CHAPTER 7

DISCUSSION, SUMMARY AND CONCLUSIONS

7.0 Introduction

This chapter concludes the research undertaken to develop a suitable prototype that was adapted from Kaplan and Norton’s Balanced Scorecard framework to measure the performance of the academicians at INTI-UC. The findings will be presented in this chapter where the results and implications of the research are discussed. The strengths, limitations, and the possible application of the prototype in the area of the discipline will also be mentioned. Finally in conclusion, the contribution of this study towards knowledge and the possibilities for future research are also described.

7.1 Summary of Research

The area of this research focused on developing a suitable electronic performance measurement system which was modeled after the Balanced Scorecard framework. In order to understand the aspects of performance management with the integration of the BSC for the purpose of creating and developing the e-BSC as a measuring tool, a study and analysis of the existing literature was carried out with a focus on implementing the application of the BSC within a private academic institution of higher education. Prior to the development of the system, fact-finding techniques were also employed to elicit the user requirements for the selection of the main categories for the individual performance scorecard and its corresponding Key Performance Indicators. The KPIs that were chosen were implemented as targets or decisive factors to assess the academicians’ performance by using the e-Balanced Scorecard as a management and measurement tool. A questionnaire was developed and given out to the respective respondents as a survey to acquire their feedback on determining the decisive factors to measure the academicians’ performance. Observations and documentation review of the current performance appraisal system were also conducted to gather additional fact-
finding data to support the basis of the research and analysis. Based on the analysis of the user requirements that helped to determine the KPIs for the e-BSC system, a prototype which primarily focused on the Learning and Growth perspective as well as with a secondary focus on the Customers and Internal Processes perspectives was then developed and evaluated in INTI-UC to assess the performance measurement of the academicians. Based on the majority of the feedback from the user evaluation which showed a positive outcome on the functionality of the prototype, it can be concluded the objectives of the research have been successfully achieved. **Section 7.2** below describes the objectives and its outcome from the research.

### 7.2 Objectives of Research Achieved

Preceding the study, the objectives of the research were formulated in Chapter 1 when the form of the research was just about to take shape. The achievements for all four research objectives that were originally indicated for the purpose of carrying out this research study are described below:

1. The objective to develop a performance measurement prototype to evaluate the academicians’ performance at INTI-UC has been achieved through conducting an observational study on the current appraisal system procedures, analysis on INTI-UC web resources and official documentation, as well as from the analysis of results gathered from qualitative fact finding research.

2. The objective of adapting the Balanced Scorecard framework with a focus on the Learning and Growth perspective was achieved through the research findings from the study and review of literature publications, the analysis of data that was generated from the both the quantitative and qualitative survey results and was constructed based on the INTI-UC e-BSC prototype framework model, corporate vision and mission statements, corporate strategy map, strategic themes and KPI categories for the academics.
3. The objective to elicit INTI-UC’s performance measurement requirements for evaluating and appraising the academicians through the implementation of KPI areas which focused on the Learning and Growth perspective has been achieved through conducting a survey to gather the user requirements from INTI-UC’s senior management. The outcome of the survey was then used to model the KPIs for the INTI-UC e-BSC.

4. The objective to examine the levels of acceptance was achieved through the conclusive positive analysis of the results which were based on the user acceptance tests that were conducted to evaluate the implications of using the e-BSC in appraising the performance of the academia.

7.3 Findings of Research Questions

The research questions that were formed in Chapter 1 are presented in this section together with the findings from the study. Basically, the findings describe what issues have been discovered and what they indicate. To answer the research questions, the prototype of the system for the e-BSC was tested and evaluated against the current system of performance assessment which is still traditionally done i.e. paper-based and processed manually. Based on the analysis of the test runs and evaluation of the e-BSC system that was carried out within the university college by a number of the senior management, HR personnel, academicians and BSC consultants, the following research questions can be concluded:

1. **How would the presence of a successful educational institution be associated with the presence of a performance measurement tracking system that provides continuous feedback for the academicians?**

Based on the research that was conducted and the prototype that was developed and evaluated, the question above has been answered. The research has lead to the findings that with the development of the INTI-UC e-BSC system, an educational institution
such as INTI-UC will be able to track the performance of their employees; namely the academicians. This is because the INTI-UC e-BSC system that has been developed offers a provision or means for the academicians to keep track of their achievements based on the KPI targets that have been set, as well as, provides continuous feedback on the academicians’ performance on an annual basis. The e-BSC system provides an avenue for the academicians to reach the performance targets set by the senior management of INTI University College. Hence, by having performance targets, an academician is able to review, keep track and evaluate their respective performances throughout their academic tenure in INTI-UC. The feedback from the user evaluation has clearly indicated that the system does allow the academicians to track their individual progress and to ensure that their career progress is well balanced and in check. The users have also agreed that the setting of distinct KPI targets provided in the system has ensured that their performance is measured more efficiently, and thus, will guide them accurately in the right direction for their career development. As such, the e-BSC system provides a mechanism to provide feedback to the academicians’ and this will greatly help in improving the performance of the academicians’ if they are found lacking in any of the evaluation criteria. This would eventually lead to the fact that when the academicians’ performance improves, it will inevitably bring about an assurance that the educational institution indeed has outstanding and excellent academicians. The performance assessment of the academicians would further augment the fact that when an educational institution has excellent academicians, the institution will inevitably become more prominent or renowned among the academic circles.

2. How would the core focus on the Learning and Growth Quadrant of the e-Balanced Scorecard help to achieve excellence and success for both the academia and academic institution?
According to the research undertaken, in order to have a successful implementation of a Balanced Scorecard system, each organization needs to establish a strategic plan whereby the corporate strategies, vision and mission statements must be translated into action. The strategic plan is then used to spearhead the monumental task of ensuring that the four quadrants or perspectives of the Balanced Scorecard are aligned to the corporate strategy. INTI-UC has also developed a corporate strategy map which was formulated based on the SWOT analysis, current student ratio, current market for education, competitors’ analysis etc. The INTI-UC e-BSC system was eventually developed based on the corporate strategy map, whereby the cause and effect relationship displayed in the map clearly denotes the links among the major factors of the strategic plans to ensure the achievement of the corporate vision and mission. As INTI-UC is an educational institution, the approach taken was to focus more on the Learning and Growth quadrant or perspective of the BSC and to ensure that it is aligned to the corporate strategy map and its goals. One notable aspect based on the prototype that was developed for the purpose of this research, is the inclusion of KPIs that is used to measure the performance of the academicians within the e-BSC framework. The underlying foundation of implementing the KPI as a measurement tool is to make certain that the BSC is indeed the most universal and appropriate framework to measure the excellence and success of an academician as there is already a perspective that concentrates solely on both the Learning and Growth aspects. From the evaluation conducted on the e-BSC prototype, many users agreed that the main focus on the Learning and Growth perspective in the Individual Scorecard is justified as the KPI categories are sufficient and effective enough to enhance and heighten the career development of the academician. With the focus on this characteristic, an educational institution’s fame and accomplishments will be duly recognized in time. As the name implies, the Balanced Scorecard is a ‘balanced’ framework for performance
management and measurement. Thus, despite the focus on Learning and Growth, the e-BSC prototype can lay claim that the other three quadrants of the BSC are also taken into account. This is again based on the cause and effect relationship links in the strategy map, in which the Learning and Growth quadrant has a direct effect on the other quadrants. Hence, the prototype is also developed with a considerable focus on the other three quadrants in the Faculty scorecards so as to allow the senior management group to review and track the performance of each faculty within the campus.

3. **How would the implementation of the e-Balanced Scorecard with its target KPI areas increase organizational learning which leads to the empowerment of knowledge management in an educational institution?**

From the overall high acceptance level garnered from the user evaluation of the e-BSC system, it can be concluded that the adaptation of the Balanced Scorecard framework is regarded as efficient and effective in its capacity to measure the performance of the academic departments. To facilitate complete performance measurement, KPI categories are first identified and are employed as a total approach to measurement to ensure sustainable high performance. These KPIs translate strategies into measurable variables against which the performance of the academicians can be managed. Moreover, they are all inevitably linked to the Learning and Growth perspective of the BSC which is aptly suited for the academicians’ advancement. Despite its main focus on the Learning and Growth perspective, it does enforce a ‘balanced’ environment and outlook as it promotes all four perspectives of the scorecard framework through the cause and effect relationship of the strategy map. The Learning and Growth perspective is coupled with organizational learning i.e. presupposing that people change their worldviews and know-how through training, upgrading competencies and staff development programs. To increase and encourage organizational learning, the particular organization must adopt an approach to be established as a learning
organization. A learning organization as defined by Senge (1990) and cited in Yunus (2010), is a place where the employees “continually expand their capacity to create the results they truly desire, where new and expansive patterns or thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together”. In addition, the innovation and creation of Knowledge Management (KM) applications in the context of organizational learning may also stem from the teaching and learning support groups, subject expert groups, link and peer tutor, conferences, symposiums, seminars, workshops, research groups, research discussions and forums. All these aspects of KM applications focus on activities that create an educational hub which encompasses a learning culture and community as well as increases an effective exchange of knowledge between the academicians. Knowledge gained by an educational institution should be used to yield better results in their future endeavors and to avoid from being obsolete. Thus, to encourage the growth of knowledge management, an easy access and retrieval of records and information must be made available for the academicians to review, retain and learn from the past organizational experiences. Consequently, the target KPIs leads to an increase in organizational learning and empowering KM though fostering an environment that encourages and recognizes contribution such as academic writing, publications, research and development and etc. According to an article by Yunus (2010) educational institutions should encourage its academics to embrace continuous change and help develop a learning environment. This can be achieved in various learning opportunities through programs such as workshops, seminars, discussions, dialogues, group dynamics, meetings, courses and be reinforced through having continuous access to information through an established information system such as library, archives, boards, notes, ICT facilities, periodicals and news media. Top-level management should also participate actively in public talks about learning at weekly meetings, forums and
monthly assemblies as these open communications are vital in instilling knowledge and promoting a learning culture in a corporate climate. Many personal or corporate experiences, success stories and even failures can be brainstormed during these public talks so that lessons can be drawn from one another. Other methods to engender learning is through the continuous and reinforced training that should be practiced and adequate funding that ought to be provided to ensure acquisition of better tools and use of improved techniques and methods of training. Excellent human resources such as talented and highly-skilled academicians should also be developed, hired, retained and rewarded accordingly to make certain that there will always be an availability of a pool of experts within the campus as they play an important role in sharing their expertise and talent across the organization. Additionally, organizational learning is gained through strengthening college-level and faculty-level leadership competencies, creating a service-driven culture and community, improving competencies among academicians in teaching and research, developing a more supportive work environment, in addition to expanding and enhancing innovation and institutional effectiveness to instill a climate for continuous improvement and live–long learning for all academicians in INTI-UC. Thus, it can explicitly be said that the creation of the e-BSC certainly facilitates organizational learning which leads to the empowerment of a Knowledge Management repository in INTI-UC through effective knowledge creation and transfer.

4. How would the e-Balanced Scorecard help to ensure that each individual scorecard and performance of the academia be aligned at all times to the corporate strategy and organizational goals as well as to ensure its level of effectiveness in appraising the academicians’ performance is deemed successful?

The prototype that was developed solely for the purpose of this research clearly shows the Balanced Scorecard framework’s four perspectives provide a ‘well-balanced’
environment for an organization. In order to maintain this balance, the BSC employs a strategy map that has been mapped out with bubbles to represent strategic themes from every BSC perspective and is interlinked upwards to ensure its alignment to the corporate strategy, vision and mission (Please refer to Appendix B). To ensure that each of the KPIs that are used to measure the performance for the academia are always aligned towards the corporate strategy, the strategic key thrusts for the Learning and Growth must intrinsically show the support and objectives to translate the strategy into action. Besides ensuring that the performance of the academicians will help to fulfill the corporate vision, the KPIs in the e-BSC also have been identified as appropriate measures to promote an academician’s development and progress in excelling in their respective career as the compulsory KPIs targets in the Learning and Growth perspective mainly focuses on academic development and performance. The e-BSC also provides a mechanism to secure sufficient information from each academician’s performance to generate the overall faculty’s performance which inevitably helps to establish an avenue for the deans to chart their future annual action plans and to track the corresponding annual performance progress at the faculty level. This mechanism is effective for the faculty scorecard because it ascertains a strategic learning link in providing vital data for the future action plans and feedback for the progress of a faculty’s performance. Through the strategic learning link, a faculty can study plans on enhancing future action plans, set higher targets and ensure that the better progress is made. Furthermore, a faculty can also recognize the highs and lows of progress scores made by tracking the performance results in each category of the Learning and Growth perspective.

The e-BSC level of effectiveness in appraising the academicians is high because it provides transparency in each strategic measure through the following factors:

1) Organizational Motivation
The INTI-UC corporate strategy helps to shape the desired behaviors and culture of the corporate scorecard, which in turn, will function as a tool to drive the desired behavior in each individual academician’s performance.

2) Evaluation of Strategy and Strategic Learning

The e-BSC provides a function to track progress towards the achievement of strategic individual academician’s objectives and demonstrates a direct relationship to the corporate strategic objectives and goals of INTI-UC.

3) To Communicate the Senior Management’s Expectations

In lieu with the corporate expectations, the e-BSC provides direction to the academicians in steering them to the right path for their career advancement and facilitates on-going feedback on their performances.

The evaluation that was conducted amongst the users has confirmed that the validity of the KPI measurements implemented in the e-BSC has provided a means of evaluating the academicians in various angles of their career and work environment. Undoubtedly, the implementation of the e-BSC is indeed successful as it has accomplished its main objective as an effective and powerful tool that can be used to execute an academician’s performance measurement rapidly and reliably.

7.4 Discussion of Findings

Based on the answers from the research questions, it can be verified that the development of the e-BSC has undoubtedly brought about significant benefits to INTI-UC; a private educational institution of higher learning. The above answers to the research questions also have projected proven results and positive outcome from the implementation of the e-BSC. All the findings have proven that the e-BSC is indeed a viable and effective system that has helped to create a ‘balanced’ environment for INTI-UC where its presence as a performance measurement system will ensure that that the organization will always be steered onto the right path for the corporate strategy to be
translated into actions. The findings have also conclusively proven that the core focus on Learning and Growth within the system is justified as the system is designed and built with the purpose of measuring an academician’s performance. The measures of the Learning and Growth perspective are really the ‘enablers’ of the other perspectives and it being at the bottom acts as a solid foundation for everything else above it. The KPIs in the e-BSC ensure that the academics possess the right skills, are motivated and are aligned with the organizational goals. Having such effective KPI measures will help to sustain INTI-UC’s ability to grow and improve as the business environment inevitable changes.

Each individual scorecard and performance of the academia will be aligned at all times to the organizational goals and corporate strategic themes as the prototype clearly shows. The results from the user evaluation have also concluded that the performance of the academicians’ can be easily planned, tracked and reviewed for their progress by the end of the academic calendar. By providing such a mechanism, the e-BSC system does offer an effective method for measuring academic performance by identifying and achieving targets to ensure excellent performance. As for the faculty and campus performance, the other three perspectives of the e-BSC are used to generate the performance scorecards by calculating the success factors based on the results from the Learning and Growth perspective.

Despite the lack of published literature on the implementation of the BSC within the private educational institutions of higher learning, this research has conclusively proven and that the underlying concept of the BSC framework that was originally designed by Kaplan and Norton for corporate organizations can be readily implemented for educational institutions of higher learning as well. The INTI-UC e-BSC has been designed and developed based on the existing literature that has so evidently showed the many testimonies and success stories of organizations throughout the world that have
chosen the BSC as the top-notched and ultimate performance management and measurement framework. Reviews in research publications have also stated that educational institutions who adopted the BSC approach with different defined measures have all achieved success and won educational awards (Karathanos and Karathanos, 2005). The same e-BSC prototype which was developed for INTI-UC can be also easily adapted and applied in any other educational institutions as the BSC framework can fit to easily suit any working environment. According to Dorweiler and Yakhou (2005), the BSC can be readily translated into many different academic settings by changing the basic elements and to perform required interpretations of the BSC into the academic environment. Dorweiler and Yakhou (2005) have also suggested some of the translation elements such as the perspectives in university strategy, academic administration objectives; the procedures in developing scorecard in the context of academic administration performance evaluation, the scoring board and etc. Therefore, the e-BSC prototype is suitable to be used as a performance measuring tool in any institutions of higher education as it provides a complete overall view of the organizational strategy together with a balanced set of perspectives and appropriate measures within the academic context for the institution.

Literature studies have shown that many scholars and administrators in the educational arena have advocated the selection of the BSC as an ‘architecture’ which would add diagnostics and performance measures to the current system of internal controls for managing their institutions (Hafner, 1998). Most colleges and universities have a mission or vision statement in place that sets out in very broad terms, the goals of the institution. It is within the context of these goals that an institution must decide what it will benchmark and what performance it will measure, a process that Kaplan and Norton (1996) described as “translating the vision” (Stewart et. al., 2001). According to Hafner (1998), traditional planning models for measuring higher education performance
are not transparent as they do not measure how well the policies, processes and practices of the institution are working. Traditional models for measuring higher education performance also are constrained by departmental boundaries, which encourage deans or unit managers to be concerned only with their portion of a process that may span multiple work groups or units within the institution. By judging the successes of private sector organizations which have implemented the BSC, educational institutions should recognize that with traditional performance measurement methods, there is no opportunity to tie individual performance objectives and performance evaluation processes to institutional performance. Acknowledging that, Hafner (1998) declared that the BSC has proven effective in resolving the inability of traditional management systems to link long-term strategy to short-term actions. Therefore in summation, the findings from the research questions in Section 7.3, demonstrates that the e-BSC has served as a catalyst for translating a corporate-wide vision; for communicating goals and strategies and linking them throughout the hierarchies; for integrating performance measurement into organizational planning; and for providing a forum for the ongoing transfer of knowledge within INTI-UC.

7.5 Strengths of INTI-UC e-BSC system

The following summarizes the strengths of the e-BSC prototype that has been developed as a tool to measure the performance of the academics ay INTI-UC:

- The e-BSC provides the academicians with the facility to plan, track and review their annual personal goals strategically.
- The system allows the senior management to develop an action plan for each faculty to allow the academicians to reach the targets for career betterment.
- To ensure excellent performance is achieved, the e-BSC offers an effective method for measuring academic performance by identifying achievable targets.
• There are well defined targets that have been incorporated in the e-BSC that would inevitably help to promote an academician’s career development.

• The KPIs incorporated in the academician scoreboard within the system is standardized for all academicians across the campus to promote uniformity and consistency.

• The e-BSC has an effective warning system that functions to generate feedback to the academicians and appraisers to encourage improvement in performance. The feedback is illustrated though a traffic light signals system and a bar chart that displays three colors: red, yellow and green to signify poor, average and good performance respectively.

• The strategy map in the e-BSC shows that the faculty and academicians’ performance and the measurement targets are directly aligned and is reflected towards the institution’s corporate long-term strategic goals and organization’s mission and vision.

• The e-BSC shows the relationship of the academicians’ performance with the institution’s internal processes, customers as well as financial perspectives.

• The system has proven that that the presence of a successful educational institution will be associated with the presence of a good performance measurement that provides continuous tracking and feedback for the academicians.

• With the e-BSC, the institution has the ability to monitor all academic development, achievements and services to improve performance and quality.

• The e-BSC provides the transparency and information that is required for both an academician and educational institution to excel.

• INTI-UC’s expectations for the Learning and Growth perspective are made clear in the KPIs for the academicians.
• The e-BSC provides a ‘balanced’ environment and architecture to support both the financial and non-financial measures of INTI-UC. It also shows the cascading links from the individual scorecard to both the faculty and campus scorecards.

• The compulsory KPIs ensure that the academician scores well in academic development i.e. qualifications, research, publications, trainings etc. as these are criteria that constitutes the job function that befits an excellent academician. On the other hand, the provision of optional KPIs was also included to allow academicians who excel in other categories to also achieve excellent scores in their performance scorecard. With these arrays of KPIs which totals to a maximum of 500 points, diversity is proffered whereby the academicians are given the choice to select as many KPIs as they can score within the given range.

7.6 Limitations of INTI-UC e-BSC system

Notwithstanding the many advantages that the e-BSC has to offer, there are also limitations within the system as mentioned below:

• Since the research specifically focused on the Learning and Growth perspective and with only a minor stance on the other three measures of the BSC framework, the prototype is not able to show the full implications and benefits of the overall concept of implementing the e-BSC within a private educational institution of higher learning.

• The system overwrites the original scores entered by the academician. It is unable to show parallel changes in the scores that can be made by the appraisers’ should they feel the original score entered by the respective academician is unwarranted for.

• Currently, there is no provision for generating performance tracking and feedback progress twice yearly. An ideal system should be able to provide tracking and feedback of performance progress at least twice annually, so that the academicians
are kept aware of their performance development and allows them to take necessary actions in order to improve and excel better.

- Due to the time constraints in the development phase, the system is unable to monitor progress and generate warning signals and feedback in a real-time dynamic mode.
- The system has yet to be integrated with the INTI-UC e-Campus portal as there are still certain areas that need to be developed and enhanced before going for live migration and implementation. However, a link to the e-Campus portal is provided in the system to provide efficiency for the users.

7.7 Implications of Findings

The results from the findings denote that the BSC is indeed a suitable tool that can be used extensively to manage and measure performance in an educational institution. There are many measurement frameworks available but the BSC is widely accepted and hugely popular because with data framed in the context of performance on organizational goals, it can facilitate conversation, decision making, and ease of implementation for many strategic decisions (Stewart et. al., 2001). As further mentioned in a paper published by Stewart et. al. (2001), the balanced scorecard approach thus provides a framework for real conversation about the values and strategic objectives of the institution and the contributions of individual units to those objectives. Rewards can be linked to accomplishment of performance objectives, and resources can be more easily allocated to the priorities of the institution.

Higher education is faced with more and more calls for accountability and applying the BSC approach for strategic management may be a useful response to provide stakeholders with an understanding of the organization’s progress towards its goals (Goral, 2003). According to Black (2004), the application of the BSC in an educational institution can be used to provide the opportunity for future growth as a learning
organization in the following areas: investment in technology both for administrative and teaching uses, investing in employee training and development, investing in developing leaders throughout the university and facilitating the capabilities of employees to work in both functional and cross-functional teams and as self-directed work teams.

The application of an e-BSC within INTI-UC seems appropriate and justified as it provides a facility to establish a comprehensive and well-defined set of organizational strategic goals. It also appears as a highly credible measurement tool that an educational institution can implement as it easily determines whether or not their strategic themes were in alignment with the corporate vision.

The e-BSC contribution towards knowledge is that the academicians in INTI-UC are now aware of a framework that allows them to have better and efficient management in performance, a fact confirmed from the results of the user evaluation. With the establishment of the KPIs within the e-BSC, academicians are also aware of the impact of knowledge sharing within the organization. The importance given to knowledge sharing is mainly due to its activities such as helping communities of people work together, facilitating knowledge exchange, and increasing employee’s ability in their individual and organizational goal achievement (Dyer & Nobeoka, 2000). The concept of knowledge-sharing culture is seen as a vital element of effective knowledge management initiatives (Holsapple & Joshi, 2001; Reid, 2003). Thus, the establishment of subject expert groups, teaching and learning support groups, research groups, link tutor groups, peer tutor groups, seminars, workshops and trainings etc. among the faculties in INTI-UC will help to create and foster knowledge sharing and exchange in a ‘learning environment’ for a ‘learning organization’. Yehya et. al. (2002) stated that performance appraisal should be the evaluation base of employee’s knowledge management practices and an input for the direction of knowledge management efforts.
This research reinforced the argument by Yehya et. al. (2002) where knowledge sharing proved to be influenced by the KPIs incorporated within the e-BSC system which is an ideal performance appraisal measurement to practice in an educational institution. Therefore, through this study, performance measurement is regarded as an important tool for enhancing knowledge sharing and professional development of the academician which are important factors for the survival of the business in this competitive world.

7.8 Future Research

In the light of the development of the e-BSC system for INTI-UC, the achievements of the objectives may be regarded as satisfactory accomplishments for the purpose of both the study and corporate agenda. However, on the contrary, as there are several limitations in the system stated in Section 7.7, the e-BSC is still found wanting and has definite room for improvement. Comments from the user evaluation have also highlighted certain aspects that can be enhanced further to increase the fullness of the system’s effectiveness and efficiency. As Stewart et. al. (2001) declared in a publication, ‘Translating the Balanced Scorecard in the complex world of the academia is a challenge.’

One aspect that can be further developed would be the other three core perspectives of the Balanced Scorecard as only then, the full realization of a ‘balanced concept within an organization can be achieved. The system can also be enhanced further to include the non-academic departments in INTI-UC as to create a homogeneous and standardized method of measuring performance within the whole campus. Integration of the system to the e-Campus portal would also be seen as a viable improvement.

The system can also be enhanced to accommodate the two levels of appraisals whereby the new scores entered in each level of the appraisal as judged and determined by the appraisers will not overwrite the current personal scores entered by the academician.

Another future enhancement may also look into the development of various categories
of scorecards to support the different levels of staff according to job grades. For example, a scorecard for a senior professor at INTI-UC would focus more in the academic development category rather than excelling in extracurricular activities such as attending student functions or sports events. INTI-UC may also prefer to develop differing scorecards for each faculty as some faculties also may have different criteria of measuring performance. For example, many academic staff from the Faculty of Liberal Arts (FOLA) has undertaken the job of directing many plays and dramas throughout the year as these activities are part of the liberal arts subjects. Their syllabuses do not focus much on paper-based theoretical projects like the norm in other faculties. Hence, due to differing work commitments, these academic staff would therefore prefer to have their performance appraisal reviewed for directing or leading dramas or plays.

Further research can also study the aspect of implementing operations research to simulate the growth and expansion of the student intake, staffing, revenue, customer response tactics, automating human-driven operations processes, loss, risks etc. in INTI-UC. Operations research is an application of scientific and mathematical principles to decision-making problems; also called management science. Operations research uses mathematical models and computer simulations to gain a more comprehensive analysis, better understanding and predict market behaviors. A decision-making problem occurs where there may be two or more alternative courses of action, each of which leads to a different and perhaps sometimes unknown end result. The objective of operations research is to select the best alternative, that is, the one leading to the best solution. To do so, some measure of merit, some objective function, must be prescribed (Sci-Tech Encyclopedia, 2009). A comprehensive study can be undertaken to model the decisions of the development stakeholders at INTI-UC where operations research can help the management to develop a balanced scorecard for the entire management information
systems and achieve its goals using scientific methods. By implementing operations research, the senior management at INTI-UC can recognize and avoid conflicting priorities and ensure stakeholders and customers engagement with the process.

7.9 Concluding Statement

Research has verified that the Balanced Scorecard is indeed a powerful performance management and measurement tool. As stated by Niven (2002), the BSC represents a major departure in performance management for many organizations. Strategy, not financial controls dictates the firm’s direction, and the scorecard creates a powerful new language for employee change. Change may not come easily and automatically as even the well-constructed BSC will not instantly transform the organization. As it is a new concept embraced by a private academic institution, the BSC must be embedded firmly into the very foundations of INTI-UC management systems, becoming the cornerstone for management analysis, support and decision-making in order to ensure the corporate strategy is translated into action. By ensuring its implementation among the academicians within the campus, INTI-UC can be assured of producing knowledgeable, highly-skilled, and well-trained excellent academicians who will share their expertise to students by providing first-rate teaching in their lectures. Thus, the outcome of this facet would lead to a greater customer satisfaction as similarly highly skilled and knowledgeable graduates would be produced. In a way, this aspect can also be regarded as a contribution towards our society and country as highly skilled graduates in their area of specializations are always in demand. In conclusion, an academic institution such as INTI-UC must create its own distinction in developing the academic staff above all else, as they are the ‘enablers’ of the institution and this distinction can be achieved through the implementation of the e-BSC for the academics at INTI-UC.