, and …etc. The university studied in this case listed five major strategic themes in "Improve self-financing in the academy", "Financial management", "stakeholders satisfaction", "Excellence in providing educational services with high quality", "Excellence in Scientific research", "well Qualified Staff". As indicated in table (1): Each strategic theme, goals and PMI for each.

The Strategy Themes combine four major perspectives of BSC to achieve the strategic goals.

1-Financial perspective:

Most private universities funding depends on incomes from registration fees with some funding allwances.From the SWOT analysis for the financial perspective of the university under study such as: Falling revenues in foreign currency due to the decline in the number of arrivals for the Academy students with high spending rates of the same fulfillment of the obligations fixed currency and planned, such as salaries…etc.

So as seen in table (1) the financial perspective in the BSC will be with the strategy theme of “Improve self-financing in academy”. To achieve this strategy theme first, it must introduce “establishing a unit for fund raising “through the collection of donations, cooperation between industry and university.Second,”Financial Management “through managing the reduction in expenses by using suitable financial policies and practices.

A full planning to the financial situation can lead to improving the financial structure which in turn will be reflected in the educational services rendered, salaries which lead to increase the satisfaction level for both employees and students.

Table(1)	Overview of the financial perspective's goals and measurements	
Theme	Goal	Measurement
Improve self-financing in the Academy	Establish a unit for raising fund and the collection of donations and funding of construction projects or donations	Size or % Growth in Fund
	Study the price elasticity among target groups of undergraduate and graduate students to assist decision-makers in the curricula pricing	No of studies conducted No of decisions based on this studies % increase in revenue based on this studies
Financial Management	Managing the reduction in expenses through using financial policies and practices	% decrease in annual expenses

2-Stakeholder perspective:

This perspective is needed to ensure that that target customers are recognized. Kanj and Tambi (1999) cited in to shiau (2006) proposed that customers of education organization include employees, students, parents, government and business. However, some people disregard students as customers of education (Owlia and Aspin wall, 1996). In principle, teachers, administrators and students are all internal customers, whereas government, businesses, the general public, and parents are external customers. An improvement in customer satisfaction will not only increase business profits, but also facilitate business development (Dubrovski, 2001).

As mentioned in Table (2) for the students theme to strength this theme the university will target "attracting high quality students" through establishing restrict procedures and standards for student's selection." Curriculum content development in accordance with the Egyptian labor market" through the activation of partnership program with the industry and business, "Increasing internships opportunities "through the activation of partnership programs and training with the business sector. "Encouraging cultural and sports and social activities" by establishing events, seminars, competitions that enhance the students talents and abilities in different fields. "Make the information accessible to the students for admission and transfer policies, distribution disciplines, to withdraw from "by various means such as university website and social media platforms.

Regarding Employer theme the university will target "Employer satisfaction "through presenting qualified graduates able to fit in the labor market requirements.

Table(2)	Overview of the stakeholder perspective's goals and measurements	
Stakeholder	**Goal**	**Measurement**
Students	Attract high quality students	No of accepted students vs. rejected students
	Curriculum content development in accordance with the Egyptian labor market	No of curriculums updated the extent to which curriculum is linked to the labor market
	Increasing internships opportunities	No of signed protocols No of internships No of students admitted to the internships
	Encouraging cultural and sports and social activity	No of events achieved Degree of students satisfaction
	Make the information accessible to the students for admission and transfer policies, distribution disciplines , to withdraw from the decisions and sanctions by various means such as the website of the university and guide students in a clear and simple method	No of students used this tool the satisfaction degree on this tools
Business Community (employer)	Employer satisfaction	Employer survey ratinging graduates quality Ability of graduates to move up Quality and scope of non-degree programs service to community
Community	Developing means of cooperation and provide support of public institutions in the host country and supporting countries and encouraging the participation of Teaching staff in governmental and public organizations both in the field of excellence "Engineering - Management - Logistics - transport etc ..".	# of studies conducted and services provided in that aspect
Alumni	Increase Alumni Satisfaction	# of engaged alumni

3-Internal process perspective:

The institution must first ensure that it meets the current and future needs of customers. The customer perspective thus requires an appropriate method of measuring customer satisfaction and dealing with customer complaints. It requires consideration of customer demand in both the external and internal processes, such that new operational processes can be developed to satisfy all customers. Within the educational sphere, this implies an emphasis on administrative efficiency, the promotion of educational quality, process management, e-processes, real-time assessments, and reductions in service time to increase efficiency and achieve customer satisfaction. Furthermore, for good quality control during the process, checkpoint is required to set in the service process to make effective quality control. (Shaui, 2006)

Although the establishment of the system is based on a standardized operation, the maintenance of the system according to ISO 9000 (2000) depends on education and training. Moreover, the system must also be characterized by internal innovation. The internal-process perspective must be a new internal process that can meet customer demands, not just improve and centralize current activities (Niven, 2002).

To achieve the theme of "Excellence in providing educational services with high quality", as seen in table (3) AAST must starting adopt education program at all levels, whether undergraduate or graduate studies from the Egyptian and international institutions with the activation of the role of the center of quality assurance in academic measures, "Signing Academy partnership with Western universities in order to provide joint or double degrees in various disciplines", Attracting teaching staff of the Arabs and foreigners enjoy Vocational rehabilitation in order to entrench outstanding academic value as a university with a host of regional experts and speakers from international bodies, Developing the exams so that test the ability to solve problems and to measure the mental and professional skills and achieve the targeted learning outcomes

Table(3) **Overview of the Internal process perspective's goals and measurements**

Strategic Theme	**Goal**	**Measurement**
Excellence in providing educational services with high quality	Start adopting education programs at all levels, whether undergraduate or graduate studies from the Egyptian and international institutions with the activation of the role of the Centre for Quality Assurance in academic measures	% of the program that has been adopted
	Signing Academy partnership with Western universities in order to provide joint or double degrees in various disciplines	no# of issued protocols
	Attracting teaching staff of the Arabs and foreigners enjoy Vocational rehabilitation in order to entrench outstanding academic value as a university with a host of regional experts and speakers from international bodies	no# of foreign and Arab teaching staff
	Developing the exams so that test the ability to solve problems and to measure the mental and professional skills and achieve the targeted learning outcomes	no# developed exams the extent to which the exams measure the needed skills

4-Learning and growth perspective:

The learning and growth perspective is the basis of BSC (Kaplan and Norton, 1996a). It can become the motivating force for the previous three perspectives in achieving excellent performance. The function of this perspective is to construct a complete set of core techniques and abilities to promote the previous three perspectives. With the rapid developments in information technology, competition in the education market has become increasingly intense. Individual staff members can improve with organisational growth through organisation and staff learning, and they can share knowledge to achieve the purpose of knowledge management. Through IT techniques, operational processes can be simplified to reduce time requirements and improve administrative efficiency. A school with a complete database and network facilities can obtain the latest information to encourage staff learning and innovation. The pursuit of excellent operational performance requires the introduction of proper management methods(Woo, 1997) such as business process reengineering (BPR), Hoshin management, TQM and Six Sigma. With the assistance of BSC, the effectiveness of TQM programs and BPR approaches will increase (Kaplan and Norton, 2001a).

Table(4)	Overview of the Growth and Learning perspective's goals and measurements	
Strategic Theme	**Goal**	**Measurement**
Excellence in Scientific Research	Supporting the scientific research culture and directing teaching staff toward the research importance and implementation	no of seminars held to increase the level of awareness about how to publish papers in international journals
	Encourage international publication in all academic disciplines	no of article published in international journals
	Communication with the funders for scientific research and cooperation with research teams of excellence in local and foreign universities	no of funds or grants signed
Quality of facilities	A review of the numerical density of study halls and laboratories and adhere to international standards in designated spaces for students	the degree of stakeholder satisfaction level
	Improve library services in all branches and adhere to international standards in the supply of books and modern references and search devices	the degree of students satisfaction level
	The development of security and safety system and reviewed to ensure the safety of students and to provide maximum protection and security for them	developed system
	Raising the quality of sports venues at the branch level and to ensure conformity with the technical specifications	the degree of students satisfaction level
	The development of feeder branches	the degree of students

		satisfaction level
	Create a food safety	the degree of stakeholder satisfaction level
	Provide encouraging work environment of the office rooms are comfortable and modern equipment suitable and administrative assistants in sufficient numbers	Employees and teaching staff satisfaction

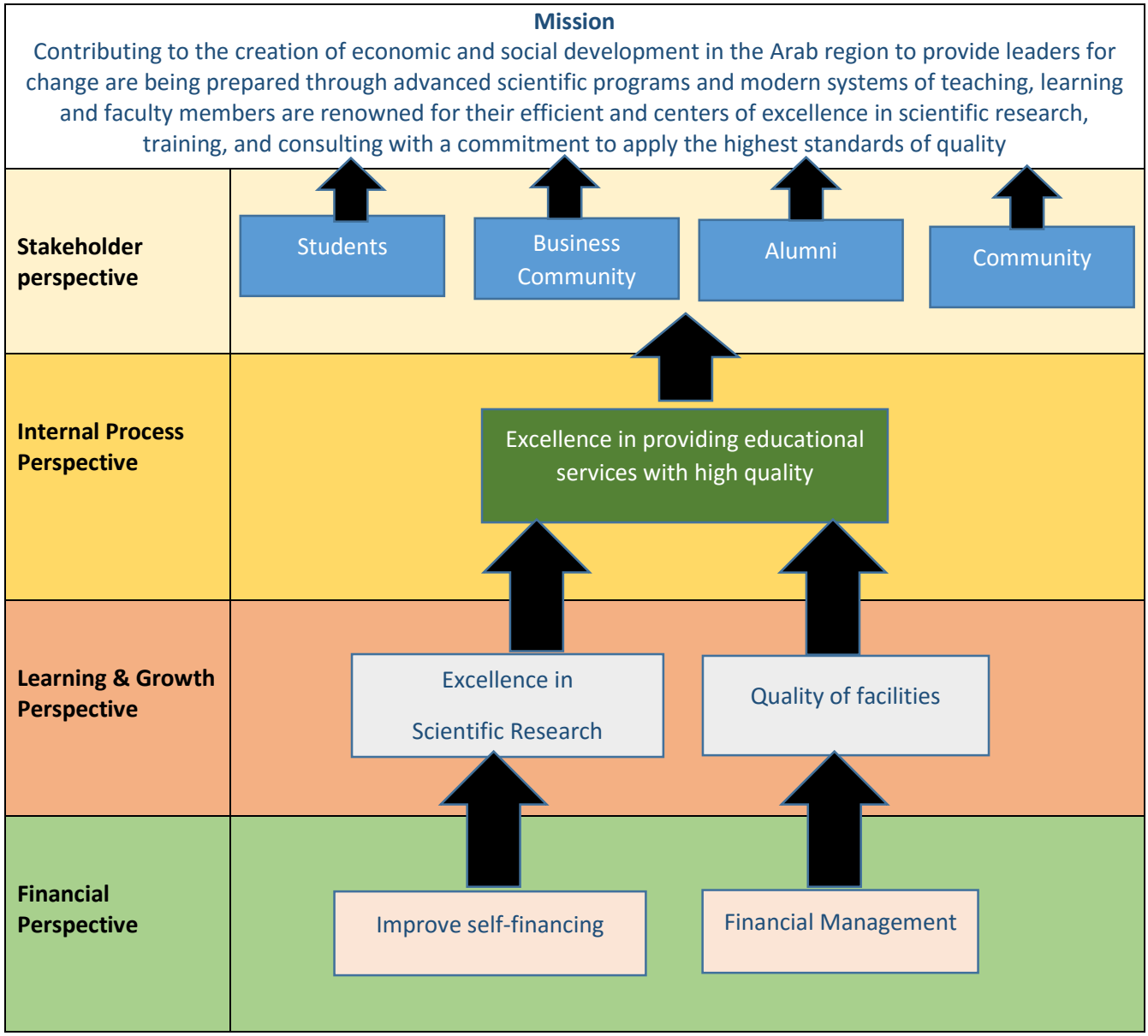
To achieve the theme of " **Excellence in Scientific Research**" the university will target" Supporting the scientific research culture and directing teaching staff toward the research importance and implementation through holding seminars to raise the awareness about international publication standards and methods , Communication with the funders for scientific research and cooperation with research teams of excellence in local and foreign universities, and Encourage international publication in all academic disciplines through providing necessary facilities.

To achieve the theme of "**Quality of facilities**" the university will A review of the numerical density of study halls and laboratories and adhere to international standards in designated spaces for students, Improve library services in all branches and adhere to international standards in the supply of books and modern references and search devices.

The development of security and safety system and reviewed to ensure the safety of students and to provide maximum protection and security for them Raising the quality of sports venues at the branch level and to ensure conformity with the technical specifications, the development of feeder branches, Create a food safety, Provide encouraging work environment of the office rooms are comfortable and modern equipment suitable and administrative assistants in sufficient numbers.

Strategy Map:

To prevent staff members having different understandings of the strategy map, a strategy story should be used to explain the map to staff members and the ensure that the details of map, such as choices of time sequences and the strength of the cause-and-effect linkages, are well understood. In revising these processes, some new problems might be created. Solving these new problems can help in revision of strategy targets and performance measurement indicators (Woo, 1997). As can be seen in Figure 3, the strategy map primarily involves the relationships between mission,vision, and the four major perspective of the BSC. Second-tier relationships are those between finance, customer, internal process, learning and growth.



Figure( ):Strategy map of the case study-source: the author

3. Conclusions:

This study is an attempt to develop the concept of balanced scorecard in higher education through the application on the private university (AAST).

The study revealed the strategic plan according to the 4 BSC perspectives, and drawn the strategy map for it.

For the prefect implementation of balanced scorecard the university should give a great attention to raise the awareness among its stakeholders about the BSC concept to get more accurate results.

From the analysis to the literature on balanced scorecard application in educational institutions it was found three limitations: firstly, the application of the BSC was not clear, as some studies applied nonprofit organizations BSC model other not. Secondly, the scope of the previous studies is limited to the application process not measuring and assessing the impact. Thirdly, the majority of studies focused on single case study scale which is not generalize the results of those studies.

So it is suggested for the future research point to: measuring the impact of application on performance and other variables such as: stakeholder satisfaction, knowledge management and organizational trust in educational institutions, and widening the sampling scale to include multi-sample rather than single case study to give the results the power and validity.

Also is suggested to conduct a comparative study between private and public universities in the assessment process.

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