Research on the knowledge of students of sciences accounting method to balanced scorecard

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Abstract
According management companies need to achieve the most dynamic financial statements was created the Balanced Scorecard. The BSC lists strategy in four prospects (financial, customer, internal processes, learning and growth). In this context, this study aims to explore the level of knowledge of accounting academics in Institutions of Higher Education, in relation to the BSC. This work is characterized as an exploratory study with a quantitative approach, which used the questionnaire as investigative technique. This study was inspired by the Survey method and using the software SPSS to conduct data analysis. With regard to the main objective of the study, the Academic accounting sample of Institutions of Higher Education in Rio Grande do Sul, one can say that the majority of scholars only 1.79 stated that possess a wealth of knowledge and are not any 98.21, very little, little regular or good knowledge about the BSC.

Key words: Balanced Scorecard; Academics; Managerial Accounting.

INTRODUCTION
With the rise of globalization and the internationalization of markets, decision-making has become increasingly present in the everyday life of the Accounting Professional. The information should be interpreted and analyzed in a secure and consistent so that the organization runs the lowest possible risk so much time to invest, as at the time of produce and market their products. In the service sector, the requirements are not smaller than at the industrial and commercial sector, so the internal controls will be the key to future success. For this reason, accounting is a very important tool for decision-making, because through the collection of data, provides reports and indices which give guidelines to the Administration (Hopwood, 2008).

Economic measures enterprises such as costs and profitability of products, services, and activities, for Atkinson et al (2000), are obtained through the systems of managerial accounting. In addition, managerial accounting systems measure the economic performance of decentralized operating units, such as business units, divisions and departments. These measures of economic performance are directly related to the company's strategy and the implementation of the strategy of each operational unit. Therefore, the accounting information is one of the primary means by which all hierarchical levels of organization are given feedback on their performance, so if you qualify and learn from past actions to improve the future. As the Organization invests in new capabilities and technologies, immediately your results can be measured in the short term by the traditional accounting. It is therefore important that accounting professionals seek new models of evaluation, and thus can keep up with the new demands and trends. In this respect, the Balanced Scorecard provides a significant contribution to the Group new forms of assessment on the following perspectives: financial, customer, internal processes, learning and growth (Aghion, Griffith, 2006).

Because of the accounting be subdued in statements produced, because reports of assets and liabilities at a given time, the Balanced Scorecard will not solve this problem, but softens as it brings other perspectives to be used at the time of a professional accounting placement on the organization. In this case, the role of the Balanced Scorecard is to assist the accounts have a multidimensional vision of the institution analyzed, thus, improving the Accounting Professional with innovative techniques and making it an important part in the administration of the Organization (Aghion, Griffith, 2006).

In view of the above, this survey was conducted at a higher education Institution (HEI) in the Serra Gaucha. In order to explore the level of knowledge on Balanced Scorecard of the graduates of the

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This survey was conducted by means of an exploratory study, with a quantitative approach, which used the questionnaire as investigative technique. This work aims to clarify and raise the level of knowledge in BSC of accounting academics.

In addition to this introductory section, this article is organized into the following sections: literature review of the topic balanced scorecard; methodology; presentation and analysis of results and final considerations.

BALANCED SCORECARD
Source and Evolution of the Balanced Scorecard

In light of the many changes occurring in the market since the industrial revolution, businesses had to look for new alternatives to remain on the market as competitive businesses. At that point, they realized that current financial statements were not sufficient to assist in the administration of organizations that the results expressed therein presented themselves null, while the question was on: how much longer the company will keep the market? To fill this gap, was developed by and Norton balanced scorecard, defined as follows:

The Balanced Scorecard translates mission and strategy into objectives and measures, organized according to four perspectives: financial, customer, internal process and learning and growth. The scorecard creates a structure, a language for communicating the mission and strategy, and uses indicators to inform employees about the drivers of current and future success. By articulating the desired results by the company with the vectors of these results, executives hope to channel the energies, skills and expertise of people across the enterprise to achieve the long term goals (KAPLAN; NORTON, 1996b, p. 25).

According to Lawrie, Cobbold (2004), both competitive strategy and the concept of the balanced scorecard are not static, but dynamic, as they are always evolving. From a historical perspective, the BSC since its inception in 1992, is constantly evolving, learning and incorporating new knowledge, these deployments resulting in hundreds of companies in many different places around the world. The author discusses the balanced scorecard in 1990 was restricted with respect to its scope, its capital was predominantly used up physical and measurement tools. In 2004, its scope was broad, his capital was predominantly intellectual, and used the model of integrated strategic management.

With the emergence of the Balanced Scorecard as a theory, has triggered a large number of jobs on its applicability and function as an inducer of competitiveness in organizations. This has raised interest in testing this new managerial performance model that interacts with the strategy and the evaluation metrics previously adopted by the organization. The BSC has been labeled both the effective and easy to apply or innocuous and mechanical expectations that originate from an organizational tradition in the economic-financial and Cartesian’s dictated the tone of management in the twentieth century (Marr, Schiuma, Neely, 2004).

However, the creation of consensus around this tool comes to meet old aspirations with regard to competitiveness and performance, which will affect current patterns of organizational learning and demand by integrating several areas of activity and functional aspects over time, and thus recognizing the organization as a living entity.

For this reason, organizations are adopting various management streams simultaneously, namely: visioning, globalization, customer satisfaction, segmentation of consumers, focusing on leadership, supply chain reengineering, new product introductions, learning organizations, teams high performance, electronic commerce, just-in-time, 360-degree assessment, ERP, organizational redesign, technological leadership, data-mining, core competencies, among others. These are some of the strategic options of executives to face a scenario of increasing uncertainty ((Marr, Schiuma, Neely, 2004).

Central aspects of the BSC

The prospects for value refer to the process by which model of value creation is viewed by stakeholders. Through this model, the strategy is translated into goals, which allow the evaluation of the performance of the organization. According to Lawrie, Cobbold (2004), the prospects are:
Financial: shows whether the execution of the strategy is helping to improve the equity of the company, primarily of net income, return on investment, cash flow and the creation of economic value;

Customer: assesses whether the goals articulated in relation to customer satisfaction, winning new customers, retaining customers and winning new markets are bringing results for the company, through measures such as: delivery time, quality, cost and product performance;

Internal Process: identifies the main processes defined by the company are generating value and business objectives are being met, and;

Learning and Growth: verifies that learning, gaining new knowledge, technologies, and competence of the individual, are enabling the three previous outlook.

The Balanced Scorecard approach preserved measurements of financial performance, lagging indicators, but included with the measurement of other drivers of future financial performance (Kaplan; Norton, 2000, p.13). According to Kaplan; Norton (2004), these perspectives are linked by a chain of cause and effect relationships. At the moment it is granted a training program to enhance employee skills (learning and growth perspective), this influence to improve services to customers (internal process perspective) which results in higher customer satisfaction and loyalty (customer perspective) ultimately increases revenue and margins that influence the financial perspective.

According to Kaplan; Norton (1996b), financial objectives may differ considerably in each life cycle of a business. The theory of business strategy suggests several strategies that business units may follow from the aggressive growth in market share consolidation, liquidation and exit. These cycles are identified by:

i) The growth phase;
ii) Phase support, and
iii) Harvesting stage.

For Kaplan and Norton (1996b), the growth phase, companies are in the early stages of its life cycle. Companies that find themselves in this phase can operate with negative cash flows and low rates of return on invested capital, investments for the future can consume more resources than those produced today. The financial goals of the companies at this stage would be: revenue growth and increased sales to certain markets, customer groups and regions.

In phase support companies attract investment, but are compelled to get excellent returns on invested capital. Estimate maintain market share and maybe increase investment, seek to resolve possible problems production bottlenecks, expand capacity and to seek continuous improvement. The financial goals of the companies at this stage would be related to profitability. These goals can be expressed through measures related to revenue accounting. Other business units associated revenue accounting to the level of capital invested in the unit, return on investment, return on capital employed and economic value added, these are the measures used to evaluate performance of business units (KAPLAN; NORTON, 1996b).

At harvest harvesting companies seek investments made in previous phases. Investments at this stage (put, as a suggestion, some synonyms phase, not to be repetitive - period) are sufficient to maintain equipment and capabilities, so any investment project payback period should have defined and very short. The main goal of this phase is to maximize cash flow. The financial goals of the companies at this stage would be the operating cash flow (before depreciation) and reducing the need for working capital (Kaplan; Norton, 1996b).

According to (Marr, Schiuma, Neely, 2004), the Balanced Scorecard provides corporate coverage, since dynamic involving everyone in the organization, even situations where monitoring is done on a small scale, for a group of individuals. For large corporations BSC has an additional appeal because it allows the adoption of a global approach to performance management and simultaneously tailored to the characteristics of the place where the work is being performed.

Tools for Implementing the Balanced Scorecard

To (Marr, Schiuma, Neely, 2004), the application of BSC happens from the integration of the Scorecard strategy for this process to occur is necessary to use instruments that will enable this description of the history of the organization's strategy into results and strategic goals. There are some tools that can be used to do this merging, which are:
a) Strategy Maps - portray relationships of cause and effect on the scope of the vision of success for an organization established and coordinates activities at all levels, using as a guide the strategy developed by the company. The map is drawn from four perspectives of the Balanced Scorecard, demonstrating to all who participate in organizational processes that shape the work of each one connects to the larger goals, making possible the detection of gaps in implementation by lower levels of organization;

b) Scores - are systems of counting of points (scores), which consolidates and total performance in each perspective, provide an integrated view of organizational performance, drawing correlations with the business strategy and the achievement of results. Facilitate the visualization of the importance of a theme, creating awareness around the efforts needed to make strategic goal is realized. The scores can also be used to support the performance-oriented remuneration, establishing ranges of excellence for bonuses and incentives with respect to meeting the objectives planned.

c) Strategic trees - is the presentation of graphs that let you see the links between objectives and performance inductors. Enable unfold, align, integrate and disseminate strategic indicators;

d) Measures Sheets - to develop the Scorecard is necessary to characterize the language of measurement, indicators present measures that need to be translated, so that they have a common meaning in the identification of deviations from targets. To have a good BSC system, it is necessary to have the memory on the construction of the indicators so that, if necessary, can be recovered. Chips are used for measures to register the measurement model and their connections to the organization’s strategy, enabling employees see that their actions can intervene in the performance;

e) Learning Guides - BSC, in addition to defining metrics for evaluating the company’s strategy is to contribute to the learning and development of individuals. This learning converted into the actions of individuals tends to help the company achieve its strategy, adding value to stakeholders.

f) Reports for Monitoring - continuous monitoring is essential to transform the strategy into action, after the preparation of scorecards, it is necessary to conduct periodic reviews of the indicators, analyzing the range of patterns and logic of each measure used by the BSC. The reports are designed in a generic way, presenting the various perspectives, goals, gauges, deviations, and score weighting factors relating to performance.

MATERIALS AND METHODS
The study was conducted in an institution of higher education located in the Serra Gaucha in 2008 in the cities of Caxias do Sul, Farroupilha and Vacaria - RS students of courses Accounting, who answered the questionnaire, aiming at obtaining knowledge about the BSC the survey population. To Rose (2001) these studies are characterized by direct interrogation of individuals whose behavior you want to know. A sample is considered non-probabilistic which was chosen for convenience. This work is characterized by an exploratory study with a quantitative approach using a questionnaire as investigative technique to collect data.

These study characteristics were evidenced by Rose (2001) to report that exploratory studies are developed with the objective of providing an overview of the subject that is being researched. The exploratory research mainly aims to develop, clarify and modify concepts and ideas. Were 56 questionnaires, designed as a tool for data collection, consisting of a series of 20 multiple choice questions and multiple choice. It was divided into four blocks, with general information on Block I, Block II on the Knowledge of BSC, in Block III and the type of action that the respondent company and participates in the final Block IV, the participation of the Balanced Scorecard, and finally completion of this study will be complemented where the outcome.

DESCRIPTION AND ANALYSIS

Descriptive Analysis
The following presents the data analysis. With respect to the profile of the respondents the results were: (1) 25% of the respondents were male and 75% female; (2) the average age 27 years with a standard deviation of 6 years.

With respect to the degree of knowledge of the respondents regarding the BSC were: (1) 26.79 knows, 14.29 unfamiliar and 58.92 heard; (2) 17.86 were informed about the BSC through courses, lectures or
seminars, 51.79 by University or college and 30.35 through books, magazines or journals, internet, coworkers or otherwise; (3) 21.43 have no knowledge about the BSC, 28.57 very little, 30.36 have little knowledge, 17.86 between regular and good and 1.70 much knowledge; (4) 30.36 have no knowledge about the perspectives of BSC, 17.85 very little, 25 have little knowledge, 25 between regular and good and 1.79 much knowledge; (5) 35.71 have no knowledge about the strategic maps of BSC, 14.29, 26.78 have little knowledge, 21.43 between regular and good and 1.79 much knowledge; (6) 10.71 have no knowledge on financial indicators, 39.28 very little and little knowledge, regular and 28.57 21.43 good knowledge; (7) 30.36 have no knowledge about the perspectives of BSC, 17.85 very little, 26.78 have little knowledge, 21.43 between regular and good and 1.79 much knowledge; (8) 17.86 have no knowledge about indicators related to processes, 41.08 have little or little knowledge, 41.07 between regular and good knowledge; (9) 14.29 did not have any knowledge on client-related indicators, 33.93 have little or little knowledge, 50 between regular and good and 1.79 much knowledge; (10) 51.8 responded that sees no practical applicability of the Balanced Scorecard in enterprises and 48.2 don't see applicability; (11) 29% responded that they are capable of preparing a strategic map, while 71 are not capable; (12) 25% responded that they are capable of relating to create indicators for the goals set in the strategic map, while 75% are not capable.

With respect to performance in the company: (1) 32.14 performance in the industry, 12.50% and 55.36% in trade in services, (2) 46.43% administrative, accounting 30.36%, 7 14% commercial, productive 8.93%, 7.14% in another area, (3) 41.07% of the companies have strategic planning and 58.93% do not.

With respect to participation: (1) 5.4% have participated in any deployment of BSC and 94.6% did not participate, (2) 30.36% think the technique applied in the BSC organization, brings little or very little results significant in the statements of income, 66.07% believe that bring good results or regular, while only 3.57 think the BSC can provide significant in the income statements (3) 69.6% think the BSC is taught in the course Accounting Sciences as a technique to be applied in organizational management, while 30.4% think not, (4) 23.21% evaluate the degree of importance given to the BSC at the time was transmitted by the teacher in Accounting Sciences was important or very little bit, 57.14 assess as fair or good, 16.07% think that was very important, and 3.96% are unaware or do not remember.

Factorial Analysis

The factorial analysis technique aimed to replace the initial set of 19 smaller number on the other variables called factors, in order to identify the latent dimensions in these variables, to a more understandable interpretation according to directions (AAKER et al, 2004).

To check the normality of the data was performed the Kolmogorov-Smirnov test, for each of 19 variables, finding himself a significance between 0.35 and 0.47. In this way, we can say that the distribution of the data collected concerning nineteen variables is normal to a significance level of 5%.

To verify that the correlation matrix is an identity matrix was applied the test of sphericity of Bartlet, significance less than 0.003, value less than the significance level of 0.05, showing that the correlation matrix is the identity matrix. Thus, we can affirm that the factor analysis can be used to process the data obtained in this research.

Internal consistency was assessed by Cronbach’s Alpha. The value of alpha found considering the nineteen variables, was to 0.8345, making it adequate, since it is above 0.6 (Malhotra, 2006).

We used the varimax criterion, which maximizes the variance among the factors for the rotation matrices factorials.

We identified seven significant factors relating to eight values of values greater than 1, representing 78.2% of the variance of the original data set. It was found that the first factor comprised seven original variables, the numbers 3, 4, 5, 6, 7, 8 and 9. Upon analysis of the results showed that they were related to aspects of knowledge. The second factor comprised the original variables of numbers 11 and 12. The third factor was demonstrated by three original variables, the numbers 17, 18 and 19. The fourth factor involved the two variables, the numbers 1 and 2. The fifth factor comprised a variable, the number 10. The sixth factor was evidenced by a variable number of the original 16 and the seventh factor comprised three variables of the original numbers 13, 14 and 15. The adjustment to the assumptions of factor analysis gave a value of Measure of Sampling Adequacy (MSA) was 0.79, indicating that the data is a good fit for factor analysis (Hair et al, 2010).
Table are the results of the factor analysis performed for this group of nineteen variables.

TABLE 1 - Determinants of knowledge of Academic Accounting Sciences in Relation to Balanced Scorecard:

<table>
<thead>
<tr>
<th>Order factor</th>
<th>Denomination factor</th>
<th>Analyzed aspects</th>
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<tbody>
<tr>
<td>1</td>
<td>Knowledge degree</td>
<td>3 - How would you assess your level of knowledge on the BSC</td>
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<td></td>
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<td>4 - How would you assess your level of knowledge about the BSC perspectives</td>
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<td></td>
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<td>5 - How would you assess your level of knowledge about the BSC strategy maps</td>
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<td></td>
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<td>6 - How do you evaluate your level of knowledge about financial indicators</td>
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<td>7 - How do you evaluate your level of knowledge on indicators related to customer</td>
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<td>8 - How do you evaluate your level of knowledge on process-related indicators</td>
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<td></td>
<td></td>
<td>9 - How do you evaluate your level of knowledge on indicators related to growth and learning</td>
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<tr>
<td>2</td>
<td>Capacity Development of the BSC</td>
<td>11 - If you think you can develop a strategy map</td>
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<tr>
<td></td>
<td></td>
<td>12 - If you think you can create indicators relate to the objectives set in the strategy map</td>
</tr>
<tr>
<td>3</td>
<td>participation</td>
<td>17 - The BSC technique applied in the organization, can bring significant results in the income statements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 - The BSC is taught in Accounting Course as a technique to be applied in managing organizational</td>
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<tr>
<td></td>
<td></td>
<td>19 - How would you assess the degree of importance given to the BSC at the time was transmitted by the teacher in Accounting Course</td>
</tr>
<tr>
<td>4</td>
<td>BSC</td>
<td>1 - Heard in BSC</td>
</tr>
<tr>
<td>5</td>
<td>Applicability</td>
<td>10 - Applicability of the Balanced Scorecard practice in business</td>
</tr>
<tr>
<td>6</td>
<td>Implantation</td>
<td>16 - Have you participated in any implementation of the BSC</td>
</tr>
<tr>
<td>7</td>
<td>Performance in Company</td>
<td>13 - Sector performance of the company you work</td>
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<td></td>
<td></td>
<td>14 - Area of operation</td>
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<td></td>
<td></td>
<td>15 - The company where he works, has strategic planning</td>
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</table>

CONSIDERATIONS FINAL

With regard to the main objective of the study, the Academic accounting sample of Institutions of Higher Education in Rio Grande do Sul, one can say that the majority of scholars only 1.79 stated that possess a wealth of knowledge and are not any 98.21, very little, little regular or good knowledge about the BSC.

With application of technique of factor analysis, one can replace the initial set of 19 other variables called factors, number with which it was possible to identify seven latent dimensions, which explained in these variables, to a more understandable interpretation according to directions (AAKER et al, 2004).

With application of technique of factor analysis, one can replace the initial set of 19 variables by seven significant factors, pertaining to values of eigenvalues greater than 1, representing 78.2 of the variance of the original dataset. It was noted that the first factor comprised seven original variables, numbers 3, 4, 5, 6, 7, 8 and 9. Through analysis of the results showed that they were related to the aspects of knowledge, namely: How do you evaluate your level of knowledge about the BSC perspectives; How do you evaluate your level of knowledge about strategic maps of BSC; How do you evaluate your level of knowledge about financial indicators; How do you evaluate your level of knowledge about client-related indicators; How do you evaluate your level of knowledge about process-related indicators; How do you evaluate your level of knowledge about learning and growth-related indicators.
The other six factors are related to: the ability to prepare BSC; participation in the BSC; BSC; Applicability of the BSC; Implementation of BSC and performance in the Company.

REFERENCES