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University-Industry Collaboration (UIC) and The Resource-Based View (RBV)

Imaduddin Abidin. *, Mohd Rashid Ab Hamid. **, Yap Chui Yan. ***,
Ida Rizyani Tahir. ****, and Norlida Ramly. *****

Abstract: *Small and medium enterprises (SMEs) is known as the entity that always in need for support due to disadvantages of business form entity. Indeed, knowledge transfer is seen as a major resource of long-term growth of SMEs. Besides, technology transfer to the firm is critical and significant for SMEs performance. The purpose of this paper is to improve understanding of University Industry Collaboration (UIC) concept and how its function can uplift the performance of SMEs. The UIC will consider knowledge transfer and technology transfer activities from university to SMEs. This paper also will discuss on the Resource-Based View (RBV) Theory and its links between UIC and SMEs performance. This paper presents literature analysis concerning this research topic and explores the meaning of UIC, knowledge transfer, technology transfer, and RBV. There is evidence to support that knowledge transfer and technology transfer activities have an impact on SMEs performance. Theoretically, RBV can explain the relationship between UIC and SMEs performance by elaborating the contribution of resources towards performance. This finding may pave the way for SMEs to collaborate with university in order to achieve high performance.*

Keywords: *University-Industry Collaboration (UIC), Resource-Based View, Knowledge Transfer, Technology Transfer*

Introduction

Small and Medium Enterprises (SMEs) play a vital role in the country's economic development and are considered to be the backbone of industrial development in the country. According to the Prime Minister of Malaysia, SMEs has been one of the major engines of growth of Malaysia's economy. The latest statistics indicate that SMEs constitute 99.2% of the total business establishments, and contribute about 32% of GDP and 59% of total employment.

The definition of SMEs is based on two criteria. It is either based on the total sales turnover/revenue by a business in a year or the number of full-time employees by a business. Generally SMEs in Malaysia are defined as sales turnover of less than RM25 million or full-time employee of less than 150 for manufacturing sector while for services and other sectors, the definition is defined by sales turnover of less than RM5 million or full time employee of less than 50.

*Imaduddin Abidin, Universiti Malaysia Pahang, Malaysia., **Mohd Rashid Ab Hamid, Universiti Malaysia Pahang, Malaysia., ***Yap Chui Yan, Universiti Malaysia Pahang, Malaysia., ****Ida Rizyani Tahir, Universiti Malaysia Pahang, Malaysia., *****Norlida Ramly, Universiti Putra Malaysia, Malaysia

Problem Statement

Presently, in order for SMEs to be competitive in the global economy, the quality of their products and services cannot be under estimated. Therefore in today's economic climate, SMEs competitions are greater than ever may in local or global. The quality of goods and services are most important thing for SMEs to continue for grow and survive.

With the purpose of accelerating performance of SMEs to the next level, it is important to understand the forces that drive SMEs performance. Analysis of findings from the World Bank Productivity and Investment Climate Surveys has revealed that there are six factors which influence the performance of Malaysian SMEs.

The analysis found that innovation and technology adoption was the most important performance lever, having the highest impact on total factor productivity and employment growth. This was followed by human capital development, access to financing, market access and to a lesser extent regulations and infrastructure. All these performance levers should be enhanced simultaneously or else shortcomings in any of these levers will prevent SMEs from reaching their full potential.

University-Industry Collaboration (UIC)

From the literature study it is obvious that university-industry collaboration (UIC) is generating interest in political, economic, and academic fields. Indeed, knowledge and technology are seen as a major source of long-term economic growth and technology transfer to the SMEs is critical and significant for SMEs performance. The UIC enables the sharing of personnel, technologies, and knowledge to happen between industrial SMEs and university. Consequently, it creates excellent knowledge pool, and competent highly trained graduates that enhance knowledge creation and transfer as well as innovation, development and commercialization of new valuable technology (Gopalakrishnan & Santoro, 2004).

Government pressure, business environment surrounding and collaboration benefits are among reasons for industry to collaborate with university. However, the literature discloses that, despite pressure from the government, there are a lot of different reasons for universities and firms to collaborate (Plewa, Quester & Baaken, 2005) and one of it is business environment pressure. Business environment now under pressure as a result of the global economic environment, have made big changes to the landscape of UIC. Many industries have experienced a structural change from just being a local business to being a global business, to be more dynamic and competitive and these changes have made the industries to open up to work with the university in order to maintain their survival (Bettis & Hitt, 1995). Organisation for Economic Co-operation and Development (OECD, 2009) is quoted to say that university has been modified in recent years to suit the needs of business with a stress on knowledge innovation, knowledge exchange, knowledge transfer (KT) and partnership with the private sector. A range of initiatives are specially designed to stimulate economic development considering all factors of growth.

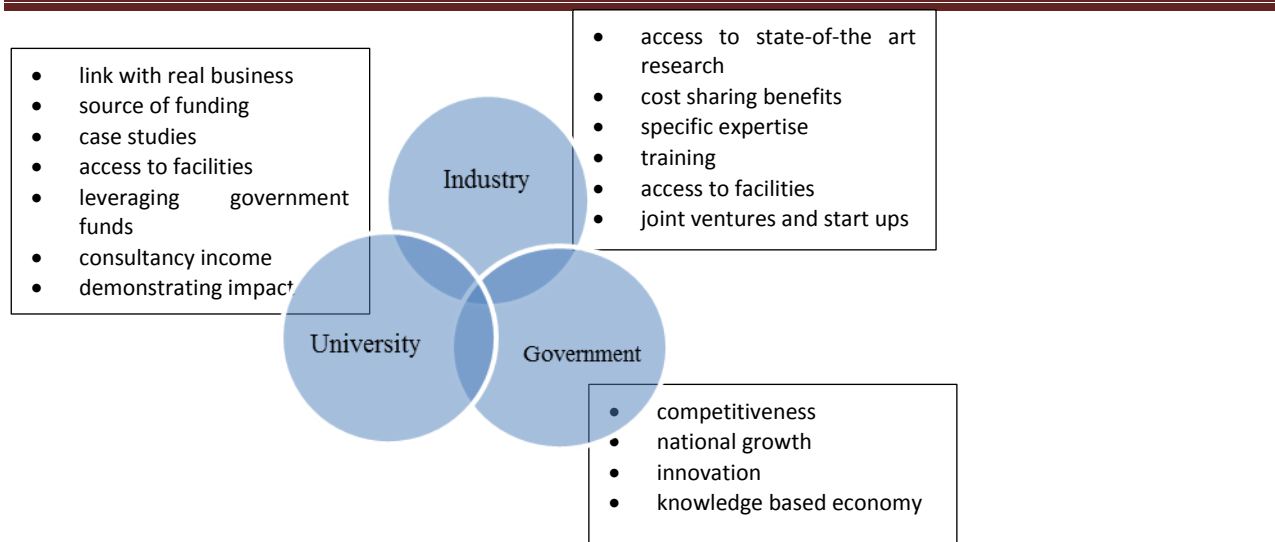


Figure 1: Potential benefits from university industry collaborations. This figure adapted from Link and Tassej (1989); Lambert (2003); Landry (2007); Etzkowitz and Dzisah (2008) cited in Schofield, nd

Generally, resources can be thought as inputs that enable organization to carry out its activities. Furthermore, resources consist of three sub-groups: tangible assets, intangible assets and capabilities. Tangible assets are fixed and current assets whereas intangible assets include intellectual properties. Capabilities are often described as invisible assets (Itami,1987) and encompass the skills of individuals or groups. It could be argued that intangible assets and capabilities can be categorized under or derived from the knowledge. Managing knowledge is one of the challenges of practicing managers in RBV where in an organization, managing knowledge requires deep understanding of characteristics and everybody needs to modify their behaviour. The interest in knowledge management affected the perception towards resources and capabilities as argued by Grant (2005). Another challenge is organization's ability to innovate. Innovation is also derived from knowledge and it involves continuous product development. D Aveni (1991) argues that an organization to innovate in product to stay one step ahead of competitors. Cooperation and coordination of resources is needed to be productive and competitive.

The Resource-Based View (RBV) and SMEs Performance

The resource based view emerged in 1984 and served as a popular theory of competitive advantage. The term was originally explored by Wernerfelt and its assumption is the desired outcome of managerial effort within the firm is a sustainable competitive advantage (SCA). He developed the RBV due to his frustration upon looking at the course syllabus and course materials when he was supposed to teach Strategy to university students. He disagreed that opportunities and threats can be exploited solely through the external positioning of businesses. He felt too much management research was focused on the external environment rather than on the strengths of the firm.

Thus he explored the important role of resources related to creating advantage compared to competitors. He explores the usefulness of analyzing firms from the resource side rather than from

the product side. Wernerfelt's (1984) conceptual article entitled "A Resource-Based View of the Firm" was a popular article where from there he goes on to analyze on the resources perspective. In the article he direct strategy scholars back toward resources as important antecedents to products and finally to firm performance. Another contribution of his 1984 paper is that the firm should base their strategy on their strengths and tomorrow's strength will be developed from today's strength.

Then conceptual work focused on the characteristics of firm resources that can contribute to a sustainable competitive advantage is done by other scholars such as Barney, Rumelt, Diericks and Cool. Then RBV evolved based on the need to address the issue of the role of resources in diversification based on Penrose discussion (1959) which lead to firm expansion into new products and markets.

Due to this reason, RBV theory emerged and being discussed widely by many scholars. Extension to RBV has generated new dimensions for the firm to be more competitive. The general principle in resource based theory is that rival firms compete on the basis of their resources and capabilities. The **main elements of the resource based view** are:

- sustainable competitive advantage and superior performance
- the characteristics and types of advantage-generating resources
- strategic choices by management

Wernerfelt (1984) and Barney (1991) shaping the works on RBV. In his framework, Barney state that organization resources that are valuable (contribute to firm efficiency or effectiveness), rare (not widely held), inimitable (difficult to duplicate) and non-substitutable (other resources cannot fulfil the same function) can yield sustained competitive advantage. This framework has been used as base for many RBV studies. However, in the process of extending Barney's framework, most researchers fail to further define the original underlying RBV constructs and specify the causal relationships.

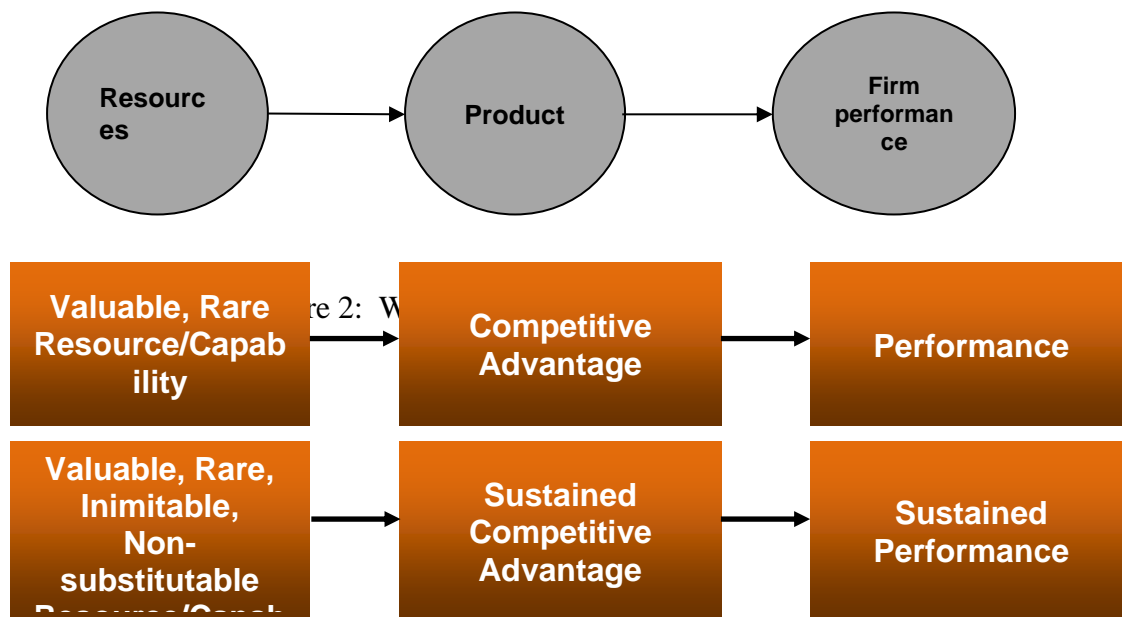


Figure 3: Barney's (1991) conceptual model

Sustainable competitive advantage is the prolonged benefit of implementing some unique value-creating strategy based on unique combination of internal organizational resources and capabilities that cannot be replicated by competitors. Sustainable competitive advantage allows the maintenance and improvement of the enterprise's competitive position in the market. It is an advantage that enables business to survive against its competition over a long period of time.

There is evidence to support that knowledge transfer and technology transfer activities have an impact on SMEs performance. Theoretically, RBV can explain the relationship between UIC and SMEs performance by elaborating the contribution of resources towards performance. This finding may pave the way for SMEs to collaborate with university in order to achieve high performance.

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The Determinants of Agricultural Entrepreneurial Intention of the Unemployed Urban Kano, Nigeria

Baffa K. Gwadabe*

***Abstract:** This paper analysed the determinants of agricultural entrepreneurial intentions of the unemployed in urban Kano, Nigeria, using three different multinomial logistic models fitted to the primary data obtained via structured questionnaire from the 173 out of 200 targeted respondents. The results suggest that age explains the likelihood of starting or engaging in agricultural business. Gender and educational levels were not significant in explaining the likelihood of starting the business. Inadequate capital was found to explain the likelihood. Family and cognitive ability (self) as motivational variables were insignificant in explaining the likelihood. Risk tolerance was found to explain the likelihood of starting the agricultural business. Employment status was found significant in explaining the likelihood. Innovative ability was insignificant in explaining the likelihood. The paper recommends that entrepreneurial support should be geared toward young ages as against old age; as the size of youth unemployed outweighed that of old age in the study area. Promoters of entrepreneurship could use risk tolerance behaviour in selecting people to support. Capital should be made available by the concerned institutions to enable persons preparing to start the agricultural business to start. Researchers could also incorporate other predictor variables in analysing the determinants or employ different models, like nested models against non-nested models used in this study.*

Keywords: agricultural, entrepreneurial, multinomial, logistic, pre-start-up, likelihood, nested and non-nested.

*Baffa K. Gwadabe, Bayero University, Kano, Nigeria

Appropriate Assessment Strategy for Student Nurses: Practice and Theory?

Nicola Morrell* and Maryam Herin**

***Abstract** The study examines student nurse attainment of pass grades at both theoretical and practical level. The rationale for the importance of this research is that it would provide an insight into whether the levels of assessment in the first year are appropriate. This research may also demonstrate whether students are more likely to pass practical assessments assessed by mentors in practice or theoretical assessments marked by academic staff in universities. It is pertinent to re-examine the curriculum and type of assessments that pre-registration student nurses undertake, in light of the recent drive for adding in care and compassion into the nursing curriculum following the Mid-Staffordshire enquiry and the subsequent Frances report. There is evidence which has demonstrated that mentors out in practice rarely fail students in their practical assessments.*

Keywords: nursing, assessment, practice, theory,

1. Introduction

The study examines student nurse attainment of pass grades at both theoretical and practical level. The rationale for the importance of this research is that it aims to provide an insight into whether the levels of assessment at 1st year, particularly 1st semester, are appropriate for the group of students. This may then shine a light as to whether there are particular areas that need to be focused upon from a teaching and learning point of view for the lecturers.

This research study may also demonstrate if students are more likely to pass in their practical assessments, which are assessed by mentors in practice, compared to theoretical assessments, which are marked by academic staff. At the present time it may also be pertinent to re-examine the curriculum and assessments that pre-registration student nurses undertake, in light of the recent drive for adding in care and compassion into the nursing curriculum following the Mid-Staffordshire enquiry and the subsequent Frances report. There is evidence which has demonstrated that mentors out in practice very rarely fail students in their practical assessments.

2. Literature Review

Assessment of pre-registration student nurses is extremely important in the current healthcare climate due to many questions being asked around the competence of registered nurses. Within all practice based professions assessment of competence is extremely important (Whiteford, 2007). Questions were already being asked regarding whether the assessment of student nurses is appropriate following a significant study by Duffy (2003). This displayed how the quality of student nurse education was substandard against the level that it should be; and now following the Mid-Staffordshire enquiry and subsequent Frances report this has brought the claims made by Duffy (2003) into particular context and bears resonance with all nurse educators.

It has been suggested by Duffy (2003) and Luhanga et al (2008) that student nurses have higher pass rates in practical assessments compared to theoretical assessments. One suggestion for this

*Nicola Morrell, University of Central Lancashire, UK., and **Maryam Herin, Manchester Metropolitan University, UK.

disparity between pass grades in practical and theoretical work has been that mentors in practice do not like to fail student nurses for fear of upsetting them, and that mentors will often question themselves and give the students the benefit of doubt. However, this has significant consequences for nursing and healthcare as a whole as if students are being passed practically when they shouldn't be then the competence of nurses is compromised and patient care will inevitably suffer.

3. Research Methodology

This piece of research will be quantitative, Roberts and Priest (2006) describe that quantitative research is the undertaking of investigations which primarily use numerical methods. For this piece of research this would be the most appropriate method. Cresswell (2009) advocates the use of quantitative research in gaining this type of data due to it being numerically stored by universities.

Data Collection

The research project will take place at a medium sized university within the North West of England. The process for sample selection will be non-probability sampling. The process of consecutive sampling was chosen, Polit and Beck (2010) advocate the use of consecutive sampling in gaining information with regards to all the people within a population who meet the eligibility criteria for the research. The sample size that will be selected will be three years of full cohorts of 1st semester 1st year students, who have undertaken the amended assessments for the new programme of study. This size sample will be examined as it will provide an accurate demonstration as to provide results, Gorard (2001), and Saks and Allsop (2011) suggest that larger sample sizes are preferable as this will minimise data being lost.

The data to be collected will be secondary data; Blaikie (2003) described secondary data as data that has already been collected by somebody, usually for an official purpose. The data in question for this piece of research has been collected as part of the administrative task for the programme and student records, this data was readily available. It would not have been time efficient to collect primary data when the existing data was available. Gorard (2001) advocates the use of secondary data, particularly for new researchers of which I am, as he believes that for many reasons particularly from a speed and cost perspective it is an appropriate source of data.

Data analysis

The method of data analysis used was univariate descriptive analysis. Blaikie (2003) asserted that this method of data analysis can be used to demonstrate relevant characteristics of a social phenomenon, this links in well with this research project of examining the relationships between pass and fail in academic and practical assessments.

4. Main Findings

The data analysed were pre-registration student nurses 1st semester 1st year theoretical and practical assessment results, the data consisted of 3 years of data, to ascertain if there was a difference between the different year's cohorts.

	Practical Assessment		Theoretical Assessment	
Cohort A-Pass/Fail (n=196)	190/6	97%/3%	150/46	78%/22%
Cohort B-Pass/Fail (n=189)	178/11	94%/6%	182/7	96%/4%
Cohort C-Pass/Fail (n=185)	165/20	89%/11%	100/85	54%/46%

Figure 1- a table demonstrating the raw data.

In answer to the research question, in general over the three cohorts of students results explored more students do pass the practical component of the assessment rather than the theoretical assessment.

- The total number of students to pass the practical assessment was 533 out of a total number of 570.
- The percentage of students who passed the practical assessment was 94%.
- The total number of students to pass the theoretical assessment was 432 out of a total number of 570.
- The percentage of students to pass the theoretical assessment was 76%.
- The percentage of students to fail the practical assessment was 6%, and 24% failed the theoretical assessment.

These figures are over a 3 year period. This demonstrates that although some cohorts had higher pass and fail rates there was a general trend between pass in practical assessments and fail in theoretical assessments. The relevance of these results may demonstrate that mentors out in practice who assess student nurses on their practical work generally pass students. This could add support to the results found by Duffy (2003) who believed that mentors in practice are unwilling to fail student nurses, whereas this research study also examines the pass rates of theoretical assessments and demonstrates that academic staff will fail students.

The data will be presented in a bar chart for the nominal data demonstrating comparison between the different groups of data.

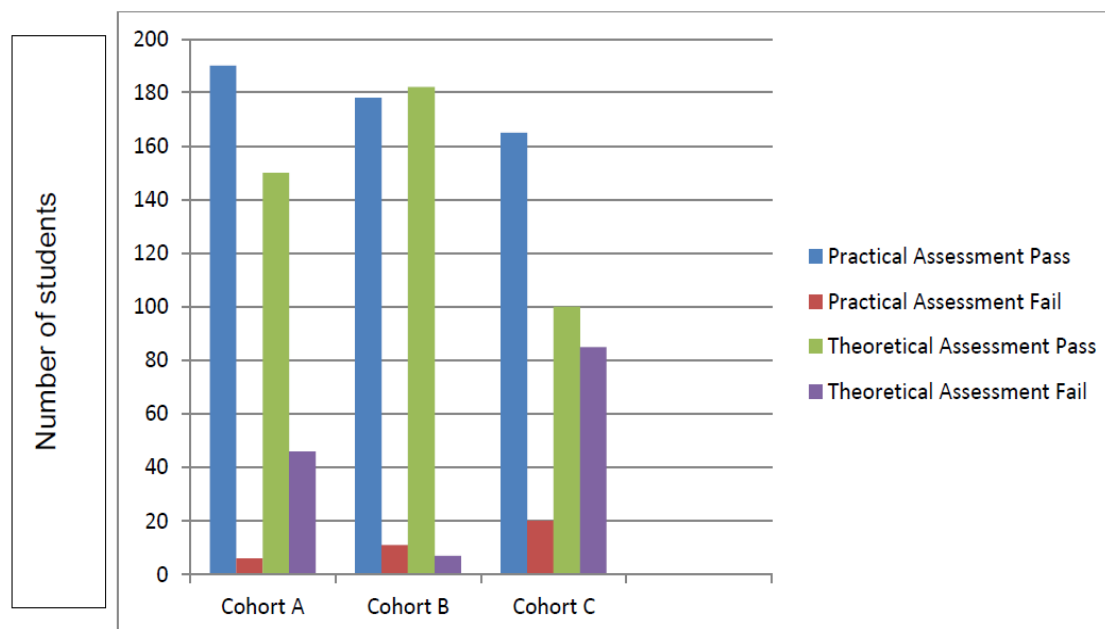


Figure 2- Bar chart representation of results.

Both figures 1 and 2 demonstrate that the majority of pre-registration student nurses passed both assessments, and that a smaller number comparatively failed. This may demonstrate that the assessments are at the correct level for the students. The results of this study leave more questions than answers, although the original research question has been answered.

It would be interesting to explore if any students failed both assessment and also what component of each assessment was passed and failed.

5. Conclusions

The implications of what the data displays demonstrate that the majority of students have passed both assessments, and that more students passed the practical assessment rather than the theoretical assessment. What should be examined further is what parts of both assessments have been failed and if there is anything in particular that the students have all excelled at or failed. It is essential to have an awareness that this is a small scale and exploratory study which should be kept in mind when assessing the data analysis as an element of generalizability would need to be applied. This study has only looked at 3 cohorts of students and it would be worthwhile to examine other points of assessment i.e. 2nd year or 3rd year and different semesters, to ascertain if the data is similar or different.

In terms of the sample this piece of research has validity as it does explore the whole cohort of students and not just a small sample. The comparative nature of the study strengthens the results and validity also. Although to be more valid the study could be completed subsequently over a few different points in the programme of study and, possibly over different universities, to ensure that the claims made are accurate. Nonetheless this is a small scale project and this must be remembered.

In order to expand upon and take this research further it may be appropriate to complete a further study which would examine the data in more depth and allow for exploration between different years of assessments in order to assess if the findings from this have any longevity. If the research were to be completed again it may be appropriate to complete a parallel qualitative phenomenological study to gather the student's feelings on what they found easy and difficult. This could be completed through students completing focus groups, questionnaires or maintaining diaries, although maintaining diaries for a whole cohort would be problematic and time consuming for the researcher when analysing the data. Another possible follow on study could be to complete an ethnographic study examining the perceptions of programme leaders and academic staff, through completing semi structured interviews in order to discover what their perceptions of the pass fail rates are between theoretical and practical work.

On reflection the strengths of completing this method of quantitative research are that it is a relatively simple form of gaining research data as the data was previously present and this reduces the need for data collection. Completing this method of research has provided an insight into the simplicity of completing quantitative research, even though this was a very small scale and uncomplicated study. The weaknesses of completing this piece of quantitative research may be that the research study was in itself very simple. The results are very generalizable due to not being in any depth. Future studies could examine the data in more depth by looking at more factors and also by potentially conducting interviews or questionnaires of either the students or the academic staff to triangulate the data and gather perceptions and insights into what this may mean.

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A Lean Study: The Business Benefits of Lean Techniques

Maryam Herin* and Bill Vickers**

***Abstract** A new Head of Resourcing and Workforce Planning was appointed to implement a recruitment and selection strategy which meant improving results for internal customers, reducing costs, and improving ways of operating to improve efficiency. Resistance to change was high from staff, there was very little support as people were tired: they said they has seen and heard it all before and nothing had changed – so what was going to be different this time? Using lean techniques and the knowledge of existing staff, the long-established culture started to change. Measurements were taken at the start of the programme and after nine months to determine the results. Morale of the staff improved, efficiencies were implemented and gained quickly, and there was trust between management and staff. This is their story and results.*

***Keywords:** Lean, Change, Involvement, Results, Performance*

1. Introduction

This is the reason this paper is important as it learns from a range of valuable work already published with lean, but takes the learning further by testing the techniques in a different way. As Hofer et al (2012) state, “the exact mechanism(s) through which lean production affects financial performance remain under-researched”. This research shows the impact in a Human Resources department in a Financial Services company over a nine month period.

It is timely now because it seems right for the next phase of the lean work to help organisations stabilise both operations, quality, output, customer, staff and financial performance in a way that is sustainable for the future. There was a long period in the twentieth century where key foundations were laid, and then towards the end of the twentieth century, giant leaps were made with Six Sigma and Lean. Now in the twenty first century, the dynamics have changed again, both broadened and deepened, with economic and financial global concerns in business. Countries appealing for help with country debt, natural disasters happening around the globe, this approach will help not only large businesses but SME’s too, to become stabilised – and on a sustainable basis, as many of these improvements once made, should remain and be built upon in the business s, year on year.

This is the next big step. It also fills a gap in the applied research area (Hofer 2012), and so fills a gap in the literature.

Outline of the Case Study Organisation - The Problem

The case study is based in a large financial services organisation, providing traditional banking products and services to private and business customers. The case study itself is focused on the Resourcing department which had approximately 100 employees within it servicing the recruitment and selection and workforce planning needs of the whole Bank. The problem stemmed from the internal customers of the Bank who were VERY unhappy – and had many complaints about the level and quality of HR and resourcing service provided. The HR department was perceived to be very bureaucratic as there was a lot of paperwork, and in addition the internal transfer costs were too high and not perceived as value for money.

*Maryam Herin, Manchester Metropolitan University, UK., and **Bill Vickers, Managing Director, Dianamics.

The perception was that there was a general lack of expertise in the recruitment department, which impacted the time the process took to deliver. Another observation was that there were too many people involved, and yet people reported being stressed and overworked – which also resulted in a high absence rate. This resulted in delays in filling vacancies for the Bank, which in turn affected productivity, and generally caused issues and resourcing problems in various divisions across the business.

The leaders consulted, and the Business perceived the answer to be to work harder and increase the recruiting pace to get more recruits into the system to fill the vacancies. To this end a new Head of Resourcing was appointed from outside the business with specialist expertise with a view to improving the situation.

To apply lean techniques and assess whether these were effective in improving quality and reducing costs. Specifically the objectives were to achieve:

1. 28 day end to end recruitment process – From Request of vacancy to offer of job
2. Improve the Business profit and loss account
3. Enhance the brand by being a quality recruiter

2. Literature Review

With business, whatever point is reached at a particular point in a cycle, there can always be room for improvement. It is on this premise that the Quality “gurus”, Deming (1982), Juran (1988), Crosby (1979), Feigenbaum (1991) and the like established principles and systems of Quality throughout the twentieth century. Towards the end of the twentieth century the focus on quality developed into methodologies such as Six Sigma made famous by companies such as Motorola in the late eighties. Jack Welsh of GE also said that it helped him save \$300m of savings. Praise indeed for Six Sigma which uses statistics measurement and reduces variation, (Deming 1982).

Then Lean where everything starts and ends with the Customer. The theory is that any goal other than the creation of value for the end customer would be wasteful, and therefore a target for elimination. "Value" is defined as any action or process that a customer would be willing to pay for. Lean focuses on value and optimizing flow; increasing effectiveness by decreasing waste, and using empirical methods to decide what matters, rather than uncritically accepting pre-existing ideas. It is said by some that Lean methodology can be seen as an extension of the work of key authors such as Taylor (1947) which incorporates some of the principles of scientific management.

The findings of Shah and Ward (2007) found that four aspects of lean practices (JIT, TQM, TPM and HRM) had a positive correlation with operational performance; In this vein, multiple studies have established that internal lean production practices such as TQM and TPM are associated with greater financial performance (e.g., Cua et al., 2001). Recent research from Hofer et al (2012) shows that internal lean practices have a positive effect on financial performance, so it can be seen the literature makes a fairly convincing argument on these linkages.

This paper however, subscribes to the wider view proposed by Vinodh and Balaji (2011) which suggests that by managing and improving processes associated with the customer, employee and

supplier, this will ultimately improve the financial position, as well. This is what this paper sets out to achieve.

3. Research Methodology

This paper has a practical focus as it puts research into practice; it is based on the systematic mapping of processes, collection and analysis of data and/or facts, and then acting on this to result in an improved working environment.

Interviews were undertaken in a semi-structured format with each member of the team and management to establish and map the current way of working, (200 people). Data, including diagrams and maps and procedures, budgets, invoices, minutes of meetings with relationships of the current ways of working and importantly the process flow were documented reviewed and posted up in the “War Room”, specially commandeered for the purpose of this study. The key steps in the process were clearly identified to show the process flow. This highlighted stakeholder commitment and requirements of the process more clearly. All stakeholders reviewed the maps and ensured they were correct representation of how the current process worked.

Once the process maps were documented, the aim was to identify and remove the ten wastes in line with the lean methodology using Kaizen workshops. As already mentioned Lean is focused on preserving value with less work, and although the term was originally thought of by Krafcik (1988), it became more widely known through the Toyota Production System (TPS) as "Lean" in the 1990s.

The ten wastes identified in this study align to the three broad types of waste identified by Toyota: muri, mura and muda, and the use of kaizen workshops and novel value process mapping techniques. As per the original Japanese terminology, Muri focuses on the preparation and planning of the process, or what work can be avoided proactively by design. Then, mura then focuses on the implementation of the work design and the elimination of fluctuation at the scheduling or operations level, such as quality and volume. Muda is then discovered after the process is in place and is dealt with reactively. It is seen through variation in output.

The original seven wastes (muda) are:	Explanation
• Transport	moving products that is not actually required to perform the processing
• Inventory	all components, work in process and finished product not being processed
• Motion	people or equipment moving or walking more than is required to perform the processing
Waiting	waiting for the next production step
• Overproduction	production ahead of demand
• Over Processing	resulting from poor tool or product design creating activity

• Defects	the effort involved in inspecting for and fixing defects
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Kaizen workshops were held with all stakeholders with the aim of reviewing the process, eliminating waste, retaining value, and making the process flow more smoothly to meet the customer and business need. All key stakeholders were involved so the solutions were theirs.

4. Main Findings

After the processes were mapped, and the data had been collected, analysed, reviewed and changes made, it showed that after 9 months of applying the lean techniques, the following was achieved:-

Research Objective	Findings
28 day end to end recruitment process – From Request of vacancy to offer of job	The wastes were removed and were made much smoother which resulted in a cycle time reduction from 114 days to 28 Day recruitment Cycle Time, as requested by the customer. Indeed focussing on the principle of continuous improvement, this subsequently moved to 5 days. It also moved to a Right first time vacancy fill to customer specification. This way the organisation could ensure vacancies were filled as they became vacant. As Carreira (2006) said “ <i>Lean Six Sigma is about relentless, sustained improvement – analysis after analysis, metric after metric, and project after project- lean causes products to move through processes faster, and Six Sigma improves quality</i> ”.
Improve the Business profit and loss account	Financial Savings <ul style="list-style-type: none"> • Reduced by 10 staff to perform efficient tasks 10 FTE @ avg salary £16K = 160K SAVING £400,000pa • Re-deployed Business staff - SAVING £540,000 pa to Business • Induction costs are currently £1.895M If leakage was reduced by 20% this would be a saving of £379,000pa and 300 staff retained Year on Year • Re- negotiated Agency fees £200,000 SAVING pa • Optimise advertising relationship - £600,000 saving pa • TOTAL £2,119,000
Enhance the brand by being a quality recruiter	The Bank moved from a “reactive recruitment” process to an “individual candidate experience” and a positive business experience. This was also measured in terms of consistency, repeatability, as it needed to be a consistent candidate journey, and was found to be so using the measure and scorecard put in place.
Other: Technology	The results also revealed that there was a distinct lack of technology, and what little was available was not used to optimum effect. This resulted in the provision of inconsistent Management Information which was difficult to retrieve. Instead of c50 different individual databases

	that were very difficult to access and were not linked, one candidate management database was established to track vacancies so we could list, track progress and report on quality data. This had the added advantage of proactive head count management and was matched to manpower planning processes. It was paid for out of the savings made.
Time savings for internal managers	<p>Significant time savings with cycle time reduced for:</p> <ul style="list-style-type: none"> o Volume recruitment from 114 days to 28 days (75%) o Regulated recruitment from 232 days to 100 days (57%) o Network recruitment from 114 days to 31 days (73%) o Area Manager interview utilisation time improvement by over two-thirds <p>Referencing process reduced to 15 day Service Level Agreement and costs halved</p>
Significantly improved Risk Management	Quality compliant processes for Financial Services Organisation requirements, Audit, Legal Governmental requirements, etc

5. Conclusions

It was clear that from the application of the lean methodologies, and the collection of data that the following conclusions could be drawn:

The lean techniques were effective in improving quality and reducing costs. The study achieved the research objectives and more to providence evidence of benefit to the business:

In terms of the 28 day end to end recruitment process, significant improvement was seen in the time to recruit AND in the improved quality of recruits (which demonstrated an enhanced brand image), AS WELL AS reduced costs of recruitment and selection for the bank, thereby improving efficiency and effectiveness using lean techniques

Over the 9 month period there were significant savings shown on the Business profit and loss account

This study also showed evidence of the strategic value of HR (Ulrich 1996) by aligning recruitment directly to business requirements, and improving retention rates; stakeholders were satisfied, and financial gains were made, efficiency and effectiveness gains were seen.

Because the recruitment processes were undertaken in a more streamlined way, it enhanced the Bank's image as an employer with the candidates and the suppliers, and at the same time enhanced the value of human capital because of the knowledge gain internally.

Other departments requested our expertise not only for HR and resourcing but for process improvement and lean too.

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The effect of college students' engagement on GPA and college satisfaction, the case of a mid-sized U.S. university

Mussie T Tessema,* Kathryn J Ready,** and Samuel Tsegai***

***Abstract:** This study assesses the extent to which five effective educational practices (level of academic challenge, active and collaborative learning, student-faculty interactions, enriching educational experiences and supportive campus environment) are correlated with two desired college outcomes: GPA and college satisfaction at a mid-sized U.S. university. All five effective educational practices identified in the model show a positive effect in explaining both college satisfaction and GPA, and altogether explain about 27 percent of the variance in college satisfaction ($R^2=.27$) and about 9 percent of the variance in GPA ($R^2=.09$). ANOVA tests revealed a significant difference in GPA between ethnic minority students (mean=3.11) and non-ethnic minority students (mean=3.23). Implications of these findings and future research directions are discussed.*

***Keywords:** College students, ethnicity, engagement, GPA, college satisfaction.*

1. Introduction

As the economy has become more globalized, and the United States has shifted away from manufacturing toward a knowledge-based economy, postsecondary education has become an increasingly important determinate of economic success and prosperity (Institute for Higher Education, 2012). However, America's global rank in college completion among young adults is declining. The U.S. has fallen from 12th [in 2009] to 16th [in 2011] in the proportion of adults' age 25 to 34 holding college degrees (de Vise, 2011: 1). This suggests that the U.S. is losing ground in the global knowledge economy race because the gains in postsecondary attainment for other nations have increased at a significantly faster rate than in the U.S. (McCormick & McClenney, 2012: 307). Despite this decline, the importance of college enrollment has increased as more and more American jobs require postsecondary degrees. According to Carnevale, Smith, & Strohl (2010), by 2018, about 63 percent of jobs in the U.S. will require postsecondary education. As a result, the College Board has a goal of obtaining 55 percent college completion (an associate degree or higher) among 25- to 34-year-old Americans by 2025 (College Board, 2011). The national college completion rate currently is 41.1 percent. However, at the current rate of progress, only 46 percent of Americans will have a college credential by 2025 (College Board, 2011). While there is a need to improve college completion rates across the board, a student population requiring special attention is current and potential low-income ethnic minority college students, whose college completion rates continue to fall well below the average (Nunez, 2013).

Despite access, college completion rates vary significantly by racial and socio-economic groups. While approximately 62 percent of white students enrolled in college have earned bachelor's degrees within six years, only 51 percent of Hispanic and 40 percent of African American and Indian American students have similarly achieved this goal (NCES, 2013). Among low income groups, graduation rates further decline. For instance, Rampell (2013) notes that only about 1 out of 10 Americans, whose parents were in the lowest income quartile, had obtained a four-year college degree by age 24; the comparable share for people from the highest quartile was about 7 in 10. Further, Engle & Tinto's study (2008) reveals that about 89 percent of low income, first-generation

*Mussie T Tessema, **Kathryn J Ready, and ***Samuel Tsegai, Winona State University, MN, USA.

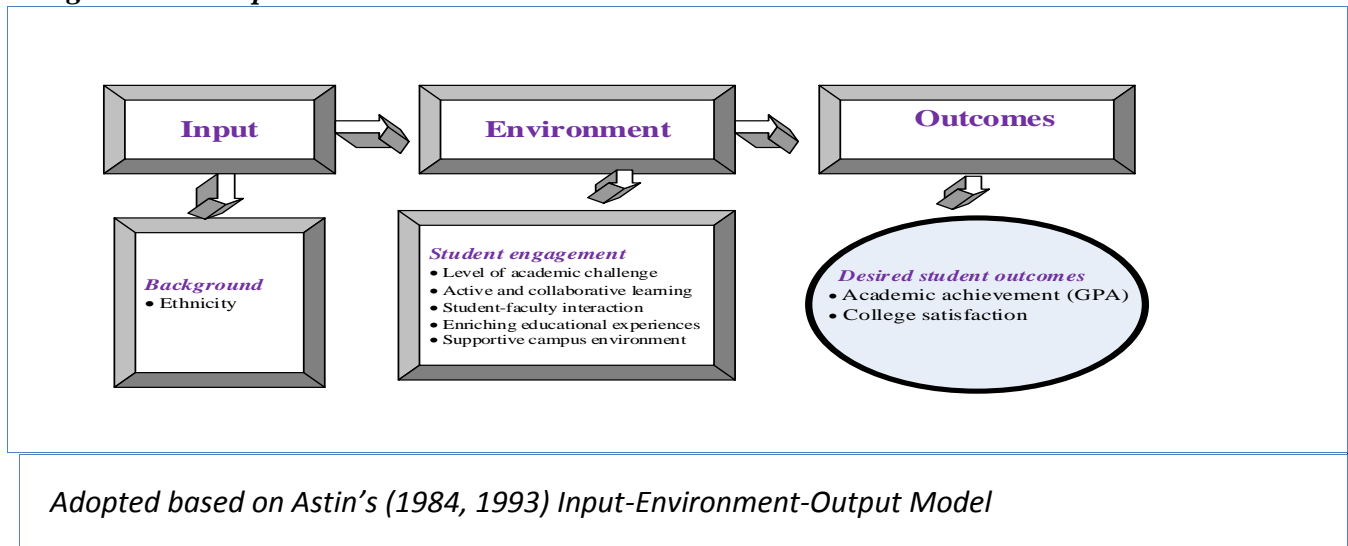
college students, who are more likely to be from ethnic minorities (Hispanic, African American, and Indian American), did not graduate within six years. The above figures clearly show that there are substantial socioeconomic and racial gaps in postsecondary success, beginning with enrollment and culminating with lower graduation rates. Although a number of studies have been conducted on college students' engagement, little rigorous research exists to assess the extent to which ethnic minority college students are engaged in effective educational practices and how these practices impact desired outcomes, namely achievement/GPA and satisfaction with college. This study, therefore, intends to fill the research gap by examining these issues using a sample of 2838 students from a mid-sized public University.

2. Literature review

The focus of a small, but growing, body of research has focused on ethnic minority college students' experience during college and the effect these experiences have on their learning and development. Although student engagement is complex and multifaceted (Fredricks, Blumenfeld, & Paris, 2004), researchers have identified a number of indicators or predictors of student engagement such as student behaviors (e.g., time-on-task, attendance), student characteristics (e.g., self-efficacy), and institutional practice (e.g., class size, presence of technology) (Yazzie-Mintz, 2010). According to the National Survey of Student Engagement (Kuh, 2001), there are five measures of student engagement in effective educational practices: level of academic challenge, active and collaborative learning, student-faculty interactions, enriching educational experiences, and supportive campus environment. In this study, *student engagement* is conceptualized as the extent to which college students are engaged in the five effective educational practices identified by the NSSE. The NSSE survey assesses the extent to which students are engaged in empirically-derived effective educational practices and benefits obtained from their college experience (Kuh, 2001; Pike, 2013).

The conceptual model used in the study draws on elements of Astin's (1984, 1993) input-environment-output (I-E-O) model and the work of Pace (1984), Chickering and Gamson (1987), Tinto (1993), and Kuh (2001) (see Figure 1). Astin's model assesses "the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions" (Astin, 1993: 7). Astin's (1993) Input-Environment-Output assessment model assumes that student outcomes are functions of three basic elements: inputs (characteristics of the student at the time of initial entry to the institution or prior to enrollment), environment (anything that happens to a student during college as a result of various programs, policies, faculty, peers, and educational experiences to which the student is exposed), and outcomes (students' characteristics after exposure to the environment).

Figure 1: Conceptual Framework



Research on college students' engagement has indicated that engagement on effective educational practices is linked to many desired student outcomes (Astin, 1993; Ishitani, 2006; Pascarella & Terenzini, 2005). This study focuses on two salient outcomes: academic achievement (GPA) and college satisfaction.

3. Research Methodology

The measures that will be used in the analyses of ethnic minority college students' engagement of the effective educational practices are the 42 items comprising the five NSSE benchmarks (level of academic challenge, student-faculty interaction, active and collaborative learning, enriching educational experiences and academic achievement) (Kuh, 2001). *The Level of Academic Challenge* is an eleven-item scale in which students report about the time they spend preparing for class, the amount of reading and writing they have done, and institutional expectations for academic performance. *The Student-Faculty Interaction* scale consists of six items where students report on the extent of their interaction and discussions with faculty members and advisors inside and outside of class; they also report on the extent of prompt feedback on academic performance and work with faculty on research projects. *Active and Collaborative Learning* is a seven-item scale measuring the extent of students' class participation, the degree to which they have worked collaboratively with other students inside and outside of class, and the amount of tutoring and number of community-based projects in which they have been involved. *Enriching Educational Experiences* is a scale with twelve items probing the extent of students' interaction with those of different racial or ethnic backgrounds or with different values or political opinions, their use of information technology, and their participation in activities such as internships, community service, study abroad, and co-curricular activities. *Supportive Campus Environment* is a six-item scale measuring the extent to which students feel that the campus helps them succeed academically and socially; assists them in coping with nonacademic responsibilities; and promotes supportive relations among students and their peers, faculty members, and administrative personnel and offices. The measures that will be used in the analyses of the proposed two desirable student outcomes include *academic achievement*, measured using actual GPA, and *college satisfaction*, measured with 2 items from the NSSE survey. While the above two desirable student outcomes are

treated as dependent variables, the five dimensions of effective educational practices are treated as independent variables.

The data used in this study were based on a NSSE survey administered at a mid-sized U.S. university by the University's Institutional Planning, Assessment and Research Office in 2009 and 2011. The survey was administered during the spring term randomly to 2838 freshmen- and senior-level students who had attended the institution for at least two terms. In 2009, 1279 students responded, and, in 2011, 1559 students participated. Seventy percent of the respondents were female, 37 percent were low-income, 56 percent were freshmen students, and 47 percent were first-generation students. Overall, the universe (U) profile mirrored the respondent population (R) for key demographics during the two year survey (2009 & 2011), and students completing the survey had enough experience with the institution to render an informed judgment. Survey questions focused on recent common experiences of student engagement. The respondents were asked to report the frequency with which they engaged in the five effective educational practices using a simple Likert rating scale format. Students also provided information about their background, such as gender, age, parent's education status (generation status), enrollment status, and race or ethnicity.

4. Main Findings

Table 1 shows means, standard deviations, and correlations of all variables in the study. As reported in the correlation matrix of Table 1, the relationship between each of the five effective educational practices and the two desired educational outcomes (college satisfaction and GPA) as well as two demographic factors (race/ethnic and family income) are shown. Although there are positive relationships among all educational engagement practices with college satisfaction and GPA, the extent of the relationship varies (Table 1).

Table 1: Statistical Description and Correlation Matrix

N	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	Level of academic challenge	3.0	.48									
2	Active & collaborat. learning	2.3	.58	.48**								
3	Student-faculty interaction	2.5	.51	.48**	.62**							
4	Enriching educ. experiences	4.1	.68	.37**	.56**	.54**						
5	Supportive campus envirmt.	2.5	.44	.34**	.27**	.38**	.24**					
6	College satisfaction	3.23	.65	.22**	.13**	.26**	.19**	.50**				
7	GPA	3.22	1.71	.20**	.23**	.17**	.26**	.15**	.10**			
8	Race/ethnicity	1.3		-.01	.05	-.04	.08**	-.08**	-.07**	-.02		
9	Family income		.48	-.05	-.02	-.03	-.05	-.02	0	-.05	-.01	

*Correlation is significant at the 0.05 level (2-tailed); N=2838.

**Correlation is significant at the 0.01 level (2-tailed); N=2838.

Table 2 shows the results of the regression analysis, which demonstrates the extent to which the 5 effective educational practices explain college satisfaction and GPA. As shown in Table 2, while all five effective educational practices identified in the model show a positive effect in explaining college satisfaction, three of the variables (student faculty interaction, enriching educational experiences, and supportive campus environment) show statistically significant positive impact in explaining college satisfaction and are greater than or equal to $\beta=.08$. The 5 factors altogether

explain about 27 percent of the variance in college satisfaction. In addition, while all five effective educational practices identified in the model show a positive effect in explaining GPA, three measures (level of academic challenge, active and collaborative learning, and enriching educational experiences) show statistically significant positive impact in explaining college satisfaction and are greater than or equal to $\beta=.09$. The 5 factors altogether explain about 9 percent of the variance in GPA.

Table 2: Results of Regression Analyses on college satisfaction & GPA ^a

Variables	College satisfaction	GPA
Level of academic challenge	.05	.11***
Active and collaborative learning	.01	.09***
Student-faculty interaction	.10***	.02
Enriching educational experiences	.08***	.18***
Supportive campus environment	.46***	.00
F	87.26***	22.54***
R	.52	.29
R ²	.27	.09

Notes: ^a Standardized Regression Coefficients are reported; *** $p<.001$; $N=2838$.

Next, ANOVA tests were conducted as shown in Table 3, to determine if there is a significant difference between college satisfaction and GPA of the ethnic minority from non-ethnic minority (white) college students. The findings in Table 3 show that, while there is statistically significant differences in GPA of ethnic minority college students ($M=3.11$, $SD=1.6$) and that of the non-ethnic minority college students ($M=3.24$, $SD=1.7$) ($F(1, 2,673) = 4.8$, $p<0.001$); there is no significant differences in college satisfaction of ethnic minority ($M=3.21$, $SD=.65$) and that of the non-ethnic minority college students ($M=3.23$, $SD=.64$).

Table 3: Effects of ethnicity on college satisfaction and GPA

Desired college outcomes	College students	Mean	SD	ANOVA test		
				t	df	Sig.
GPA	Ethnic minority students	3.11	1.6	(1,2673)	4.8	0.00*
	Non-ethnic minority students	3.24	1.7			
College satisfaction	Ethnic minority students	3.21	.65	(1,2671)	2.1	n.s
	Non-ethnic minority students	3.23	.64			

5. Conclusions

This study concludes that, although there are many factors that affect college satisfaction, engagement in the so called ‘five effective educational practices’ was found to be important and was positively correlated with college satisfaction and GPA. The findings from our analysis can help universities in enhancing the above two desired student outcomes, which subsequently influence persistence and graduation (e.g., Astin, 1993; Ishitani, 2006; Pascarella & Terenzini, 2005; Pike, 2013) for all students in general and the ethnic minority in particular. This is because student engagement had a compensatory effect for at-risk students (Cruce, Shoup, Kinzie, & Gonyea, 2008). Engagement can be particularly beneficial to those groups of students least prepared for higher education. Hence, an important implication of the present study is that, if

colleges and universities are to improve students' retention and graduation rates, they should consider taking actions to support the five educational practices in order to improve academic achievement and levels of satisfaction, which subsequently influences college persistence and completion. As remarked by McCormick and McClenney (2012: 330), "NSSE surveys were designed to produce data that are meaningful and actionable... Most fundamentally, NSSE aims to transform research findings into a set of resources to help practitioners work their way through practical problems."

This study concludes that, although engagement in the so called 'five effective educational practices' cannot guarantee higher levels of college satisfaction and GPA, its absence (lower engagement) adversely impacts both college satisfaction and GPA. This suggests that while students' engagement plays a particularly important role in improving both college satisfaction and GPA outcomes, it should not be perceived as the only factor that affects the two desired college outcomes. While this study is an important step forward in understanding the extent to which five educational practices are correlated with two desired student outcomes, namely colleges satisfaction and GPA, as well as the effect of ethnicity on GPA and college satisfaction, it also leaves some questions open for future research. This study was conducted in only one U.S. mid-sized university. Hence, in order to generalize and validate the findings of this study, we suggest that a similar study be conducted in other universities, both in the U.S. and other parts of the world. In addition, a larger sample size would better be able to ascertain differences between ethnic minority groups and examine possible differences in gender across groups. Perhaps, not all groups are similarly impacted. Additional research is needed to examine the robustness of the findings and generalizations.

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Public Relations Strategies for Managing Religious-Based Conflicts and Crises In Nigeria

Onyiaji, Judith Chiaka*

***Abstract:** Nigeria has witnessed a lot of religious crisis since the early 1980s. These include the 1980 Maitatsine religious riot in which hundreds of lives were lost; the “Miss World”pageant orchestrated religious riot of 2002 in which hundreds of lives were again lost and many more. The recurring Boko Haram crisis in which thousands of innocent Nigerians have been brutally murdered is believed by many to be religiously cum politically motivated. It is strongly believed that some Nigerian politicians are behind the problem. They hide under the cover of religion and ethnicity to galvanize political support for themselves or violence against supporters of their opponents. Since after the 2011 general elections in the country, there has been heightened incidence of Boko Haram crisis where the lives of innocent citizens are being brutally snuffed out daily. Unfortunately, a dangerous dimension has crept into the crisis where women and children are now the latest target of attacks, kidnappings, denial of rights to education, rape and murder. The objectives of the study included to: determine the extent to which public relations crisis management strategies could be used to arrest this problem; ascertain the correlation between the extent of deployment of public relations strategies and the existence of this country in Nigeria. Data were sourced through opinion survey of select Nigerians of diverse social persuasions and statistically analysed with Chi-square and Spearman’s correlation coefficient. Results obtained reveal that adequate deployment of public relations crisis management strategies could be used to effectively arrest the problem and; there is a strong correlation between the poor deployment of public relations strategies and the existence of crisis in Nigeria. With these outcome, some suggestions for the way forward were proffered in the study.*

*Onyiaji, Judith Chiaka, Institute of Management & Technology, Enugu – Nigeria

Profiling and Mapping Tool

Sulaiman Gool*

Project Description: Profiling and Mapping Tool Development

South Africa will be spending close to US\$100bn on infrastructure over the next 5 years. Added to this will be significant investments in the Oil and Gas sector, both on and offshore. The projection is that many of the major contractors for this infrastructural expansion will be foreign entities. Government has stipulated a certain minimum local content for the various types of industries. In order to satisfy this requirement, firms will have to procure a significant proportion of their inputs locally, including services.

In anticipation of this rising demand for local procurers, I am developing a Profiling and Mapping tool. The objective of this tool is to assist procurers in sourcing goods and services from local service providers. The tool evaluates the entire value chain in the targeted sector and subsectors. It presents the user with an immediate overview of the sector together with a spatial map of goods and service providers.

The tool will offer a comprehensive database including information on a designated company's structure, products and services, equipment, expertise, clients, major suppliers, origin of inputs etc.

Scope and Objective of the Profiling and Mapping Tool

The Profiling and Mapping program being developed gives each documented company a local content rating. The listed companies are then Geo-Coded and mapped by the Profiling and Mapping Tool. The mapping tool includes several levels of filtering enabling the client to zoom in on the suppliers, satisfying his requirements. The tool also graphically illustrates inter-firm transactions and facilitates match-making. It is frequently difficult for small companies to bid for large projects on their own, but by clustering similar companies, the task becomes less onerous.

The Profiling and Mapping tool enables companies to efficiently market their capability and expertise both nationally and internationally. The tool also includes an analysis section into which the power and functionality of Excel has been programmed, so that data mining is nothing more than dragging variables to visually create the necessary coordinates of linkages.

In South Africa, we have a training authority for each sector. These Training Authorities are funded by government and fund interventions that address scarce skills identified by industry. Since the Profiling and Mapping tool records the skills complement of the companies together with their shortages, the tool can then be used to match the needs of industry to the funds disbursed by the training authorities.

*Sulaiman Gool, University of Western Cape, South Africa