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Highlights

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Discovering Thoughts, Inventing Future

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Quality Human Resources Management for Effective Educational System

By Dr. Ojebiyi O.A & Adediran Adekunle Amos
Obafemi Awolowo University

Abstract - Human Resource Management is a long - established task within the governments management frame work. Through this task the government meets its obligation to be a good employer; seeks to secure staff commitment; and develops and manages staff to give their best to help the government serve the community. For quality effective educational system to be achieved, government through Ministries of Education need to respond to changing community expectation mean that, the task of managing both teaching and non teaching staff better is more important than ever - it is the staff who deliver the service, and it is through a new emphasis on staff management that a customer service and performance oriented culture will gradually evolve. Government through various Management of Educational sector need to sponsor its staff for in - service training, workshop, conference, seminar etc. for optimum delivery of services in their various department.

Keywords : *human resource management, staff, educa-tional system, government quality.*

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Quality Human Resources Management for Effective Educational System

Dr. Ojebiyi O.A [α] & Adediran Adekunle Amos [σ]

Abstract - Human Resource Management is a long - established task within the governments management frame work. Through this task the government meets its obligation to be a good employer; seeks to secure staff commitment; and develops and manages staff to give their best to help the government serve the community. For quality effective educational system to be achieved, government through Ministries of Education need to respond to changing community expectation mean that, the task of managing both teaching and non teaching staff better is more important than ever - it is the staff who deliver the service, and it is through a new emphasis on staff management that a customer service and performance oriented culture will gradually evolve. Government through various Management of Educational sector need to sponsor its staff for in - service training, workshop, conference, seminar etc. for optimum delivery of services in their various department. To meet the obligation of managing staff, government needs money, enabling working conducive environment, and staff support. Every staff in the educational sector has a role to play in meeting the challenges of improving human resource management practices and maintaining a dynamic and progressive approach to managing people. This paper therefore explains how human resource management works in Nigeria Educational System. It also describes the core principles and values of the government, were responsibilities lie and key management task and strategies that must be addressed.

Keywords : human resource management, staff, educational system, government quality.

I. Introduction

Human Resource Management is a planned approach to managing people effectively for performance. It aims to establish a more open, flexible and caring management style so that staff will be motivated, developed and managed in a way that they can and will give of their best to support organizations missions. (Armstrong 2006). Bratton (1999) defined human resource management as the methods of integrating and maintaining workers in an organization so that the organization can achieve the purpose and meet the goals for which it was established. It is the coordination of the activities and efforts of the workers in an organization so that organizational goals are achieved. In other words, human resource management is the process of motivating workers in the organization so as to obtain maximum outputs (Watson 1986).

As Storey (2007) put it, human resource management is seen by practitioners in the field as a more innovative view of workplace management traditional approach. Its techniques force the managers of an enterprise to express their goals with specificity so that they can be understood and undertaken by the workforce, and to provide the resources needed for them to successfully accomplish their assignments. (Legge 2004). As such, human resource technique, when properly practiced, are expressive of the goals and operating practices of the enterprise overall.

Human resource management according to Golding (2010) involves several processes. These processes can be performed in a human resource department, but some tasks can also be outsourced or performed by line managers or other departments. When effectively integrated, they provide significant economic benefit to the organization.

For effective educational system according to Paauwe (2009) human resource management function includes a variety of activities and key among them is deciding the staffing needs of an institution, or school, recruiting and training the best teachers, ensuring they are high performers. The training of the teachers and development should be the focus of the institutions objectives and goals and staffs competencies in achieving them.

The following strategies of training staffs have been outlines by Ulrich (1996).

- ❖ Commitment to training and developing staff, regular analysis of operational requirements and staff competencies, working training and development to the institutions goals and objectives, skilled training personnel, regular evaluation, a continuous learning culture, joint responsibility between the head and the staff for identifying and meeting training needs and a variety of training and development methods for different circumstances and learning styles. With all these in place, quality human resource management will be achieved in educational system.

The objectives of this study is to:

1) Make individual institutions improve staff (teachers) performance.
2) Enhance efficiency and effectiveness in educational system.

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3) Identify training and development needs for staff and match these where possible to the opportunities available.
4) Make an organization communicate regularly with staff on subject that affect them and take an interest in the welfare of staff.

II. Conceptual Clarification

a) Human Resource Management

Human Resource Management according to Bratton and Gold (1999) as quoted by Out, Salawu and Ajadi (2011) is that part of the management process that specializes in the management of people in work organizations. Human resource management emphasizes that employees are critical to achieving sustainable competitive advantage, that human resources practices need to be integrated with the corporate strategy and that human resources specialists help organizational controllers to meet both efficiency and equity objectives. (Musaazi, 1982).

Ordinarily, the definition of human resource management would be in complete without further explaining what the terms "human resources and management" are. First and foremost, people in work organizations, endowed with a range of abilities, talents and attitudes, influence productivity, quality and profitability. People set overall strategies and goals, design work systems, produce goods and services. (Becker and Gerhart 1996). Individuals, therefore become "human resources by virtue of the roles they assume in the work organization. Employment roles are defined and described in a manner designed to maximize particular employees contributions to achieving organizational objectives.

In theory, the management of people is no different from the management of other resources of organizations. In practice, what makes it different is the nature of the resources, people (Out, Salawu and Ajadi 2011) one set of perspective views the human being as potentially a creative and complex resource whole behaviour is influenced by many diverse factors originating from either the individual or the surrounding environment.

Organizational behaviour theorists for example, suggest that the behaviour and performances of the "human resource" is a function of at least four variables: ability, motivation role perception and situational contingencies. Another set or perspective emphasizes the problematic nature of employment relation (Watson, 1986). The human resources differ from other resources the employer uses, partly because individuals are endowed with varying levels of ability (including aptitudes, skills and knowledge), with personality traits, gender, role perception and differences in experience and partly as a result of differences in motivation and commitment (Out, Salawu and Ajadi, 2011).

b) Management

The term management may be applied to either a social group or a process. (Watson 1986) management according to Paauwe (2009) when applied to a process, conjures up in the mind a variety of images of managerial work. Management may be seen as a science or an art. The image of management as a science is based on the view that experts have accumulated a distinct body of knowledge about management which, if studied and applied can enhance organizational effectiveness. This view assumed that people can be trained to be effective managers (Out, Salawu and Ajadi 2011).

Management is also defined in terms of planning, organizing, commanding, coordinating and controlling. It is regarded as primarily concerned with internal affairs. The role of management therefore emphasizes that an organization is a purposive miniature society and as such, power and politics are pervasive in all work organizations. By power it means the capacity of an individual to influence others who are in a state of dependence. (Musaazi 1982).

Organizational politics refer to those activities that are not required as part of a managers formed role, but which influence, or attempt to influence the distribution of resources for the purpose of promoting personnel objectives, politics in organization is simply a fact of life. Those who fail to acknowledge political behaviour ignore the reality that organizations are political systems. (Out, Salawu and Ajadi, 2011).

An alternative image of managerial activity is to view management as art. This implies that managerial ability and success depends upon traits such as intelligence, charisma, decisiveness, enthusiasm, integrity, dominance and self-confidence (Bratton and Gold 1999) if management is equated with specific traits associated with successful styles of leadership, it would provide a basis for selecting the "right" individual for managerial positions in the organization. Managerial skills can be developed but cannot be acquired by attending "business schools". In other words, if management is an art, managers are born. The science and art issue is not an arid academic debate, given public and private expenditure on management education and training. (Out, Salawu and Ajadi, 2011).

Human Resource Management Plan

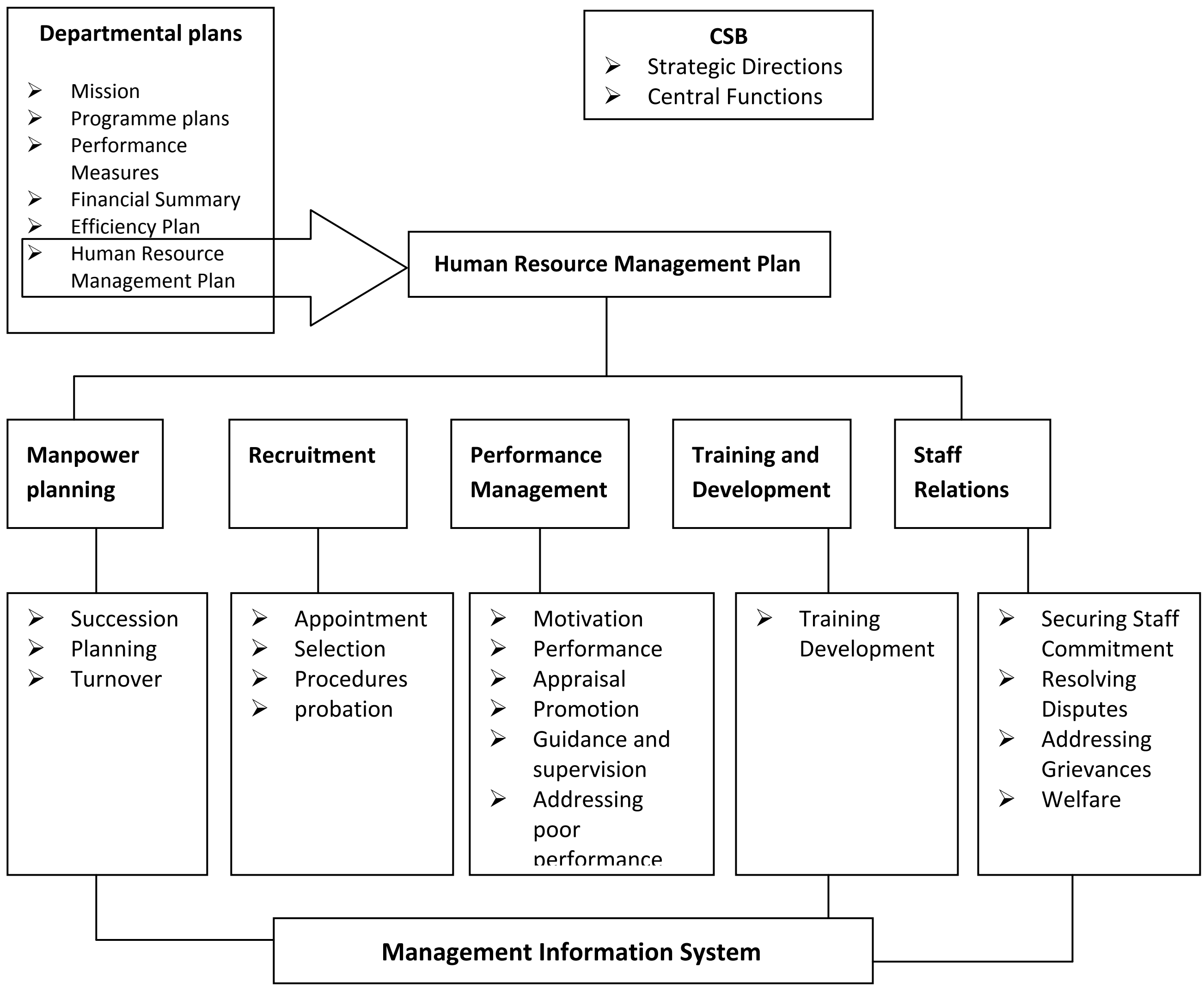


Figure 1

Human resource management plans are used to link together the overall policies of organization's mission, objectives and values of the organization and any specific human resource management activities being undertaken at the management level. The plans thereby provide clear policies and guidelines for staff and heads.

The core values of human resource management in organizations

VALUES	
HRM	❖ Trust ❖ Care ❖ Teamwork ❖ Encouragement ❖ Development
SERVING THE COMMUNITY	❖ Openness ❖ Commitment ❖ Effectiveness ❖ Foresight ❖ Courtesy ❖ Propriety ❖ Expertise ❖ Partnership ❖ Integrity ❖ Efficiency ❖ Leadership ❖ Responsiveness

Source : Prahalad and Hamed (1990).

Figure 2

Values shape the culture of any organization. They are the key to the way things are done. The values of the severce as a whole should be built upon by organization to develop the particular culture an organization is seeking. Well defined values gives staff an instinctive feel for decisions expected from them and therefore, reduce the amount of time spent consulting others before making a decision.

Human resource management brings out the important values of trust, care, teamwork, encouragement and development which the organization meet the principle of being a good employer and thereby motivating staff to give their best (Prahalad & Hamed 1980).

III. The Issues in Human Resource Management in Educational System

Every educational system at every level depends heavily on teachers for the excution of its programmes, maintaining and improving effective educational standards and quality is only possible through teachers. The teacher, therefore is the most indispensable entity in the school. He is the greatest aid to learning. As much as possible, teachers should be thoroughly trained and supported in their work. (Musaazi 1982).

Human Resource Management deals with the establishment of procedures for the employment and payment of workers or staff. It is the arrangement of conditions which make possible greater self direction by staff in the performance of their duties (Out, Salawu and Ajadi 2011). It is therefore an important function in the general context of all administrative responsibility of managing staff. However, in Nigeria the ministries of Education, civil (public) service commissions are very much involved in a number of policies affecting teachers. Areas of such involvement, for example, include recruitment, staff development, transfers and promotions, staff evaluation, dismissal and general discipline, salaries and pensions.

Thus, the life of the school teacher is affected by the activities of officials in the Ministries of Education or their agencies. Consequently, the synergy between the two becomes pertinent if teaching is to become effective. It should also be reminded that the major premise of staff or human resource management in schools is that the end results of the educative process will be justified by the effectiveness of the school teachers. When dealing with staff or human resource management in schools, one need to put three things into consideration, these are the assessing the need of staff, satisfying the need for staff and maintaining and improving staff services.

IV. Models of Human Resource Management for Effective Standardization of Educational System

The application of different models is to increase organizational effectiveness, that can bring quality in human resource management in educational system. Fombrum et al (1984) human resource management model emphasizes the interrelatedness and the coherence of human resource management activities. Their model consists of four key constituent components selection, appraisal, development and rewards. These four human resource activities aim at increasing school performance. The strength of the model is to express the coherence of internal human resource management policies and practices to the organization's external strategy.

It also serves as a pedagogical framework for explaining the nature and significance of key human resource management practices and the interactions among the factors making up the complex fields of human resource management.

The Harvard Model of HRM

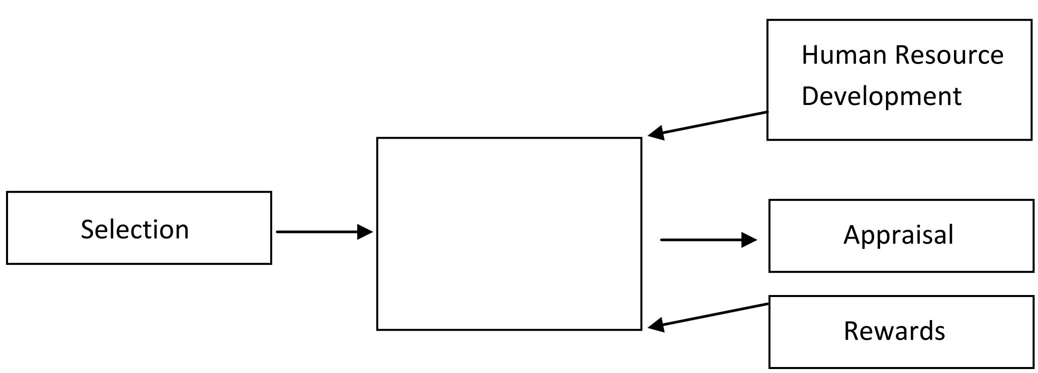


Figure 3 : The Fombrum, Tichy and Devana Model of HRM

This model consist of six basic components:

1) The Situational Factors influences management's choice of human resource management strategy. This normative model incorporates workforce characteristics management philosophy, labour market regulations, societal values and patterns of unionization and suggests a merging of both "product markets and socio-cultural logics" (Boxall, 1992).
2) The stakeholder interests recognize the importance of "trade-offs" either explicitly between the interest of owners and those of employees and their organizations, the unions.
3) Human Resource Management policy choices emphasize that managements decisions and actions in HRM can be appreciated fully if it is recognized that the result from an interaction between constraints and choices. The model depicts management as a real actor, capable of making at least some degree of unique contribution with environmental and organizational parameters and or influencing those parameters itself overtime.
4) The human resources outcomes are high employee commitment to organizational goals and high individual performances leading to cost effective products or services. The underlying assumption here is that employees have talents that are rarely fully utilized at work and they should desire to experience through work.
5) The long term consequences distinguish between source levels, individual, organizational and societal. At the individual employee level the long term outputs comprise the psychological rewards workers receive in exchange for efforts. At the organizational level increased effectiveness ensures the survival of the organization. In turn, at the societal level, as a result of fully utilizing people at work some of society's goals for example, employment and growth) are obtained. A strength of the Harvard model is the classification of outputs and outcomes at both organizational and societal level, creating the basis for a critique of comparative HRM (Boxall, 1992).
6) The sixth component of the Harvard model is the feedback loop. As it has been discussed the situational factors influence HRM policy and choices.

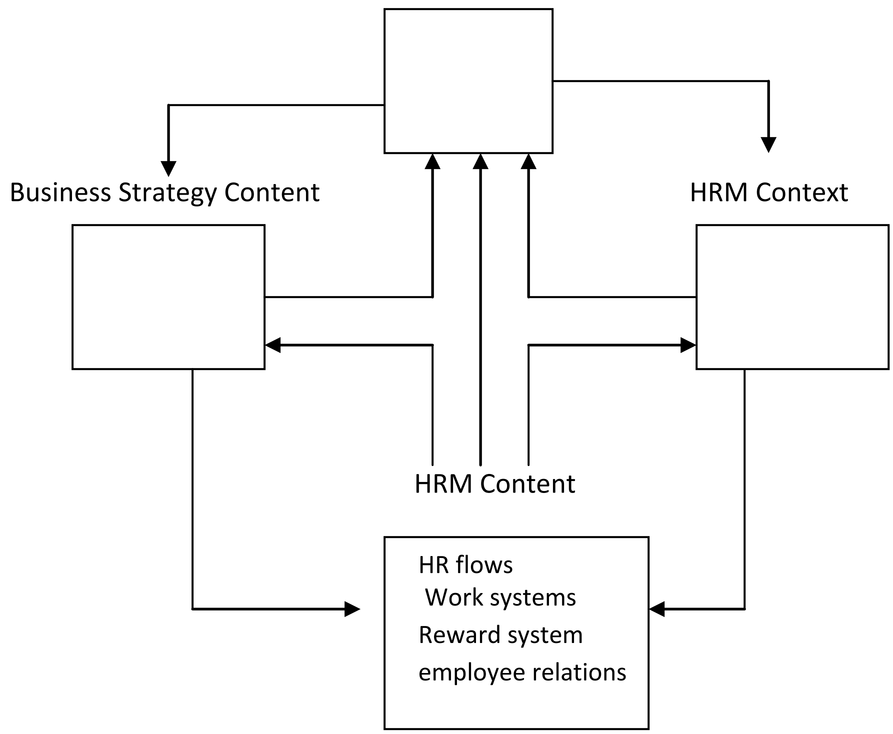
Consersely, however, long-term outpouts can influence the situational factors, stakeholder interest and HRM policies. It clearly provides a useful analytical basis for the study of HRM. The model also contains elements that are analytical (that is, situational factors, stakeholders, strategies choice levels) and prescription (that is notions of commitment competence and so on) Boxall, 1992)

V. The Warwick Model of HRM

This mode emanates from the centre for corporate strategy and change at the University of Warwick and with two particular researchers, Harvard framework to extend the analysis of HRM and has five elements

1) Outer context, inner context, business strategy context, HRM context and HRM content.

The model takes cognizance of HRM business strategy and HRM practices, the external and internal context in which these activities take place and the process by which such change takes place including interactions between change in both context and content. The strength of the model is that it identifies and classifies important environmental influence on HRM.



Sources : Hendry and Pettigrew (1990)

Figure 4 : Warwick Model of HRM HRM Context

The models described above have strength which the school head can effectively draw upon to achieve the goals of the school. The weakness of the model, however, can be avoided by the school head in order to succeed.

The application of these models of human resource management by the school head can help to achieve maximum success with his staff

VI. Function of Human Resource Management

Human Resource management is a body of knowledge and a set of practices that defines the nature of work and regulate the employment relationship. The following five functions areas have been described by Robbins (1991).

a) *Staffing*

Deals with obtaining people with appropriate skills, abilities, knowledge and experience to fill jobs in the work organization. Eminent practices are human resources planning, job analysis, recruitment and selection.

b) *Reward*

Involves the design and administration of reward systems. Practices include job evaluation, performance, appraisal and benefits.

c) *Employee Development*

Is analyzing training requirement to ensure that employees possess the knowledge and skills to perform satisfactorily in their jobs or to advance in the organization. Performance appraisal can identify employee key skills and competence.

d) *Employee Maintenance*

Is the contribution and monitoring of work place safety, health and welfare policies to retain a competent work force polices to retain competent workforce and comply with statutory standards and regulations.

e) *Employee Relations*

Under this heading may be a range of employee involvement / participate schemes in union or non-union work places. In a union environment, it also includes negotiations between management and union repre-sentatives over decision affecting the employments contract.

VII. Conclusion

Human resource management has been defined as the methods by which the leader utilizes materials and human resources to achieve predetermined organization goals. Thus, human resource management is the process that deals with utilizing people perform duties and function in an organization. Human resource management models have also been discussed in this study and is capable of making school head to achieve a success among his staff.

Human resource management functions have analyzed the heart of the organization. It is the right of getting people to do the right job and in the right pleases which will go along way to ensure the overall achievement of the goals of the organization. Personnel (human resource) is therefore the life-blood of an organization be it a business enterprise manufacturing materials or an educational institution that has educated and enlightened graduates as its finished products. The work the staff performs, the amount of the efforts expended and the level of commitment they have to their work all go a long way to or sure overall goals attachment.

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Balancing an Imbalanced Score Card at BPL Engineering Limited-A Case Study

By Dr. Sunita Panicker
Christ University Hosur Road, Bangalore

Abstract - The Indian electronics Industry has evolved from a undersized government regulated and sluggish growth industry in early 1990,s to a multi-segment export oriented that is witnessing rapid growth and high competition due to changes in Governments policy regime. The once protective policies have been relaxed to a great extent in a bid to attract foreign capital and adapt technology across borders, so that a globally competitive industry is developed. Feeling the heat of the resistance from global brands on its home territory and reeling under the beat of widespread slowdown in the economy, BPL group management worked out a blueprint to substantially reduce its workforce in the year 2002 as part of its restructuring plan. BPL group is an Indian electronics company that deals with consumer appliances (such as refrigerators and washing machines), home entertainment products and health care devices. Over the years, BPL's growth has been subject to constant challenges.

GJMBR-A Classification : JEL Code: L63, L88

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Balancing an Imbalanced Score Card at BPL Engineering Limited- A Case Study

Dr. Sunita Panicker

I. Introduction

The Indian electronics Industry has evolved from a undersized government regulated and sluggish growth industry in early 1990,s to a multi-segment export oriented that is witnessing rapid growth and high competition due to changes in Governments policy regime. The once protective policies have been relaxed to a great extent in a bid to attract foreign capital and adapt technology across borders, so that a globally competitive industry is developed. Feeling the heat of the resistance from global brands on its home territory and reeling under the beat of widespread slowdown in the economy, BPL group management worked out a blueprint to substantially reduce its workforce in the year 2002 as part of its restructuring plan. BPL group is an Indian electronics company that deals with consumer appliances (such as refrigerators and washing machines), home entertainment products and health care devices. Over the years, BPL's growth has been subject to constant challenges. BPL engineering Limited which is a part of the BPL group is engaged in the manufacture and sale of components, with its corporate office located in Bangalore, Karnataka. Karnataka state has sizeable presence in automotive and engineering sectors. The proactive policies along with capability and natural resources drive attractiveness for these sectors.

II. Industry Profile and Company Note-Electronics and Engineering Industry

India's electronics industry offers opportunity for growth than need to be tapped to reduce dependence on imports. The industry structure comprises over 5,000 various components that are classified under different segments such as speakers, transformers, power cords and cables, vehicle alarm system, transducers, relays, washing machine motors, and compressors.

The company was started at a time when the government had reserved many areas of business for the public sector. It had also virtually barred most entrepreneurs from entering other fields through reservations on licensing. With the company's supplies mainly concentrating on the requirements of the parent company which is into the production of Television and white goods. A part of their production was also exported to European, Asian and African markets. The onslaught of the Korean and Japanese products who flooded their products into the market with their high profile audio and video equipments and white goods which where competitively priced, started to erode the market share of BPL.

The components industry has evolved from a small government regulated and slow – growth- industry in the early 1990's to a multi segment, export-oriented industry that is witnessing rapid growth and high competition due to changes in the technology. The industry structure comprises over different segments. The industry domain has expanded rapidly over the years and has accommodated a lot of players; all this factors have lent support to the highly fragmented structure of the industry, with no company enjoying a major market share.

Demand for components is generated primarily from two sources, the OEMs (Original Equipment Manufacturers) and the replacement market, the former has a majority share in demand. The industry has been enjoying a robust demand in both domestic and export markets.

BPL Limited (BPL) was incorporated in 1963 as a Private Limited company and was promoted by Mr. TPG Nambiar for the manufacture of indicating instruments and Electronic Test and Measuring Instruments in technical and financial collaboration with BPL Instruments Limited, U K.The Company started manufacturing Hermetically Sealed Panel Instruments at its factory in Palakkad (Kerala) for defence use. Later, it started the manufacture of Electronic Test and Measuring Instruments and Electro Medical Instruments - Defibrillators and Central Monitoring Systems. In 1979 Permission was obtained for manufacture of plain paper copiers in technical collaboration with Gestaner UK. Later improved state-of-the art plain paper copiers were introduced in technical collaboration with Sanyo, Japan.

In the year 1982, the Company diversified into consumer electronics field, colour television receivers, black & white TV receivers, video cassette recorders etc. The products are marketed under the brand name`BPL'.It was in this year the Company had embarked on the manufacture of components and compressors and formed consumer business groups. The consumer business (under BPL Ltd) was

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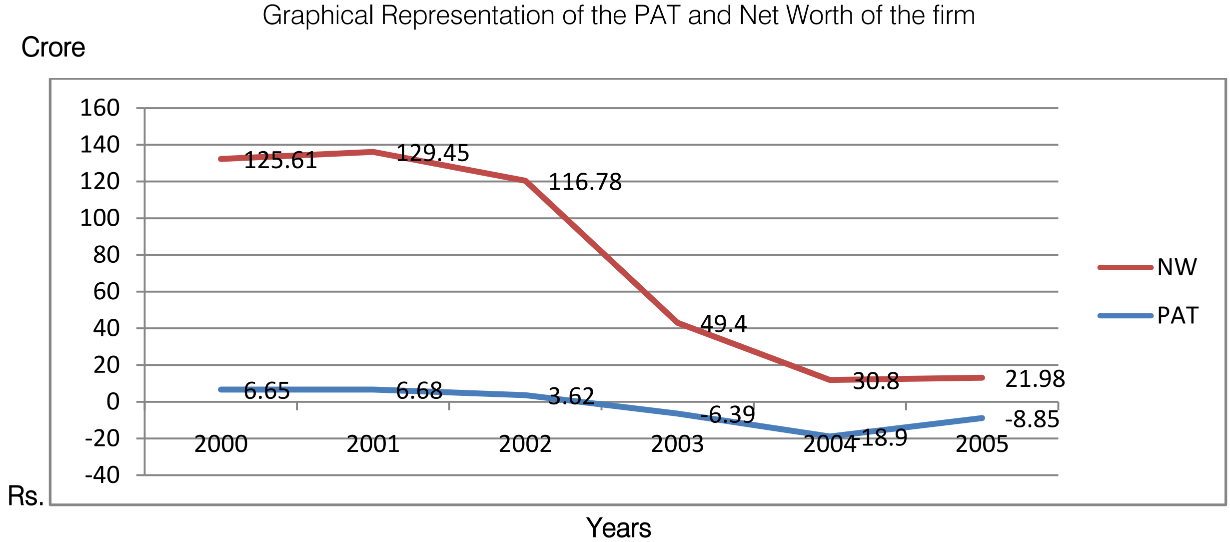
streamlined into four key business groups such as entertainment electronics, home appliances, soft energy and medical systems. The component line of business will comprise BPL Display Devices Ltd, Electronic Research Ltd, BPL Automation Ltd and BPL Engineering Ltd.

BPL Engineering Ltd., a subsidiary of BPL Ltd., was incorporated in 1982. The company, BPL Engineering Ltd is the component manufacturing arm of BPL Ltd. They were supplying components to various consumer electronics and home appliances for their parent company. BPL Engineering Ltd product line includes speakers, transformers, power cords and cables, vehicle alarm system, transducers, relays, washing machine motors, and compressors, The Company employs around 487 employees in both their components and compressor division in total. The Compressor Division of the engineering company is engaged in manufacturing of hermitically sealed compressors for refrigeration industry. Most of these components recorded robust growth in turnover during its initial days and up to 2001.

Profit After Tax and net worth of the firm in Crore Rs.

Year	Profit After Tax	Net Worth
2000	6.65	125.61
2001	6.68	129.45
2002	3.62	116.78
2003	-6.39	49.40
2004	-18.6	30.80
2005	-8.85	21.98
2006	-41.99	-20.01

Graphical Representation of the PAT and Net Worth of the firm



From the above graph of BPL Engineering Limited it is seen that there is steady growth in the year 2000 and 2001. But there has been a steep fall in the profits after tax of the company in the year 2002 but still on the positive side. In the year 2003 2004 the company's profits have dipped drastically indicating the fatal state of the company. In the year 2003-2004 corporate debt restructuring scheme has been adopted and in 2005 the firms losses have reduced. But due to failure of the same the losses have again fallen drastically and reached -41.99.

The net worth of the company has been slowly deteriorating from 2001-2002 and shown no improvement therefrom. The company was unable to fight competition and adopt to new technology and adopted restructuring but the strategy has failed and has pushed the firm to a financial distress.

The detection of a firms operating and financial difficulties is a subject which has been particularly amenable to analysis with the financial ratios. Every ratio is unique and tells a different story about the financial position of the company, hence instead of searching for a single best ratio Prof. Edward Altman has built a new model that distils five key performance ratios into a single score called Z-Score.

He has used multiple discriminating analysis weightage used for the different ratios which are used for the different ratios which are:

X1= (Working Capital/ Total assets) x 0.717;

X2= (Retained earnings/Total assets) x 0.847

X3= (EBIT/TA) x 3.107

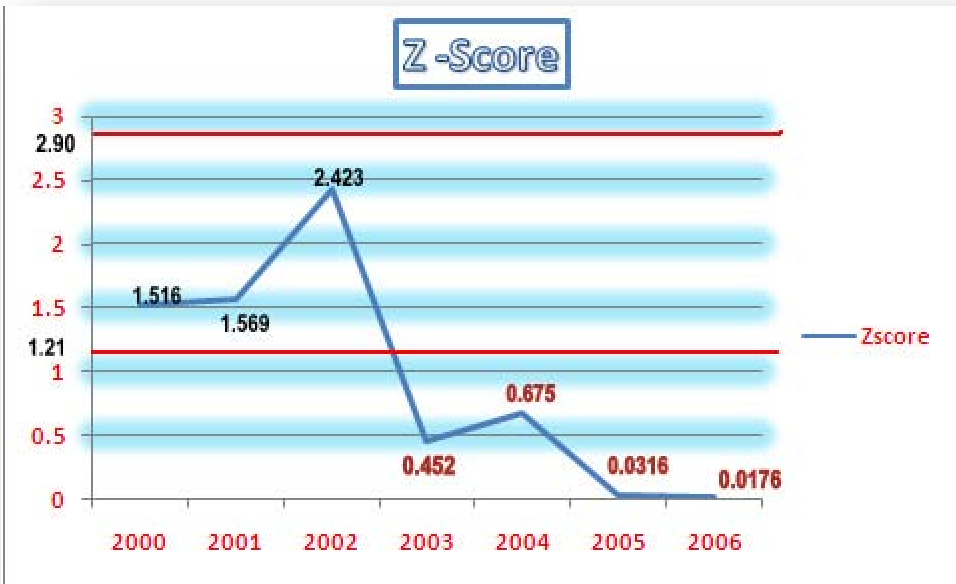
X4= (capital Fund / TL) x 0.42

X5= (sales/ TA) x 0.998

Table Showing the calculation of Z-Score

Years/X	2000	2001	2002	2003	2004	2005	2006
X1	0.201	0.195	1.3	(0.085)	(0.102)	(0.0064)	(0.0636)
X2	0.35	0.36	0.34	0.12	0.02	(0.02)	(0.27)
X3	0.25	0.26	0.095	(0.48)	(0.035)	(0.43)	(0.52)
X4	0.45	0.44	0.042	0.067	0.072	0.068	0.077
X5	0.67	0.71	0.64	0.83	0.72	0.43	0.66
Z-score (X1+X2+X3+X4+X5)	1.516	1.569	2.423	0.452	0.675	0.0316	0.0176

Graph representing the variations in Z-Score



III. Interpretation

a) According to prof. Altman : If Z- Score is above 2.90, the firm is in good financial position.

b) If the score is between 1.21 and 2.90, indicates the warning signals leading to firm's poor financial health.

c) If the score is below 1.21, means the firm is tending towards bankruptcy.

d) Hence keeping this in mind BPL's Z- Score it indicates the following:

i. As the above graph clearly shows in the period of 2000-2002, the area above the level of 1.21, hence indicating that it enjoyed a healthy financial position.

ii. In the period of 2003- 2006 the firm's financial position gradually declined due to several internal and external reasons. In 2003 the firm incurred huge losses due to the entry of new competitors in the market and huge imports undertaken by many BPL clients.

iii. BPL's financial position was so bad that the management decided to undertake corporate debt restructuring and filed for it in Feb 2003.

iv. The restructuring plan added hope to the company's survival and the company's position slightly improved in the year 2004-2005, but the plans strong beginning did not last for too long and the company's losses increased to the extent of Rs 41.99 crores in the year 2006.

IV. Sickness

The electronic industry in India has been driven by certain key attributes like favourable government policies, low cost of production, skilled labour, burgeoning demand especially from the international markets and competitive environment. The Industry is however, vulnerable to certain concerns and challenges that are likely to erode its competitiveness. Sluggish growth in the end user industry and the imports due to duty reduction, currency volatility favorable transfer pricing by overseas parent company.

Free trade and Preferential Trade Agreements with unequal access to each others markets are all problems faced by the company. The survival of the company was dependent on the Parent Company.

Government policies with respect to Import and Free Trade Agreements adversely affected the company, wherein imports was cheaper and too many local players in the market lead to adverse pricing and there was no scope of price hike. Though they had a small export percentage, it was not sufficient to take the company through. Own manufacturing by some of the multinational companies who were the customers of compressors also posed an additional strain on the demand of the product of BPL Engineering.

a) Causes of Sickness

i. *External Causes*

a. *Entry of Competitors*

Competitors include Bharath electrics, Genus Power, JCT electronics, Zicom security and many other. The industry own fragmented nature and low entry barriers for international players have stepped up the situation. Besides, these factors pricing pressure faced by component manufacturers from OEM's(Original Equipment Manufacturers) and Raw material suppliers have also contributed substantially to rise in competition

b. *Rocketing Component Parts*

Rapid increase in material cost, primarily a result of increase in basic commodity prices like steel, aluminum and copper in recent times, are an area of great concern.Import of Compressors into India is another area where the Company is determined to remain vigilant, and pursue legally available means as and when necessary

c. *Turmoil in The Industry*

The year 2004- 2005 witnessed a lot of turmoil in the refrigerator industry with one of the key customers of the Company losing a lot of its contracting business as its major customers increased in-house production and did away with outsourcing

d. *Increase in The Cost of Input Materials*

Rapid increase in material cost, primarily a result of increase in basic commodity prices like steel, aluminium and copper in the 2006, was an area of grave concern as the compressor manufacturers have not been able to pass on a corresponding price increase to refrigerator manufacturers and were consequently forced to absorb a substantial part of this increase, resulting in further erosion of margins. Import of Compressors into India is another area where the Company is determined to remain vigilant, and pursue legally available means as and when necessary. Excess compressor making capacity of various players in the country and imports were a cause for concern. While these were instrumental in restraining the price increase on finished products, growing input costs was constantly eroding the margins in the business.

ii. *Internal Causes*

a. *Poor Accounts Receivable Management*

The company was able to sell what it produced but it lacked management in accounts receivables which had a drastic effect on its working capital. The company has poor accounts receivable management. The introduction of computerized systems for receivables management would make the system more effective. Thereby reducing losses due to non ability to fund obligations and also maintain inventory

b. *Lack of Adoption to Technology*

BPL Engineering needs to adopt to change in technology. Introduce new technology in its production systems as well as compressors.

Inability to service customers- BPL engineering has not been able to service its customers needs. Thus it is necessary to understand their requirements and change production accordingly.

c. *Inability to Pay Dividends*

As observed from the financial ratios of BPL engineering, one can see that the company's borrowings have been gradually increasing over the years but the ability to pay back the borrowed funds has deteriorated.Inability to pass on corresponding price increase to refrigerator manufacturers. Thereby are forced to absorb substantial part of this increase resulting in further erosion of margins.

d. *Lack of Focus on Core Competencies*

The company should focus on its core competencies and focus on those domains where they are performing well rather than operating in those areas where its profits are low. And also entering into new areas of operations when the current position is unstable.

V. Strategies for Turnaround

In 2001, "We will have no choice but go the way the world is going. If Nortel or Cisco could lay off its employees by thousands, we may have to resort to a similar measure to sustain growth and remain competitive," BPL chairman and managing director Ajit Nambiar told rediff.com in Bangalore in 2002 on the sidelines of a media briefing to launch Loewe TV models.

"We are working out a blueprint on how to go about it. It's part of the group's restructuring plan to be a lean and mean organisation. It could be a VRS or severance package. We are yet to work out the details," Nambiar stated.

Admitting that like any other manufacturing or electronic company, BPL too was affected by the prevailing economic downturn and uncertainty, Nambiar said sale of its consumer electronic goods during the current fiscal (2001-02) might not witness higher growth.

"It could be flat sales this year," Nambiar quipped, adding, "the situation might see a turnaround during the last quarter (Q4) of the current fiscal, thanks to a good monsoon, which will give fillip to our sales in the semi-urban and rural markets. The urban markets are nearly saturated."

Allaying fears over capacity under utilisation, Nambiar said the manufacturing facilities were operating to full capacities, especially in the home appliances' segment as several national and multinational companies have started outsourcing their requirements.

"For instance, we are the largest compressor makers in the country, supplying them for leading Korean and Japanese brands. Our BPL Engineering facility in Hyderabad is running to full capacity," Nambiar claimed.

During the preceding financial year (2000-01), the company posted a 15 per cent growth in the TV segment, selling 5.5 million units against 4.8 million in the previous fiscal year.

a) Financial Strategies

i. *Debt Restructuring*

In the year 2003, as part of its mega restructuring exercise, BPL engineering was looking for external commercial borrowing route to bring down the company's debt servicing costs. At that point the company's debts amounting to over Rs 800 crore. The finance team has seen another induction at the top with Mr. P.V.K. Sundaram, a senior partner with S.S. Kothari & Co, joining as Vice-President to head the finance restructuring efforts. BPL, which is servicing a debt burden in excess of Rs 750 crore, has been in talks with the ICICI Bank-led consortium to recast the debts at a favourable interest rate regime. ICICI's exposure to the company is estimated at over Rs. 400 crore.

b) Human Resources Strategies

i. *Reduction of Salaries*

While employees sources across BPL group companies like BPL Engineering and BPL Refrigeration confirmed in 2003 that salaries were being delayed, some said that certain higher level managers' payments were delayed even beyond 30 days. There is also talk of more lay-offs among employees in manufacturing units.

ii. *Downsizing of Employees*

The company, was never interested in looking at lay-offs, but the market has forced them to carry out a downsizing exercise. Thus, in 2003 the number of employees were forced to leave. BPL Ltd and its associate companies employ a total of 7,000 people (2200 in BPL Ltd alone). In 2001, the company had a total of 10,000 employees prior to the downsizing exercise in 2003.

iii. *Change in The Management*

In 2003, BPL has seen a spate of exits by top officials in recent months, including Mr R. Murali, Finance Director, Mr Ajay Baijal, COO, Entertainment Electronics Business Group, and Mr George Thomas, COO of Soft Energy Business Group. It has roped in new hands to steer the marketing of entertainment electronics and soft energy business groups. Mr Sharad Mathur, a former national sales head of ICICI Prudential Life Insurance, has been recruited as Vice-President in-charge of marketing for the Entertainment Electronics Business group. He is slated to join in the second week of April 2003. A former Coca-Cola official, Mr Samyukth Sridharan, has joined to head the company's sales and marketing of the Soft Energy Business Group.

c) Marketing Strategies

i. *Identifying Newer Markets: 2004*

The Rs 4,500 Godrej group may pick up a strategic stake in the BPL group's compressor manufacturing company BPL Engineering. The Godrej group is also planning to become BPL Engineering's customer. The compressors manufactured by BPL Engineering find application in the white goods industry. The Godrej group has a substantial presence in this sector through its range of refrigerators and washing machines.

For BPL Engineering, if the Godrej group goes ahead with the plan to pick up a stake, it will result in the infusion of much-needed funds. "We have been informed by senior BPL group executives that the Godrej group has expressed interest in picking up a stake in BPL Engineering," said a senior executive in a financial institution.

ii. *Hiving off the Business*

To get things in action, in the year 2002 ''The Balanced Scorecard'' based strategic framework devised by the company would be the key to the restructuring programme. "The framework will focus on two key aspects — identifying business units and streamlining the core component business (mainly manufacturing lines) that would feed other businesses, " said Mr Nambiar. The plan would not only look at bringing synergies among businesses and leveraging the group's direction in manufacturing, but also construct the manufacturing/component line into a returns churning endeavor.

The consumer business (under BPL Ltd) was rationalized into four key business groups, they include, entertainment electronics, home appliances, soft energy and medical systems. The component line of business will embrace BPL Display Devices Ltd, Electronic Research Ltd, BPL Automation Ltd and BPL Engineering Ltd.

VI. The Balanced Scorecard

The Balanced Scorecard is a structure that focuses on shareholder, customer, internal system and learning requirements of a business to create a system of linked objectives which collectively describe the strategy of an organisation and how that strategy can be achieved. The various aspects of Balanced scorecard adopted by BPL Limited and leading it to an impact on BPL Engineering Ltd are:

a) Financial Perspective

The financial perspective measures the results that the organization delivers to its revenues from new products, gross margin percentage, cost reduction in key areas, economic value added and return on investment. Having realized the importance of the financial measure, it was time for the business to fall back on its core strength, "manufacturing". Thus, BPL engineering limited started charting its plans based on a fiery growth map for its components business. The component business itself was estimated to touch the Rs 1000 crore mark in 2003. In 2003 the mix of component business was 50:50 of external revenues and in-house consumption. The company was looking at a double edged strategy to make this a business on its own. Wherein, this would see further consolidation of the manufacturing facilities.Which would in turn lead to enhanced profits and take the company out of red. In the year 2004 the company focused on cost reduction for the evident reason that it was in house and could be done by making the people understand the gravity of the situation the company was in and the economic situation existing in the country and across the world as a whole. The entire factory operations were revamped and redundant expenses arising at all levels were studied and the whole process was restructured. Creating understanding at all levels helped the company in reducing the costs . In addition, outsourcing of non core activities was done mostly to save on the cost. .Non Value added services were the foremost criterion where it was weighed appropriately to outsource and not the activities which required particular tasks to do it proficiently. Total Productivity Management (TPM), was implemented and the standard value creation was the key aim. Thus, cost reduction and better utilization of Men, Machine and Materials were the main mantra.

b) Customer Perspective

The customer perspective considers the business through the eyes of customers, measuring and rejecting upon customer satisfaction. The measures are:-market share, customer satisfaction, customer retention percentage, time taken to fulfill customers request.

In 2004, to be a key player in this industry, BPL engineering desired to go global and therefore they were targeting the clientele in Europe and the Asia Pacific market. With sturdy design and expansion support, the components group of BPLengineering limited had become a chief player in the world component market. In addition to this, BPL Engineering also became the principal manufacturer of compressors and motors for washing machines and refrigerators and targeted the 1-million compressor mark for the year 2005.

Unlocking worth in conditions of novel branding and product contribution to gather a bigger pie of the market became vital element of the overall expansion plan for the business. Revamping of the audio line of company was on cards in line with the innovative strategy. In 2004, the audio market was valued about Rs 1,000 crore in India, of which music systems accounted for 45 per cent by value, others 55 per cent with a escalation of about 10 per cent. BPL Limited was present across all segments in the audio sector with a total of 36 models. The company had followed a two-pronged strategy wherein, they entered the market with a latest set of products and targeted the core of the market, the Rs 6,000-Rs 12,000 segment and offer products with a higher configuration category contributing audio products besides Colour Televisions. The strategy is aimed at reducing close competitors in this group like Sony which was aggressive in price points of Rs 20,000 and above, Philips at about Rs 15,000 — Rs 18,000.

c) Internal Process

The internal perspective focuses attention on the performance of the key internal process which drives the business such as innovative process, operation service and post-sales services. The implementation of a technology backed image was also set to give the company a play in the 'innovation/smart' product image segment. The sanctioned assessment of the brand in 2004 was estimated to give a boost to the brand image. ''The plan for BPL is to clearly straddle all brands and segments through a system of sub-branding to address specific market niches, segments and price bands,'' according to BPL corporate brand management head Anand Narasimha. The BPL's brand design straddled a large variety of psychographic and demographic segments as component of its strategy of providing to a heterogeneous market. As a part of the brand campaign, BPL's brand building began with the BPL company brand or corporate brand encircling all product categories. BPL limited identified the component business, which is BPL Engineering Limited, as a core line which will feed other businesses as well as drive revenues independently. Component business set to crossed Rs 1000 crore mark the year 2005.This move also enabled the organisation to tap the contract manufacturing business.

d) Learning and Growth Perspective

Organisational competencies, technology enablers, employee education and skill level, employee turnover ratio, information system accessibility, employee proposal implemented. To make sure noteworthy synergies amongst business initiatives, BPL limited had set up a software development centre in the year 2004,which would focus on growth of embedded software and systems for consumer electronics and telecom industries, network solutions, call centre solutions, ERP solutions, etc. Besides, total mechanical and industrial design solutions for the consumer electronics industry. This intended at providing BPL limited a obvious opportunity to migrate to a business model that is based on hardware and services thus enhancing its value in future. ''BPL is already a backwardly integrated company with significant part of the value addition for the end product being created in house,'' says Mr Nambiar. When the entities strikes proper balance amongst the above four items the result will be optimum.

In the Research and Development activities, the Non – CFC technology Compressors and new model of the same. The replacement market has to be tapped fully and products have to be catered for the market. There is much scope for this market and has to be tapped fully. The Company focused on Product improvement and thereby, New washing machine motors were also developed as per customer requirements. New Hydrocarbon refrigerant based compressors are developed to meet the demands in the European markets. Development of 5.1 Home Theatre speakers and other accessories for the Pro Fx range of Amplifiers and Speakers were carried out. For the mobile phones, chargers, speakers and microphone components were developed.Ceiling Speakers for channel music system was developed and tested successfully.

Anticipated growth in domestic white goods markets would provide a large market size for the company. If the demand of the parent company's products goes up, naturally the company would also be seeing the light of the day, as it is directly proportional with the sale of the goods of the same.

A major fire broke out in the factory premises in Bangalore in Sep 2006, when a considerable amount of equipments were damaged beyond normal usage. Though Insurance claims were processed, it will no longer be able to continue its operations, and as an immediate measure, it decided to close its factory.

Mobilising of working capital was the key factor, wherein the sourcing of new working capital was a challenge. CDR (Corporate Debt Restructure Scheme) was secured with favourable terms for the company.

The reason for the company continuing to be in sicknes is that criteria the BPL Engg., was solely dependent on its Parent ie, the BPL Ltd. which had the Telecom (telecom instruments - landline, and mobile chargers, accessories, Television, and white goods. - compressors and motors and plastic injection moulding materials etc.

VII. Reasons for Further Failure

a) Adoption of Latest Technology

If the demand of the parent company's products goes up, naturally the company would also be seeing the light of the day, as it is directly proportional with the sale of the goods of the same.

So considering the above, it necessary that the company has to seek markets of the components on its own rather than being in the shadow of its parent company. It has to invest in Research and Development a good amount as the current investment is only 0.26% as of 2004, with respect to the total turnover. Cutting edge technology is the only way out for reaching out to European countries and other Export markets, as well as to capture the internal markets. In the Components manufacturing operations below the breakeven sales have resulted in the cash loss of the company.BPL Engineering needed to adopt to change in technology. Introduce new technology in its production systems as well as compressors. Re-designing of equipments and innovating new products with latest technology.

b) Inefficient Accounts Receivable Management

The company has poor accounts receivable management. The introduction of computerized systems for receivables management would make the system more effective. Thereby reducing losses due to non ability to fund obligations and also maintain inventory.

c) High Input Costs

Rapid increase in material cost, primarily a result of increase in basic commodity prices like steel, aluminium and copper in the 2006, was an area of grave concern as the compressor manufacturers have not been able to pass on a corresponding price increase to refrigerator manufacturers and were consequently forced to absorb a substantial part of this increase, resulting in further erosion of margins. Import of Compressors into India is another area where the Company is determined to remain vigilant, and pursue legally available means as and when necessary. Excess compressor making capacity in the country and imports were a cause for concern. While these were instrumental in restraining the price increase on finished products, growing input costs was constantly eroding the margins in the business.

Distorted duty structure as between input duties and import duties on components and finished goods, nascent export market in the West European countries and beyond, which are high on quality and energy efficiency which are light years ahead in technology, pose a problem.

Engaging the government on respective issues wherever necessary, enhancing internal cost competitiveness, upgrading product and technology where necessary, and addressing key export markets with renewed efforts. Anticipated growth in domestic white goods markets would provide a large market size for the company.

d) Overambitious Expansion

Since the group had an over Ambitious Expansion programe and it invested in Power and Telecom. Both these sectors are highly Technology driven and they have a long gestation period. So whatever cash they had derived in these verticals of white goods and domestic appliances were invested in these two sectors. So, there was not enough working capital and their debt restructuring programe was also not successful. And the threat from the korean products in the likes of LG and Samsung were also the cause.

So considering the BPL engg., they had a very less production for external companies other than the group companies. The ratio will be in the likes of 85 : 15. which will be 85 - Internal Group consumption and 15 External Supplies. including a miniscule percentage of export.

e) Delisting of Shares

However, in 2005, the parent companys shares were Delisted from the Delhi Stock Exchange Association Ltd(DSE) w.e.f. March 31, 2005.This further damaged the position of BPL Engineering Limited.

f) Non Availability of Operational Capital

The compressor division's production was marred due to non-availability of operational capital. Though manufacturing was started in the later period, it was less than the break-even quantities. Pressure in input prices of washing machine motors and competitively priced imports were making the business unviable. Though modifications and value engineering were carried out, it did not resulted in the desired level of meeting the price points of the motors that were imported.

Though the acceptance of the motors were there in the west – European and middle east market, the conversion into commercial orders could not be done due to the extended working capital cycle for exports and limited availability of operational capital. The Company's' operating businesses have been under severe pressure due to working capital constraints and have not been able to perform to their optimal level. Consequently, net sales and other income of the Company has significantly reduced, resulting in loss for the year 2007 and 2008.

g) Understand the Needs and Wants of the Customers

BPL engineering has not been able to service its customers needs. Thus it is necessary to understand their requirements and change production accordingly.

h) Pricing of Products Rightly

Proper Management of the men, material and money. It is necessary to price their products rightly and not to absorb a substantial portion of material and manufacturing price.

i) Efficient Handling of Manpower

Man power is very essential for efficient management. Thus HR Issues are sensitive and need to be handled with care.

VIII. Future Plan of Actions

The Company is continuing its efforts to address the working capital requirement and is hopeful of arranging the required funds during the current financial year 2009. With infusion of the additional funds and completion of restructuring exercise, coupled with certain new initiatives, the Company is hopeful of making optimum utilization of all resources available at its disposal.

Small Export Orders presently being serviced has to be developed into big business and expanded to various destinations. Improve energy efficiency and noise levels to match European market requirements. Development of new models for developing business from new segment opportunities. Indigenization of chemicals and oils in the Non CFC, to reduce materials and inventory costs. Cost reduction benefits to be achieved from alternate sourcing and design improvements and design modifications and value engineering. Import substitution was done in the Audio side in Speakers Amplifiers and other accessories.

Continuous improvements for increased efficiency and noise reduction to make Company's product competitive in National and International markets. Understanding the changing customer needs and upgrading the products to their desire. Develop an application engineering team to support the customers and strengthen Company's presence in the commercial refrigeration segment.

Sources: Annual reports, Business reports, Newspapers, Prowess database and interactions with the company personnel.

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Facility Quality Relation to Learning Efficacy in Mafraq Governerate

By Prof. Majd Al-Homoud, Dr. Marie Bani Khalid & Dr. Salem Al-Oun
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Abstract - Human resources development in the educational environment is becoming very critical to be able to provide quality and competitive graduates to the market. Education facility is the setting where interaction between students and teachers takes place. Facility quality affects students' performance. The study was conducted using interviews and surveys to elecit data from 229 administers located at three directorates of the North Badia region. Subjects were selected using stratified random sampling. Results indicated that overall perceived performance was associated with the following entities of facility quality: natural ventilation, classroom arrangement flexibility, attention to furniture and equipment. Further, the following entities of facility quality were positively correlated with directorates of the North Badia Regions: additional lighting sources, natural ventilation, presence of rest rooms, and school size; and were negatively correlated with indoor sports facility.

Keywords : students' performance, facility, quality, physical, built, environment, higher education, impact, inputs, outputs, market, mafraq, jordan.

GJMBR-A Classification : JEL Code: D83

FACILITYQUALITYRELATIONTOLEARNINGEFFICACYINMAFRAQGOVERNERATE

Strictly as per the compliance and regulations of:

Facility Quality Relation to Learning Efficacy in Mafraq Governerate

Prof. Majd Al-Homoud [α], Dr. Marie Bani Khalid [σ] & Dr. Salem Al-Oun [ρ]

Abstract - Education facility is the setting where interaction between students and teachers takes place. Facility quality affects learning efficacy. The study was conducted using interviews and surveys to elecit data from 229 administers located at three directorates of Mafraq Governerate. Subjects were selected using stratified random sampling. Results indicated that learning efficacy was associated with the following entities of facility quality: natural ventilation, classroom arrangement flexibility, attention to furniture and equipment. Further, the following entities of facility quality were positively correlated with directorates of Mafraq Governerate: additional lighting sources, natural ventilation, presence of rest rooms, and school size; and were negatively correlated with indoor sports facility. Finally, the following entities of facility quality were positively correlated to village distance from Mafraq City: natural ventilation, existence of outdoor sports facility, food facility, rest rooms, and number of students in classroom. Administrators should keep in mind that although the education environment is complicated, the different aspects of services are inter-related, and they need to take a holistic view about the facility. Policy makers should realize the importance of facility's physical capacity in influencing students achievemnets.

Keywords : learning efficacy, facility, quality, physical, built, environment, education, impact, inputs, outputs, market, mafraq, jordan.

I. Introduction

There is evidence that situational (environmental) positions and attitude of students and teachers' towards school affect students' performance (Gump, 1987; Weinstein, 1985; Totusek & Staton-Spicer, 1982; Koneya, 1976; Brooks & Rebeta, 1991). Further, interactions between environmental factors and personal characteristics of students do exhibit significant effects on the academic performance of students (Lewin, 1943). No systematic attempts have been made to link the performance of schools to student results, to put in place effective monitoring mechanisms, or to make information about school performance available to parents and students (Galal, 2008). Educational environment is the setting where interaction between students and teachers takes place. Basic physical requirements of the school facility like minimum standards for classroom size, acoustics, lighting, heating and air conditioning, in addition to pedagogical, psychological and social variables act together as a whole in shaping the context within which learning takes place (Lackney, 1999).

Statistics of 2004 show lack of specialized teachers in various majors in Mafraq Governerate of Jordan. In addition, applied science majors are not established in schools at the dispersed human settlements from Mafraq City.

Mafraq Governorate area is about 26435 Square kilometers, which represents about 29.6% out of Jordan's total area, and the second largest governorate after Ma'an. Mafraq Governorate population reached 239,000 and represents about 4.6% of Jordan's total population of 2001, of which 47.6% are females and 52.4% of which are males; 42% are less than 15 years old compared to Jordan's rate, which is 39%; and 33.1% urbanite and 66.9% town residents. Population density is about 9-11 per one square kilometers compared to the rest of Jordan, which is 58 per square kilometer. The governorate has four regions that include (Department of Statistics, 2001): (1) Mafraq center with 104,000 with 3 districts and 72 settlements of which 25 increases over 1000 people; (2) Northwest Badia and its center is al Al Al-Bayt University and have three districts with 71,000 population and 42 settlements eight of which increases over 1000 people; (3) Northeast Badia have four districts with 51,000 population and 67 settlements with 10 settlements that have more than 1000 population; and (4) Ruwaished with population of 17,000 and twelve settlements, four of which is populated with more than 1000 (Department of Statistics, 2002).

Being the first of its kind, this study emphasizes the role of physical environment of educational facility in providing qualitative and competitive graduates, which impacts socio-economics of the local community. This research is significant by being a model that focuses on development of education facility within economic constraints to sustain resources independently from central governmental support. The researchers are expected to gain more expertise in the managment and development of physical educational facility. Goals of the study are to diagnosing the relevance of the physical facility to education output that will make Mafraq Governorate dependent on its own human resources. The study outcomes will provide a set of guidelines towards making educational facility (physically) more efficient.

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II. Literature Review and Theory

a) *Teaching Environment Effect on Learning Efficacy*

A study by Tam and Cheng (1995; 1994) conceptualized quality of school teaching environment based upon a multi-perspective approach. It measured the internal social environment of the school organization and its relations to the performance of teachers and students. School environment and performance of students had theoretical and practical implications. There were six integrated school environment factors that emerged to reflect the learning/-teaching environment: strength of leadership, staff frustration, positive classroom climate, caring and support to students (a combination of three environment variables: esprit, intimacy, and student-centeredness), formalization, and pupil control (pupil control ideology minus organizational ideology) (Cheng, 1993; Ming, 1994; Ming & Cheong, 1995). Leadership behavior of the principal measured by the integration of the five aspects: instructional (educational), structural (hierarchy of authority, hindrance (difficulty and obstruction) as signs of bureaucratization of a school, and participative decision), human resource, political, and cultural (symbolic) (Sergiovanni; 1984; Bush, 1986; Bolman & Deal, 1991; Cheng, 1993). Further factors included: school context, which is measured by age and size of the school; personal characteristics of students measured by age and gender; personal characteristics of teachers measured by average teacher teaching experience (teaching age), age of teacher, and gender of teacher. Additionally, teacher performance was measured by efficacy and time-use at the individual level. Students' performance was measured by learning efficacy (efficiency). Students' competition was as a function of affiliation and involvement, better social relationship among students increase the students' engagement in study (Ming, 1994; Ming and Cheong, 1995).

b) *Facility Quality and Learning Efficacy*

School facility are of critical importance to teaching and learning environment (Lackney, 1999). Johnson (1990a) indicated that quality of the learning environment affects teacher behavior and teacher attitudes towards teaching continuity. The physical facility is an undeniably integral part of the ecological context for learning, and has a positive influence on the bottom-line indicators of quality in education (Lackney, 1999). Physical conditions of the facility include classroom environments and school environment.

i. *Classroom Environment*

Types of education facility include classrooms, laboratories, lecture halls, and other services. Usually classroom environments have 20-35 students under the control of a single teacher. Classroom environments include class arrangement, size, natural lighting, optimal thermal conditions, and indoor air quality as follows:

a. *Class Arrangement*

Several studies indicated that classroom arrangements affect student performance, especially in relation to their distance from the teacher (Griffith, 1921; Snow, 2002); it affects their grades (Becker, Sommer, Bee, and Oxley, 1973; Holliman & Anderson, 1986; Levine, O'Neal, Garwood, & McDonald, 1980), absences (Stires, 1980), participation (Sommer, 1967), and attention (Schwebel & Cherlin, 1972). Further, seating arrangements affect visual and verbal contacts with teacher and, therefore, affect participation but not necessarily overall performance (Adams & Biddle, 1970).

b. *Class Size*

Class size points directly to a social and physical link to achievement (Achilles, 1992; Finn & Achilles, 1990). Children in smaller classes (13-17 per room) outperform those in regular-sized classes (22-25 per room). An increased density can induce stress in children thereby increasing aggressive behavior and distraction in younger children (Loo, 1976). Students take more of the responsibility for their own learning when classes are smaller; learning activities become more frequently individualized (Duke & Perry, 1978).

c. *Lighting*

Natural lighting and windows affect students' performance (Brooks & Rebeta, 1991). Students had better achievement and behaviors in classrooms with more light (Rovner, 1982; Kleiber, 1973; Mayron et al., 1974; Dunn, Dunn & Price, 1985; Ott, 1976).

d. *Thermal Conditions*

Thermal comfort, influence task performance, attention spans and levels of discomfort (McGuffy, 1982). Reading speed and comprehension and mathematical skills operations such as multiplication, addition and factoring were adversely affected by temperatures above 74 F degrees (Harner, 1974).

e. *Indoor Air Quality*

Thermal tightening of buildings for energy conservation causes a variety of pathogenic factors in children in so called 'sick' school buildings. These factors may be affecting not only performance but the overall physical health of children, as they exhibit clear signs of sensory irritation, skin rashes, and mental fatigue that potentially decrease the ability of students to perform (Evans, Kliewer, & Martin, 1991).

ii. *School Environment*

a. *Noise and Location of Schools*

Noise may decrease teaching time by forcing teachers to continuously pause or by making it difficult for the student and teacher to hear one another (Crook and Langdon, 1974). Noise negatively influence children's information processing, personal control, and arousal level (Cohen & Weinstein, 1981; Evans, Kliewer, & Martin, 1991; Berglund & Lindvall, 1986; Cohen, Evans, Stokols, & Krantz, 1986).

b. *Building Condition, Building Life-Cycle, and Facility Management*

A study by educational building conditions were hampering student performance, and estimated that improved facilities could lead to a 5.5% to 11% improvement on standardized tests (Edwards, 1991; Lackney, 1996).

c. *Schools Size*

Small schools benefit students socially and academically, while smaller school buildings consume less energy. The use of school facilities can be shared with a variety of community organizations fostering meaningful partnerships and engagement, as well as, opportunities for children to walk and bike as added health benefit (Lackney, 1999). On average, research indicates that an effective size for an elementary school is in the range of 300-400 students and that 400-800 students is appropriate for a secondary school (7-8) (Cotton, 1996). School size shows effect on the following:

- Quality of the Curriculum and Cost-Effectiveness (Howley 1994, 1996; Raze, 1985; Robertson, 1995; Rogers 1987; Rutter, 1988; Walberg, 1992).
- Academic Achievement (Bates, 1993; Burke, 1987; Eberts, Kehoe, & Stone, 1982; Eichenstein, 1994; Fowler, 1992; Haller, Monk, & Tien, 1993; Stockard & Mayberry, 1992; Summers & Wolfe, 1977; Walberg, 1992).
- Student Attitudes (Aptekar, 1983; Bates, 1993).
- Social Behavior (Duke and Perry, 1978; Garbarino, 1980; Gottfredson, 1985; Stockard and Mayberry, 1992).
- Extracurricular Participation (Barker & Gump, 1964; Berlin & Cienkus, 1989; Burke, 1987; Cawelti, 1993; Howley, 1996; Rutter, 1988; Schoggen & Schoggen, 1988; Stockard & Mayberry, 1992; Walberg, 1992).
- Attendance (Bates, 1993; Fowler, 1995; Gregory, 1992; Gregory & Smith, 1987; Howley, 1994; Smith & DeYoung, 1988; McGanney, Mei, & Rosenblum, 1989; Rutter, 1988; Walberg, 1992).
- Dropouts (Fetler, 1989; Gregory, 1992; Jewell 1989; Pittman & Haughwout, 1987; Rogers, 1987; Smith & DeYoung, 1988; Stockard & Mayberry, 1992; Toenjes, 1989; Walberg, 1992).
- Belongingness/Alienation (Burke, 1987; Campbell et al., 1981; Fowler & Walberg, 1991; Gregory, 1992; Howley, 1994; Pittman and Haughwout, 1987; Stolp, 1995; Walberg, 1992).
- Self-Concept (Grabe, 1981, Rutter, 1988; Stockard & Mayberry, 1992).
- Interpersonal Relations (Bates, 1993; Burke, 1987; Fowler & Walberg, 1991; Gottfredson, 1985; Gregory & Smith, 1982; 1983; Smith, Gregory, & Pugh, 1981; Kershaw & Blank, 1993; Pittman & Haughwout, 1987; Rutter, 1988; Smith & DeYoung, 1988; Stockard & Mayberry, 1992).
- Teacher Attitudes (Eberts, Kehoe, & Stone, 1982; Gottfredson, 1985; Gregory, 1992; Johnson, 1990b; Stockard & Mayberry, 1992).
- College Entry (Burke, 1987; Fowler, 1992; Jewell, 1989; Swanson, 1988).

III. Research Methods

The hypotheses of the study were investigated based on field research using interviews and surveys. One leader for two teams of eight assistants conducted the field research. Surveys were conducted by interviewing a sample of schools administers from the four directorates in Mafraq Governerate (Mafraq center, Northwest Badia, and Northeast Badia) representing the eighteen municipalities that included a target population of all elementary and secondary schools. Interviews took place inside the school building in the municipal office for the whole sample.

a) *Hypotheses of the Study*

Based on the above reviewed background, it is hypothesized that:

i. Schools located in the three different directorates offer quality and quantity in the educational facility physically differently, which impacts learning efficacy.

ii. The further schools are located from the central city (Mafraq), the less they offer quality and quantity in the educational facility physically, which impacts learning efficacy at the governorate level.

iii. Students lack competitiveness because they lack preparedness at the school level.

  a. Lack of preparedness is affected by lack of capacity of the physical entity of the school environment.

  b. Lack of preparedness is affected by lack of capacity of the physical entity of the classroom environment.

b) *Sampling Technique*

A stratified proportional random sample was used. Stratification was for the eighteen municipalities. The 18 municipalities (covering about 100 villages) included: (1) Greater Mafraq, (2) New Bal'ama, (3) Zaa'tri and Mansheyya, (4) Hausha; (5) Baseleyyah; (6) AsSarhan; (7) Sabha and Dafyanah; (8) Safawi; (9) Umm Alquttayn and Makeyftah; (10) Bani hashem; (11) New Rhab; (12) Mansheyyat Bani Hasan; (13) New Deyr Alkahf; (14) New Rweyshid: (15) AsSalhiyyah and Nayfah; (16) Alhusseyn bin Abdullah; (17) Khaldeyyah; (18) New Umm Aljmal.

The total number of sample frame is 337 schools of which 231 for elementary education, and 96 secondary, 8 vocational and academic, and two vocational. The proportion is suggested to be about 60%-70% of the schools distributed over the three directorates and covering all the municipalities. So from each municipality only two-thirds of the total available schools were suggested to be interviewed from both female and male elementary and secondary schools. Randomization used the list of schools in each municipality which is alphabetically ordered. Selection was assigned randomly as every other school in the list until the proportion of 60-70% of the schools is achieved from each of the female and male elementary and secondary schools list. Final sample proportion was 67.9% with a size of 229 schools' administers. Response rate was 67.3% in Mafraq center, 42.3% in Northeast Badia, and 51.5% in Northwest Badia.

c) Questionnaire Instrument

The questionnaire included the following sections:

i. *Human Resources Capacity*

a. *Quantity of human resources at the schools level:* (1) School capacity; (2) Available levels of study - distribution across gender and pass and fail; (3) Available fields of study; (4) High school education distribution across gender, fields of study, and pass and fail; and (5) Available teachers.

b. *Quality of human resources at the schools level:* (1) Perception of available teaching pedagogy; (2) Directing students to choose the track they may need by providing qualified teacher who provides supervision and guidance to students; and (3) Obstacles of concentration at the Ministry of Education Level; (4) Evaluating the impact of implemented development program provided by the Ministry of Education and Ministry of Higher Educations on the local community.

ii. *Educational Facility's Physical Entities, Reflected in Quality and Quantity*

a. *Physical entity of classroom environment:* classroom size, classroom arrangements, lighting, thermal conditions, and air quality.

b. *Physical entity of school environment – infrastructure and services:* school size, noise location, building age.

iii. *Teaching-Organizational, Personality of the Teacher and the Student, and other Variables*

a. *Teaching-organizational entity includes:* (1) Strength of leadership; (2) staff frustration; (3) positive classroom environment; (4) caring and support to students (esprit, intimacy, and student-centeredness); (5) formalization; and (6) students control (student control ideology-organizational ideology).

b. *Other Variables:* (1) student attitude towards the school, student affiliation and involvement, and students' competition; (2) teacher attitude and teacher performance; and (3) Availability of Services.

iv. Learning efficacy - perceived attainment test scores of average annual in all subjects including: Science, Math, Physics, Chemistry, Biology, Geology, Computer Science, Arabic, & English.

IV. Results and Analysis

a) Descriptive Statistics

i. *Demographic Information of Interviewed Subjects*

Interviewed schools municipals were distributed over Mafraq Governerate. Location of interviewed schools from the center of the main city of Mafraq ranged from the city itself to villages located 218 km away. The average distance from Mafraq city of the sampled schools was about 29 km. Interviewed subjects were about 45% males and 55% females. Their education level ranged from college to Ph.D. and distributed as follows: Ph.D. (3.5%), Masters (17.5%), Diploma (56.3%), Bachelor (13.5%), and College (8.7%), see Table 1.

Table 1 : Frequencies Distribution of Major Characteristics of Interviewed Municipals of Schools

	Frequency	Percent	Cumulative Percent
Gender			
Male	104	45.4	45.4
Female	125	54.6	100.0
Educational Level			
Ph.D.	8	3.5	3.5
M.A./M.Sc.	40	17.5	21.0
Diploma	129	56.3	77.3
Bachelor	31	13.5	90.8
College	20	8.7	99.6
Other	1	.4	100.0
Training Workshops			
Management	25	10.9	10.9
Pedagogy	6	2.6	13.5
Computer Skills	13	5.7	19.2
Specialized	1	.4	19.7
Other	2	.9	20.5
None	12	5.2	25.8
More than One	170	74.2	100.0
Years of Service			
<5 Yrs	76	33.2	33.2
6-10 Yrs	57	24.9	58.1
11-15 Yrs	26	11.4	69.4
16-20 Yrs	29	12.7	82.1
21-15 Yrs	23	10.0	92.1
>25 Yrs	18	7.8	100.0
Place of Residence			
Same Village/City	127	55.5	55.5
Another Village	93	40.6	96.1
Another City	9	3.9	100.0
Total	**229**	**100.0**	**100.0**

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ii. *Descriptive Statistics of the Major Study Variables*

a. *Capacity of Physical Entity of Education Facility*

1) *Classroom Environment*

In terms of classroom area, it ranged from 4-48 square meters. However, most of the sample (73.7%) has classroom area of 10-29 square meters. In regards to classroom size in terms of students' numbers, the numbers of students ranged from 2 to 50 students, with an average size of about 21 students, see Table 2 and Figure 1.

About half of the sampled schools (52.8%) have classroom size of less than 20 students. In regards to proper classroom size in terms of students number, most of the sample agreed on its appropriateness (71.2%). Classroom shapes were square, rectangular, and irregular. However, the most occurring shape is rectangular (58.5%) and the least is irregular (2.6%). In terms of classroom seats arrangement, most of the sample (85.6%) agreed on its appropriateness. Also, about 54.2% of the sample agreed on flexibility of classroom furniture arrangement. Further, most of the sample (72.5%) considered the attention to furniture and equipment that makes teachers store their tools appropriate. In terms of natural lighting sources, most of the sample agreed on its availability (90.8%). Number of windows in classrooms ranged from 1-8, the most frequent occurrence of number of windows is two (48.5%).

Table 2 : Characteristics of Educational Facility's Physical Entities

Variables	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Classroom Environment							
Classroom Size (Number of Students)	229	48	2	50	21.20	8.012	64.185
Classroom Area	229	44	4	48	22.95	7.246	52.506
Classroom Shape	229	2	1	3	1.64	.534	.285
Classroom Number of Windows	229	8	0	8	2.69	1.292	1.669
Classroom Additional Lighting Source	229	1	1	2	1.21	.405	.164
Classroom Heat Control	229	1	1	2	1.53	.500	.250
Classroom Cooling Control	229	2	1	3	1.74	.448	.201
Classroom Natural Ventilation	229	1	1	2	1.13	.333	.111
School Environment							
Computer Labs	229	1	1	2	1.22	.417	.174
Science Labs	229	1	1	2	1.58	.495	.245
Art Studios	229	1	1	2	1.86	.343	.118
Library	229	1	1	2	1.50	.501	.251
Indoor Sports Facility	229	1	1	2	1.88	.323	.104
Outdoor Sports Facility	229	1	1	2	1.72	.450	.202
Food Facility	229	1	1	2	1.31	.464	.215
Praying Facility	229	1	1	2	1.76	.428	.183
School Fencing	229	1	1	2	1.34	.476	.227
School Gate	229	1	1	2	1.36	.482	.232
Rest Rooms	229	1	1	2	1.08	.276	.076
School Size (Students Numbers)	229	565	10	575	179.53	116.026	13462.049
School Area	229	9443	54	9497	1637.44	2044.001	4177938.695

In terms of additional lighting sources, about two-thirds of the sample (79.5%) agreed on its presence. Thermal conditions: only about half the sample agreed on heat availability (47.2%), and about one-quarter (26.2%) agreed on cooling control availability. In regards to air quality and natural ventilation, most of the sample (87.3%) agreed on its availability in classrooms, see Table 3.

Table 3 : Distribution of the Dichotomous Sub-Variables of Educational Facility's Physical Entities

	Frequency	Valid Percent	Cumulative Percent
Classroom Environment			
Classroom Additional Lighting Source			
Yes	182	79.5	79.5
No	47	20.5	100.0
Classroom Heat Control			
Yes	108	47.2	47.2
No	121	52.8	100.0
Classroom Cooling Control			
Yes	60	26.2	26.2
No	169	73.8	99.6
Classroom Natural Ventilation			
Yes	200	87.3	87.3
No	29	12.7	100.0
School Environment			
Computer Labs			
Yes	178	77.7	77.7
No	51	22.3	100.0
Science Labs			
Yes	97	42.4	42.4
No	132	57.6	100.0
Art Studios			
Yes	31	13.5	13.5
No	198	86.5	100.0
Library			
Yes	115	50.2	50.2
No	114	49.8	100.0
Indoor Sports Facility			
Yes	27	11.8	11.8
No	202	88.2	100.0
Outdoor Sports Facility			
Yes	64	27.9	27.9
No	165	72.1	100.0
Food Facility			
Yes	158	69.0	69.0
No	71	31.0	100.0
Praying Facility			
Yes	55	24.0	24.0
No	174	76.0	100.0
School Fencing			
Yes	150	65.5	65.5
No	79	34.5	100.0
School Gate			
Yes	146	63.8	63.8
No	83	36.2	100.0
Rest Rooms			
Yes	210	91.7	91.7
No	19	8.3	100.0
Total	229	100.0	100.0

Figure 1 : Classroom Environment

2) School Environment

In terms of services, about 77.7% of the schools have computer labs, and only 42.4% have science labs, and 13.5% have art studios. On the other side, about half the sample have libraries (50.2%) school library. Further, only 11.8% of the schools have indoor sports facilities, and 27.9% have outdoor sports facilities. In addition, about two-thirds (69%) have food facility, and only 24% have praying facility. About two-thirds (65.5%) have school fencing, and about two-thirds (63.8%) have school gates, see Table 3. Most of the schools (91.7) have rest rooms, see Table 3.

School size measured by students' numbers ranged from schools that have less than 50 students (6.2%) to schools that have 500-757 students (3.2% of the sample). However, 61.1% of the schools have less than 150 students, and the most occurring school size is 150-200 students (40.7%). School area ranged from 54-10000 square meters, with the most occurring area of 200-500 square meters (39.9%). About half the sample (48%) has area of less than 500 square meters, see Table 4. Further, 79% of the sample agreed on the schools being located in a quite zone and away from noise. About half of the sample (54.6%) agreed that their schools are well maintained.

Table 4 : Distribution of the Continuous Sub-Variables of Educational Facility's Physical Entities

Variables	Frequency	Percent	Cumulative Percent
Classroom Environment			
Classroom Area			
Less than 10	8	3.4	3.5
More than 10 & less than 30	169	73.7	77.3
30 and more / less than 48	52	22.5	100
Classroom Size (Students Numbers)			
Less than 10	22	9.5	9.6
11 to 20	99	43.2	52.8
21 to 30	85	37.2	90
31 to 40	21	9.1	99.1
45	1	0.4	99.6
50	1	0.4	100
School Environment			
School Size (Students Numbers)			
Less than 50	15	6.2	6.6
50 to less than 100	31	12.9	20.1
100 to less than 150	94	40.7	61.1
150 to less than 200	20	8.3	69.9
200 to less than 250	20	8.5	78.6
250 to less than 300	15	6.3	85.2
300 to less than 400	17	7.1	92.6
400 to less than 500	9	3.7	96.5
500-575	8	3.2	100
School Area			
54 to less than 100	3	1.2	1.3
100 to less than 200	15	6.5	7.9
200 to less than 500	92	39.9	48
500 to less than 1000	22	9.6	57.6
1000 to less than 2000	30	13	70.7
2000 to less than 3000	11	4.7	75.5
3000 to less than 4000	13	5.6	81.2
4000 to less than 5000	15	6.5	87.8
5000 to less than 6000	17	7.3	95.2
6000 to less than 10000	11	4.7	100
Total	229	100	100

b. *Human Resources Capacity – distribution across gender, levels of education, number of sections and students, and pass and fail: The distribution of gender across the sampled schools was 41.05% males, 19.65% females, and 39.30% mixed genders. Education level across the sampled schools included 57.64% elementary, 10.48% secondary, and 31.88% both levels.*

c. *Teaching-Organizational Entity, Quality of Education at the School Level & Other Variables*

1) Teaching-Organizational Entity

Instructional capacity was assessed with an average of 4 and a tendency of strong agreement; structural agreement was also with an average of 4.1 and a tendency of strong agreement; staff frustration has a tendency of disproval with an average of 2.6; positive classroom environment has a slight tendency of approval with an average of 3.7; caring and support for students has a slight tendency of approval with an average of 4; formalization has a tendency of strong agreement with an average of 4.2; and students control has a strong agreement with an average of 4.2, see Table 5.

2) Quality of Education at the School Level

Perception of existing pedagogy has a slight tendency of approval with an average of 3.8; directing students to choose the right stream also received slight approval with an average of 3.5; and obstacles by the Ministry of Education concentration has a tendency of agreement with an average of 4.0, see Table 5.

3) Other Variables

Included students attitude with a tendency of slight agreement (M=3.8); teachers attitude with a tendency of agreement (M=3.98); available school services has a slight agreement with M=3.4; and perceived students' performance has a tendency of slight agreement M=3.1, see Table 5.

Table 5 : Descriptive Statistics about Independent Variables – Organizational Entity & Quality of Education & Other Variables

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Teaching-Organizational Entity							
Instructional	229	2.40	2.60	5.00	4.0170	.38732	.150
Structural	229	3.67	1.33	5.00	4.1317	.50557	.256
Staff Frustration	229	4.00	1.00	5.00	2.6288	.92454	.855
Positive Classroom Environment	229	4.00	1.00	5.00	3.7810	.77435	.600
Caring & Support for Students	229	4.00	1.00	5.00	3.9597	.65705	.432
Formalization	229	3.50	1.50	5.00	4.2329	.51498	.265
Students Control	229	2.50	2.50	5.00	4.2205	.44125	.195
Quality of Education							
Perception of Existing Pedagogy	229	3.50	1.50	5.00	3.8443	.61237	.375
Directing Students Track	229	4.00	1.00	5.00	3.4716	.98356	.967
Obstacles of Ministry Concentration	229	4.00	1.00	5.00	3.9502	.76167	.580
Other Variables							
Students Attitude	229	2.88	2.13	5.00	3.7718	.53898	.291
Teachers Attitude	229	3.33	1.67	5.00	3.9816	.54591	.298
Available School Services	229	3.89	1.00	4.89	3.3557	.66320	.440
Learning Efficacy	229	4.00	1.00	5.00	3.1009	.67052	.450

d. Learning Efficacy - Attainment Test Scores of Average Annual in all Subjects such as: Science, Math, Physics, Chemistry, Biology, Geology, Computer Science, Arabic, and English.

Learning efficacy averaged 3.1 with agreement. Meanwhile, perceived students' performance in all subjects were as follows, see Table 6:

- Science ranged from 1-5 with M= 3.2.
- Math ranged from 1-5 with M= 2.9.
- Physics ranged from 1-5 with M= 2.7.
- Chemistry ranged from 1-5 with M= 2.9.
- Biology ranged from 1-5 with M= 3.1.
- Geology ranged from 1-5 with M= 3.2.
- Computer Science ranged from 1-5 with M= 3.4.
- Arabic ranged from 1-5 with M= 3.7.
- English ranged from 1-5 with M= 2.9.

Table 6 : Descriptive Statistics about Dependent Variable – Learning Efficacy

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Overall Performance	229				3.1009	.67052	
High Performance in Science	229	4	1	5	3.23	1.023	1.047
High Performance in Math	229	4	1	5	2.85	1.066	1.136
High Performance in Physics	229	4	1	5	2.71	.896	.803
High Performance in Chemistry	229	4	1	5	2.87	.918	.842
High Performance in Biology	229	4	1	5	3.13	.923	.851
High Performance in Geology	229	4	1	5	3.18	.907	.823
High Performance in Computer Science	229	4	1	5	3.39	.854	.730
High Performance in Arabic	229	4	1	5	3.67	.835	.696
High Performance in English	229	4	1	5	2.88	1.077	1.160

b) Relationship Between Physical Entity of the Facility over Learning Efficacy & other Variables

In order to test the hypothesis that lack of preparedness is affected by capacity of the physical entity of the Classroom and School Environments in the three directorates of Mafraq Governerate and in the different villages around the governerate, the following statistical Multi-level Analysis were carried out.

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i. *Correlation Tests - Physical entity of the Classroom and School Environments with Directorates and Village Distance*

a. *Directorates*

Table 7 shows a positive correlation of across the three directorates of Mafraq Governerate with attributes of additional lighting sources, natural ventilation, presence of rest rooms, and school size; and negative correlation with indoor sports facility.

Table 7 : Pearson Correlations – Directorates over Capacity of Physical Facility

Variable	Pearson Correlation North Badia Regions
Additional Lighting Source	.172**
Heat Control	.047
Cooling Control	.005
Natural Ventilation	.134*
Computer Labs	.101
Science Labs	-.069
Art Studios	-.060
Library	.076
Indoor Sports Facility	-.164*
Outdoor Sports Facility	-.015
Praying Facility	-.035
Food Facility	.083
School Fencing	.019
School Gate	.047
Rest Rooms	.131*
Proper Classroom Size	-.127
Classroom Size	-.024
Number of Students in Classroom	.118
Classroom Shape	-.004
Natural Classroom Lighting	.011
Number of Classroom Windows	.070
Seats Arrangement	.030
Classroom Arrangement Flexibility	-.093
Attention to Furniture & Equipment	-.003
School Size (Students Numbers)	.288**
School Area	.210**
School Quite Location	.102
School Maintenance	-.010

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

b. *Village Distance*

Table 8 shows a positive correlation across the different villages in Mafraq Governerate with attributes of natural ventilation, existence of outdoor sports facility, food facility, and rest rooms, and number of students in classroom.

Table 8 : Pearson Correlation - Village Distance from Mafraq City over Capacity of Physical Facility

Variable	Pearson Correlation North Badia Regions
Additional Lighting Source	.172**
Heat Control	.047
Cooling Control	.005
Natural Ventilation	.134*
Computer Labs	.101
Science Labs	-.069
Art Studios	-.060
Library	.076
Indoor Sports Facility	-.164*
Outdoor Sports Facility	-.015
Praying Facility	-.035
Food Facility	.083
School Fencing	.019
School Gate	.047
Rest Rooms	.131*
Proper Classroom Size	-.127
Classroom Size	-.024
Number of Students in Classroom	.118
Classroom Shape	-.004
Natural Classroom Lighting	.011
Number of Classroom Windows	.070
Seats Arrangement	.030
Classroom Arrangement Flexibility	-.093
Attention to Furniture & Equipment	-.003
School Size (Students Numbers)	.288**
School Area	.210**
School Quite Location	.102
School Maintenance	-.010

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

ii. *ANOVA Test – Learning Efficacy over Physical Entity of Classroom and School Environments*

Further analysis was carried out to investigate the effect of the physical entity of the classroom and school facility on learning efficacy using ANOVA Test of Variance. The test indicated significant effect on natural ventilation, existence of computer labs, science labs, art studios, indoor sports facilities, rest rooms, number of classroom windows, and school area, see Table 9.

Table 9 : ANOVA Test - Learning Efficacy over Capacity of Physical Facility

Variable	Sum of Squares	Df	Mean Square	F	Sig.
Additional Lighting Source	4.511	29	.156	.943	.555
Heat Control	9.975	29	.344	1.453	.072
Cooling Control	5.750	29	.198	.985	.493
Natural Ventilation	6.425	29	.222	2.333	.000
Computer Labs	9.058	29	.312	2.032	.002
Science Labs	12.788	29	.441	2.035	.002
Art Studios	5.018	29	.173	1.581	.037
Library	9.376	29	.323	1.344	.124
Indoor Sports Facility	4.762	29	.164	1.715	.017
Outdoor Sports Facility	7.072	29	.244	1.243	.194
Praying Facility	4.399	29	.152	.807	.748
Food Facility	7.875	29	.272	1.314	.142
School Fencing	6.802	29	.235	1.038	.419
School Gate	7.976	29	.275	1.218	.216
Rest Rooms	3.986	29	.137	2.036	.002
Proper Classroom Size	35.661	29	1.230	.834	.712
Classroom Size	1972.511	29	68.018	1.354	.118
Number of Students in Classroom	2632.487	29	90.775	1.505	.055
Classroom Shape	8.447	29	.291	1.027	.435
Natural Classroom Lighting	27.203	29	.938	1.123	.313
Number of Classroom Windows	74.168	29	2.558	1.661	.024
Seats Arrangement	37.420	29	1.290	1.228	.207
Classroom Arrangement Flexibility	64.973	29	2.240	1.152	.281
Attention to Furniture & Equipment	44.662	29	1.540	1.042	.414
School Size (Students Numbers)	456446.120	29	15739.521	1.199	.234
School Area	1.988E8	29	6854857.856	1.810	.010
School Quite Location	182.842	29	6.305	.713	.859
School Maintenance	58.845	29	2.029	1.140	.294

iii. *Regression Model for Significant Attributes of Physical Entity of Classroom and School Environments with Learning Efficacy*

The hypothesis that Learning Efficacy is affected by a set of physical entities of classroom and school facility showed significance in Table 10.

Table 10 : Multivariate Tests Model - Learning Efficacy over Significant Variables of Capacity of Physical Facility Effect

Effect Wilks' Lambda	Value	F	Hypothesis df	Error df	Sig.
Intercept	.015	1220.316[a]	10.000	190.000	.000
Learning Efficacy	.139	1.456	290.000	1827.574	.000

However, factors that contributed to the regression model in the order of their strong effect are: natural ventilation, rest rooms, science labs, computer labs, school area, indoor sports facility, number of classroom windows, and art studios, see Table 11.

Table 11 : Tests of Between-Subjects Effects - Learning Efficacy over Significant Variables of Capacity of Physical Facility

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	Heat Control	9.975[a]	29	.344	1.453	.072
	Natural Ventilation	6.425[b]	29	.222	2.333	.000
	Computer Labs	9.058[c]	29	.312	2.032	.002
	Science Labs	12.788[d]	29	.441	2.035	.002
	Art Studios	5.018[e]	29	.173	1.581	.037
	Indoor Sports Facility	4.762[f]	29	.164	1.715	.017
	Rest Rooms	3.986[g]	29	.137	2.036	.002

	Number of Students in Classroom	2632.487[h]	29	90.775	1.505	.055
	Number of Classroom Windows	74.168[i]	29	2.558	1.661	.024
	School Area	1.988E8	29	6854857.856	1.810	.010
Intercept	Heat Control	183.192	1	183.192	774.146	.000
	Natural Ventilation	110.562	1	110.562	1163.979	.000
	Computer Labs	121.298	1	121.298	789.252	.000
	Science Labs	177.698	1	177.698	819.995	.000
	Art Studios	263.977	1	263.977	2411.320	.000
	Indoor Sports Facility	269.182	1	269.182	2811.274	.000
	Rest Rooms	98.761	1	98.761	1462.587	.000
	Number of Students in Classroom	39429.236	1	39429.236	653.777	.000
	Number of Classroom Windows	599.361	1	599.361	389.227	.000
	School Area	3.125E8	1	3.125E8	82.493	.000
Total	Heat Control	592.000	229			
	Natural Ventilation	316.000	229			
	Computer Labs	382.000	229			
	Science Labs	625.000	229			
	Art Studios	823.000	229			
	Indoor Sports Facility	835.000	229			
	Rest Rooms	286.000	229			
	Number of Students in Classroom	117522.000	229			
	Number of Classroom Windows	2043.000	229			
	School Area	1.567E9	229			

V. Conclusions

a) *Capacity of Physical Facility over Learning Efficacy & Geographical Location & Village Distance*

Learning efficacy was associated with the following entities of the physical capacity of classroom and school facility and in the order of their strong effect: natural ventilation, rest rooms, science labs, computer labs, school area, indoor sports facility, number of classroom windows, and art studios, which supports Lackney (1999), Snow (2002), Brooks and Rebeta (1991), Griffith (1921), Becker, Sommer, Bee, and Oxley (1973), Holliman & Anderson (1986), Levine, O'Neal, Garwood, and McDonald (1980), Stires (1980), Sommer, (1967), Schwebel & Cherlin (1972), and Adams & Biddle (1970).

Further, the following entities of the capacity of physical classroom and school facility were positively correlated to directorates of Mafraq Governerate: additional lighting sources, natural ventilation, presence of rest rooms, and school size; and negative correlated with indoor sports facility, which supports Cotton (1996), Brooks & Rebeta (1991), Rovner (1982), Kleiber (1973), Mayron et al. (1974), Dunn, Dunn & Price (1985), and Ott (1976). Finally, the following entities of the capacity of physical classroom and school facility were different in relation to village distance from Mafraq City: natural ventilation, existence of outdoor sports facility, food facility, and rest rooms, and number of students in classroom, which supports Loo (1976) and Duke & Perry (1978).

b) *Evaluations – SWOT Analysis*

i. *Strength*

availability of all streams; teachers specialties, capacity, skills, and cooperation; small students numbers; and available electronic pedagogy.

ii. *Weaknesses*

Lack of computers; weak physical infrastructure like crowdness in some classrooms, rented buildings, and bad quality buildings; dispersed school from residential settings; lack of instruments, tools, and computers in remote schools; insufficient financial and technical capacities of school; two teaching shifts (morning and evening) and mixed schools; and travel distance for teachers and students.

iii. *Opportunities*

Improvement of physical environment, infrastructures, facilities, labs, equipment, buildings, and classrooms; separation of gender and of educational levels.

iv. *Threats*

lack of thermal control in extreme weather conditions; and lack of safe playground, school fencing, and other infrastructures.

c) Recommendations

Some schools suffer from lack of infrastructure and feel upgrading is not made possible, especially for schools who have rented buildings. It is suggested to increasing and enhancing infrastructure and services for students, teachers, and management; distributing services equally among schools; implementing safety measures at the main street in front of the schools.

Major issues that should be considered by education policy makers include:

- Emphasis of joining schools together, as it seems number of students as well as section are vital for output and more so than number of teachers. Many schools are suffering, especially in the Northeast Badia Region of Mafraq Governerate, from small number of students in geographically dispersed villages. It is healthier to increase numbers of students to a range of 20-30 per section for completion among students.
- Physical infrastructure that supports students' activity seems vital and affects student's performance positively. Therefore, it is worth to invest in sports and arts facilities, and the like.

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Shaping Business Ethics and Corporate Governance: An Inclusive African Ubuntu Philosophy

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Abstract - Cultural beliefs and philosophies are fundamental in shaping a society. Lately, there have been various discussions about the values of the African Ubuntu philosophy in many aspects as it relates to issues of human relationships, business ethics and corporate governance. As a governing African philosophy, the Ubuntu is inclusive in nature as it considers all members of the community (organisation) as one entity aiming at achieving one purpose. There have been assertions that the ultimate success of any organisation operating in an African environment is premised on this Ubuntu framework. This study aimed at establishing corporate governance approach as practiced by organisations within an African context. Thus, the paper analyses and reports on research findings pertaining to issues towards general business ethics and corporate governance approaches within an African context. The study results show that Africa's socio-cultural framework that is premised on the Ubuntu philosophy resonates with general principles surrounding business ethics and corporate governance.

Keywords : africa, business ethics, corporate conscie-nce, corporate governance, corporate social response-bility, malawi, stakeholders, sustainability, ubuntu.

GJMBR-A Classification : JEL Code: G34, M14

SHAPINGBUSINESSETHICSANDCORPORATEGOVERNANCEANINCLUSIVEAFRICANUBUNTUPHILOSOPHY

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Shaping Business Ethics and Corporate Governance: An Inclusive African Ubuntu Philosophy

James Kamwachale Khomba [α], Rhoda C Bakuwa [σ] & Ella Cindy Kangaude-Ulaya [ρ]

Abstract - Cultural beliefs and philosophies are fundamental in shaping a society. Lately, there have been various discussions about the values of the African *Ubuntu* philosophy in many aspects as it relates to issues of human relationships, business ethics and corporate governance. As a governing African philosophy, the *Ubuntu* is inclusive in nature as it considers all members of the community (organisation) as one entity aiming at achieving one purpose. There have been assertions that the ultimate success of any organisation operating in an African environment is premised on this *Ubuntu* framework. This study aimed at establishing corporate governance approach as practiced by organisations within an African context. Thus, the paper analyses and reports on research findings pertaining to issues towards general business ethics and corporate governance approaches within an African context. The study results show that Africa's socio-cultural framework that is premised on the *Ubuntu* philosophy resonates with general principles surrounding business ethics and corporate governance. Central to the findings is the revelation that Africa's socio-cultural framework has a direct impact on business ethics, corporate governance approaches and overall corporate performance of organisations operating in Africa. It is expected that the study findings will influence organisations in Africa to adhere strictly to the provisions and recommendations of the King III Report on Good Corporate Governance.

Keywords : africa, business ethics, corporate conscience, corporate governance, corporate social responsebility, malawi, stakeholders, sustainability, ubuntu.

I. Introduction

In the wake of various corporate scandals and amid increasing concern about environmental sustainability issues, there has been a great deal of debate regarding the applicability of business ethics in the modern business age. The discussion on this topic was highlighted with the failures of giant corporations such as Enron, WorldCom and Parmalat, largely due to corporate governance issues (West, 2009). There was also a corporate environmental scandal involving BP (British Petroleum), when oil spilled into the Atlantic Ocean in the Gulf of Mexico. As many as 5 000 barrels of oil a day spilled into the ocean waters, threatening the US and Mexican coastal areas and causing environmental and ethical alarms (BBC News, 2010). The state of Florida declared the incident a state of emergency. As a response to the oil spill, the US administration banned oil drilling in new areas on the US coast while the cause of the oil spill off the Louisiana coast was being investigated.

Subsequent to such experiences, there has been a great deal of focus shift on how modern businesses are supposed to be managed. Many business executives and other stakeholders have begun looking more closely at how morally corporations are supposed to behave in their operations. This has led to a renewed emphasis on business ethics and good corporate governance considerations. Ethical issues are usually debated in terms of corporate governance, environmental degradation and global warming, corporate social responsibility, and corporate conscience (Kleine and Von Hauff, 2009; Nakano, 2007).

Apart from the requirement that organisations should run their operations in the most economical, efficient and effective manner possible to increase performance, today, there is an increasing insistence on the need for organisations to be ethical as well. Within the business framework (Khomba and Vermaak, 2012), there is a clear relationship between corporate activities and other stakeholders within and outside the organisation.

In corporate relationships, it seems reasonable to expect that operating organisations should serve different stakeholders in an ethical manner. A corporation should engage with its internal and external stakeholders to determine its current ethical reputation amongst the stakeholders, as well as what their ethical expectations are of that organisation (Rossouw, 2010b). Thus, under the corporate governance requirements, a corporation should account for its ethical performance and duly report it to relevant stakeholders.

II. Research Aim and Objectives

There have been different approaches used by corporate managers worldwide in governing of their companies. This study aimed at establishing corporate governance approach as practiced by organisations

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within an African context. Thus, the paper analyses and reports on research findings pertaining to issues towards general business ethics and corporate governance approaches within an African framework that is premised on the *Ubuntu* philosophy.

Specifically, the article gives the background to the general business ethics and corporate governance, introduces the African *Ubuntu* philosophy, details research design and methodology used during the study, reports on research findings and finally makes conclusions and recommendations about the study.

III. Premises of Business Ethics

Business ethics focuses on what is good and right in a particular economic activity, where an organisation engages in a moral analysis and assessment of such economic activities and practices (Smith, 1790). Business ethics entails the study of the ethical dimensions of organisational economic activity on the systematic, organisational and intra-organisational levels (Rossouw, 2010a).

Ethics refers to a set of rules that define right and wrong conduct and that help individuals distinguish between fact and belief, decide how such issues are defined and what moral principles apply to the situation (Hellriegel et al, 1992). Moral principles describe the impartial general rules of behaviour that are of great importance to a society, along with the values the society represents. Moral principles are fundamental to ethics. Ethical behaviour would be characterised by unselfish attributes that balance what is good for an organisation with what is good for the stakeholders as well. Thus, business ethics would embrace all theoretical perspectives regarding the ethicality of competing economic and social systems.

The discussion of the business ethics dimensions are varied, depending largely on social and economic elements surrounding the organisations concerned. The view that prevails depends on the roles that organisations are supposed to play internally and in society in general. In macro-ethics, the central question is the fairness of the organisational choice of economic system and also ethical merit of the key elements of such a system. Essentially, these key elements comprise the profit motive, private property, the limited liability of corporations, competition, and free markets (Du Plessis, 2010; Smith, 1776; Collier and Roberts, 2001). It can be argued that whilst corporations are regarded as a means for the maximisation of shareholders' wealth, they should also ultimately improve the socio-economic welfare of local communities, although that may not initially be their intended purpose.

IV. African Socio-Cultural Framework and *Ubuntu* Philosophy

The word Ubuntu is derived from a Nguni (isiZulu) aphorism: *Umuntu Ngumuntu Ngabantu,* which can be translated as "a person is a person because of or through others" (Moloketi, 2009; Tutu, 2004). Ubuntu can be described as the capacity in an African culture to express compassion, reciprocity, dignity, humanity and mutuality in the interests of building and maintaining communities with justice and mutual caring (Khoza, 2006; Luhabe, 2002; Mandela, 2006; Tutu, 1999)

The *Ubuntu* philosophy represents an African conception of the human being, and his/her relationship with the community that embodies the ethics that define Africans and their social behaviours (Mbigi and Maree, 2005). Africans are social beings that are in constant communion with one another where a human being is regarded as a human being only through his or her relationships to other human beings. Therefore, the survival of a human being is dependent upon other people – the community and society.

Within an African environment, socio-cultural underpinnings rigorously apply and the African *Umunthu* or *Ubuntu* (humanness) philosophies are omnipresent throughout the continent. Therefore, the *Ubuntu* socio-cultural dimensions apply and are considered critical in any organisation operating in Africa (Lutz, 2009; Mangaliso, 2001; Mbigi and Maree 2005). Africa has its own unique socio-cultural settings, which have a direct impact on people-centred systems encompassing leadership, employee welfare, extended family systems, caring and sharing, and corporate governance. Thus, the socio-cultural diversity premised on the use of Western management systems would pose a great challenge within an Africa-based organisation.

V. Corporate Governance Worldviews

Whilst the above scenario could be true, organisations usually pursue wider corporate agendas. There are many views on the roles of corporations, depending on regional perspectives (Rossouw, 2009). These varied views have given rise to different approaches on how organisations are managed or governed (corporate governance) in different parts of the world. There are several corporate governance regimes around the world that are underpinned by different sets of socio-cultural frameworks, which in turn reflect the societies in which these frameworks were developed. In addition, corporate governance regimes are also directed by the question: For whose benefit should corporations be governed?

Corporate governance frameworks can generally be classified as embodying certain ideologies. The exclusive corporate governance regime is typical of the USA (Rossouw, 2009), where organisations are perceived to be primarily pursuing the financial interests of shareholders. By contrast, the perception that prevails in Continental Europe is that an organisation is a multi-purpose institution which is obliged to serve and satisfy a variety of stakeholder concerns and interests. Thus, a stakeholder-centred approach towards business ethics is associated with most European states, Asia and Africa. The main difference is that the African perspective on the ethics of corporate governance is mostly grounded by an inclusive ethic of governance, whilst the Asian perspective on the ethics of corporate governance is founded on the expansive ethic of governance (West, 2009).

An inclusive corporate governance regime under the African *Ubuntu* philosophy signifies that an organisation has an explicit commitment to serve the interests of both shareholders and non-shareholding stakeholders. Such an organisational commitment to a stakeholder-centred approach towards corporate governance is partly influenced by African socio-cultural values. The African *Ubuntu* philosophy emphasises the importance of community, solidarity, coexistence, and the inclusion of community members (Broodryk, 2005; Mangaliso 2001; Mbigi and Maree, 2005).

Furthermore, it has been observed that the African inclusive governance approach could also be a result of strong support of developmental activities on the African continent (West 2009). Finally, such an inclusive approach in Africa is also partly influenced by the strong presence of state-owned enterprises that pursue both social and economic agendas. In the inclusive nature of the African society, the recent King III Report on governance for South Africa "seeks to emphasise the inclusive approach to governance" (Institute of Directors in Southern Africa, 2009).

An expansive corporate governance regime is represented by the Asian community. Asian corporate governance engages the expansive approach, which represents a mid-position between a shareholder-centred approach and a stakeholder-centred approach (Reddy in Rossouw, 2009). However, it is not a matter of a trade-off between the two governance approaches, but rather a synthesis between shareholder and stakeholder interests. The expansive approach to corporate governance with Asian society is partly the result of the lesser prominence of shareholder concerns in Asian companies, as many companies in Asia are either state-owned or small-and-medium enterprises (SMEs) owned by family members, and hence, shareholder concerns are less pronounced. Furthermore, studies reveal that in an Asian society, informal external corporate governance through societal norms, practices and values are often more influential than the formal external corporate governance mechanisms of laws and regulations (Rossouw, 2009).

The above literature analysis of both the African and Asian ethics reveals that society and other external stakeholders have more influence on the internal governance of corporations than statutes and regulations do. This picture differs from that in America and Continental Europe. A leaning towards a stakeholder-centred approach is discernable in both the Asian and African perspectives. Therefore, employing the American exclusive shareholder-centred approach to corporate governance within an African framework would be a total mismatch towards an inclusive nature of the African society.

VI. African Corporate Governance Guidelines

Most of the corporate governance guidelines in African countries generally resemble the systems used in the UK (West, 2009), largely because many African countries are members of the Commonwealth. As a result, local company laws have been influenced strongly by British company laws. Although the British Common Law is not binding on African countries, it continues to play a pivotal role in the legal frameworks of many African countries. British cases still carry some weight in business applications on the African continent.
In South Africa, the King Committee was established in 1992 under the chairmanship of Professor Mervyn King (Du Plessis and Prinsloo, 2010; West, 2009). The King Committee was established with the task of providing a set of corporate governance guidelines for South Africa. This followed the release of the Cadbury Report in the UK in 1992, and an increasing interest in the subject worldwide. The King I Report covered many of the same issues as the Cadbury Report, paying considerable attention to the board of directors and the protection of shareholders. However, the use of non-financial concerns and engagement with other stakeholders were also mentioned in the King I Report.

The King II Report is notable for explicitly adopting an inclusive stakeholder-centred approach to corporate governance that has its roots in the stakeholder theory, in opposition to the model of shareholder primacy maintained in the UK and USA (West, 2009). The South African imperatives were reinforced in the passing of the Broad-based Black Economic Empowerment Act, No 53 of 2003 (South Africa, 2003), which established a formal structure to reward companies meeting certain criteria, usually related to the level of black ownership, employment and procurement practices. Another development was the inclusion of the international financial reporting standards (IFRS) into corporate reports. The international financial reporting standards have been officially adopted within the corporate governance reporting systems in South Africa and most African countries.

The King II Report was reviewed in response to the new company legislation, and this culminated in a new corporate governance report, the King III Report. The key theme of the King III Report is an even greater focus on sustainability and ethical reporting systems that should be adopted by corporations (Du Plessis and Prinsloo, 2010). In general, the King III Report adopts the same overall stance as the King II Report, encouraging companies to take a stakeholder approach while maintaining formal structures with a shareholder orientation.

The King III Report acknowledges the importance of stakeholders and sustainability reporting in that "reporting should be integrated across all areas of performance ... and should include reporting on economic, social and environmental issues" (Institute of Directors in Southern Africa, 2009). The inclusion of three parameters – economic, social and environmental – is consistent with the triple bottom line reporting requirement that companies and organisations need to display a corporate conscience in respect of social and environmental sustainability as well. Consideration of future generations is vital in business ethics and corporate governance issues.

South Africa's corporate governance guidelines provide a fair representation of corporate governance on the African continent as a whole in the provision of an inclusive stakeholder-centred approach towards corporate governance. Rossouw (2005) observes that analysis of corporate governance reports across Africa, mostly sub-Saharan Africa, reveals that all reports, apart from those from Nigeria, advocate inclusive stakeholder-centred corporate governance.

However, companies that wish to implement inclusive corporate governance guidelines are faced with managerial challenges. Many corporations, especially large ones, have not been able to fulfil their corporate governance requirements when it comes to their corporate social responsibility (Bendixen, Abratt and Jones, 2007). Corporations have instead oppressively abused employees and other stakeholders in many ways. For instance, many multinational companies are making abnormal profits at the expense of the local communities and the natural environment. Such malpractices jeopardise stakeholder co-existence and the sustainability of future business.

Another challenge is that citizenship is not yet fully embedded and represented in most boards or operating structures or systems of many organisations, despite the claim that organisations have social and environmental responsibilities (Brignall and Modell, 2000). There is an indication that the needs of different stakeholders are not incorporated and that performance measurement systems do not take the effect of power relationships and conflict into consideration. Pressures from different stakeholders are usually inconsistent and contradictory, especially in the public sector.

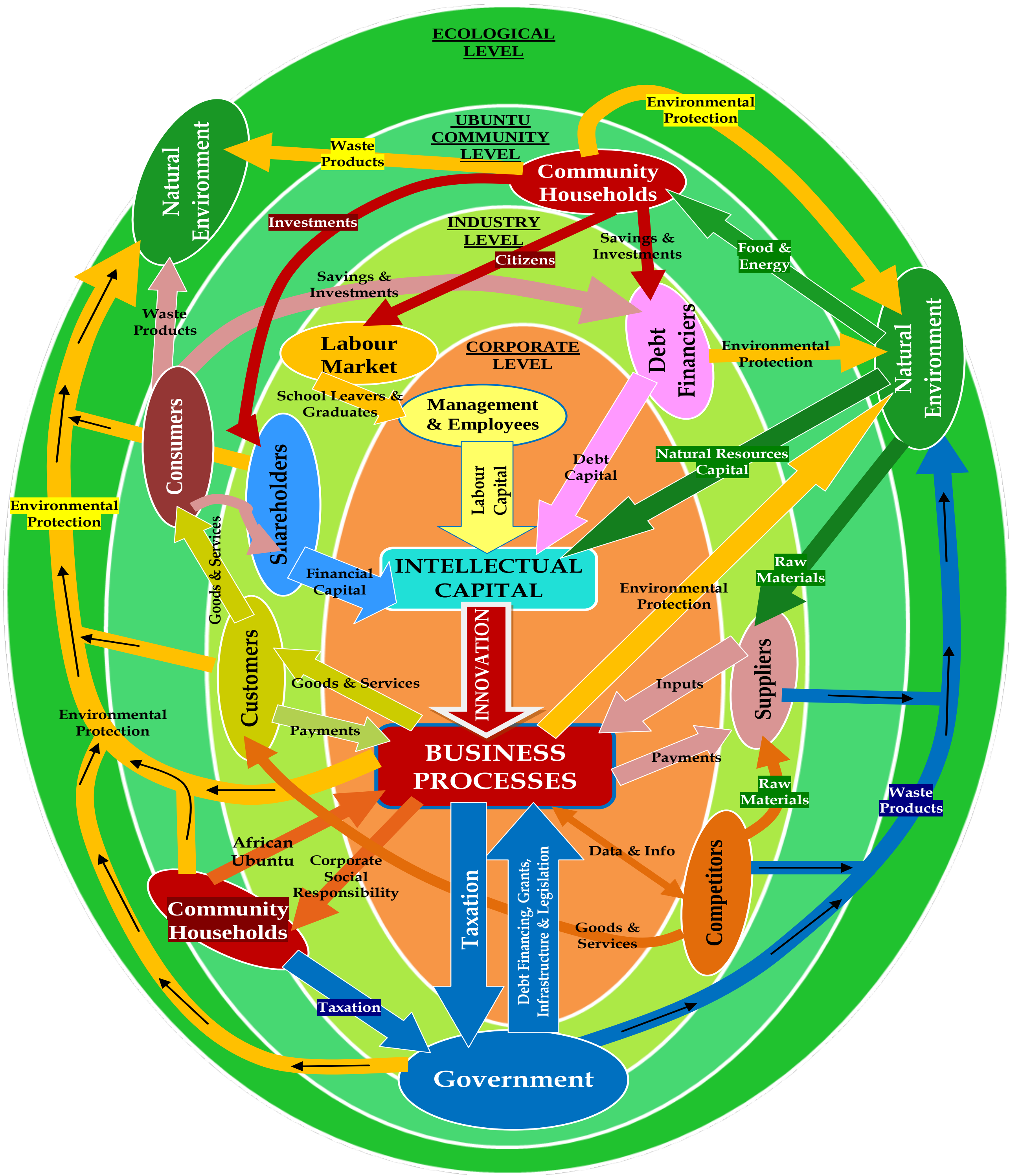
Generally, corporate governance issues in Africa are in their infancy and are, therefore, transitional. Although corporate governance guidelines tend to take a stakeholder-centred approach to represent the African society, there is still a compromise with the application of UK laws in the legal framework that includes company laws.

VII. A Conceptual Framework of Stakeholder Relationships and Networks

To give a better picture about the African environment, Khomba (2011) developed a conceptual framework of stakeholder relationships and networks (the *Ubale* Framework – "ubale" is a Bantu language that means "relationships"), as depicted in Figure 1, below.

There are four systems layers in the conceptual framework, namely the corporate level, the industry level, the *Ubuntu* community level, and the ecological (natural environmental) level. On a daily basis, and in a very complex way, different stakeholders interact with an organisation for different business transactions. Generally, any business comprises such complex activities involving different constituents that are linked to take the entity towards organisational success. For any business to maintain its sustainability, it is imperative that all stakeholders are ethically and morally treated.

Figure 1 : A conceptual framework of stakeholder relationships and networks (The *Ubale* Framework)



System Level ▶	Corporate	Industry	Ubuntu Community	Ecological

Source : Khomba (2011:8)

The essence of the *Ubale* Framework is that of relationships and networks in respect of all stakeholders that are engaged in the creation of wealth for an organisation. Such stakeholder relationships and net-works resonate with the foundations of the African *Ubuntu* philosophy where all members are regarded as one community or society. The above *Ubale* Framework is founded on the recognition of the interconnectedness of and relationships between corporate activities and all stakeholders.

VIII. Research Design and Methodology

a) Exploratory Research

Initially, some exploratory research, as recommended by Babbie and Mouton (2007) was conducted in Malawi to ascertain the general framework on corporate governance issues in African companies. During this exploratory study, 112 large Malawian companies were visited through questionnaires and interviews with business executives. The results indicated that, in general, Southern African corporate governance approach inclines more on the inclusive regime rather than an exclusive one.

b) Secondary Research

Further, a secondary research through a desk review was done of documents collected from different sources, including stock exchanges, registrars of companies, companies' published annual reports, organisational constitutions, national statistical offices, government publications, internet, university publiccations, chambers of commerce and industry from different countries in Southern Africa. Some of the documents reviewed include Malawi's Companies Act (Malawi Government, 1986), the South African Companies Act, No. 61 of 1973 (South Africa, 1973), Malawi's Capital Market Development Act (Malawi Government, 1990) and the South African Stock Exchange Control Act, No. 1 of 1985 (South Africa, 1985).

c) Primary Research

The primary data collection method was a field survey methodology, using correlational research design. A cross-sectional (correlational) research design studies some phenomenon by investigating different constructs at a single time (Babbie and Mouton, 2007; Welman et al., 2005).

During this study, a Likert scale survey questionnaire was used as the main instrument to gather quantitative data. The questionnaire was designned around a range of formulated statements as a means to explore respondents' perceptions of a wide range of business ethics and corporate governance issues as applied in Africa. A Likert scale provides a measurement technique based on standardised response categories (Babbie and Mouton, 2007). The researchers interviewed people who have vast knowledge and experience of corporate governance issues, as recommended by Selltiz and Cook (1964).

d) Sampling

A sample was randomly selected from big corporations that are registered with the Registrar of Companies or the Malawi Stock Exchange in Malawi and from companies registered with the Johannesburg Stock Exchange or the Johannesburg Chamber of Commerce in South Africa. A limited number of companies from other countries were reached via their diplomatic missions, either in Malawi or in South Africa.

A total of 518 questionnaires were transmitted electronically to the sampled participants and then followed up for feedback. For non-responses, electronic reminders were sent via e-mail every two weeks for the two months of the questionnaire survey. The reminders increased the response rate significantly.

A total of 102 hard copy questionnaires were administered through the deployment of research assistants who collected data from targeted companies. The research assistants delivered the hard copies to the business executives concerned, and thereafter collected them at an agreed time. The hard copy administration proved to be more effective in terms of response rate than the electronic copy administration. This is largely because the follow-ups were more personalised than was the case with the standardised electronic administration via e-mail. The electronic administration had a response rate of 58.5% (303 responses out of 518 transmissions), whereas the hard copy realised a response rate of 82.4% (84 responses out of 102 remittances).

e) Data Reliability and Validity

Data reliability as a measure of the internal consistency of the data constructs was determined by means of the Cronbach alpha (α) – an α coefficient above 0.7 is considered reliable (Bryman and Bell, 2007; Costello and Osborne 2005; Field, 2009). In this study, the overall α coefficient was 0.898, which suggests that the internal consistency of the data constructs was excellent.

Though data was collected from organisations in different countries across Southern Africa, the statistics indicate that the Bartlett test of sphericity X^2 (68) = 1572.79, p<0.001 was significant for all factors indicating that we can be confident that the sample was homogenous and that multicolinearity does not exist under these survey data according to Field (2009). Thus, the Bartlett test of sphericity statistics X^2 (68) = 1572.79, p<0.001 indicates that the study results are valid for any conclusive discussions.

IX. Results and Discussion

Overall, the analysis shows that there were varied responses from participating organisations regarding the extent of their agreement on each on the questionnaire statements with regard to issues involving business ethics and corporate governance as per the following study revelations:

Statement 1: Our organisation puts more emphasis on maximisation of shareholders' wealth than of other stakeholders' wealth

The study assessed the extent of exclusive shareholder-centred governance approach within organisations in Africa and thus assessing the application of the popular maxim of "shareholder wealth maximisation" that is the beginning and end of shareholder-centred management theories. The study findings reveal that only 45.5% agree (24.3% "Agree" and 21.2% "Strongly agree") that their organisations put more emphasis on the maximisation of shareholders' wealth than on other stakeholders' wealth. A total of 27.9% disagree, whilst 26.6% "Somehow agree" with the statement.

The analysis of the study findings indicates that there are still some companies that are still inclined to focus on the maximisation of the shareholder value rather than look at value for other stakeholders too. However, other companies have embraced an inclusive stakeholder-centred approach within their visionary focus as is revealed in the study analyses below.

Statement 2: We recognise the interdependence of relationships of our stakeholders

There seems to be a general understanding that an organisation can succeed only if all stakeholders are recognised as members of and contributors to company's success. All the respondents agreed (45.2% "Agree", 46.5% "Strongly Agree" and 8.3% "Somehow Agree"). The analysis thus indicates that the majority of contemporary managers in Africa take cognisance of the stakeholder-centred approach towards their corporate governance. Thus, an inclusive stakeholder-centred management approach is practiced within the African framework.

Statement 3: Our profitability success is a result of inputs from various stakeholders

The study evaluated organisation's recognition of stakeholder involvement in the value creation activities in terms of the financial bottom line (profit). The vast majority of the respondents recognise that their profitability bottom line is a result of inputs from different stakeholders from within and outside the organisation. Thus 81.9% agree (47.0% "Agree" and 34.9% "Strongly agree") with the above statement, while only 3.9% disagree and 14.2% "Somehow agree". This analysis indicates that most organisations recognise significant contributions by different stakeholders towards their operations. This result is in line with the inclusive nature of African management systems.

Statement 4: Our primary goal of external reporting is to contribute to an ongoing stakeholder dialogue

A part from open communication and feedback systems, the study also aimed at assessing the extent of the external reporting systems that are intended to meet stakeholders' informational needs. The study results reveal that a majority of 78.1% of the respondents agreed (40.6% "Agree" and 37.5% "Strongly Disagree") that their external reporting systems are primarily meant to maintain stakeholder dialogue with the respective corporations. Only 2.8% disagree, whilst 19.1% "Somehow Agree" with the above statement. This analysis indicates that the majority of managers take cognisance of good stakeholder dialogue, which is achieved through external reporting systems. This kind of stakeholder relationship would enhance cooperation and active participation amongst different stakeholders who are fully aware of corporate operations and overall performance.

Statement 5: We constantly interact with and help the local community in which we operate

The study further aimed at establishing the extent of the relationship between an organisation and the local community and its organisational culture in this regard. Whilst the majority agree (63.3%) with the above statement, some do not (13.7%). Of the respondents, 23.0% "Somehow agree" that they constantly interact with the local communities within which their business operates, casting doubt on the quality of such a community relationship.

Whilst the majority are in relationship with the local communities, the study results demonstrate that still some organisations are not involved in helping their local communities. With full sensitisation, one would expect full compliance with corporate citizenship ethical obligations, which include integrated reporting system, as recommended by the King III Report (Institute of Directors in Southern Africa, 2009)

Statement 6: Our organisation is highly respected for maintaining and promoting environmental protection

The study findings indicate that few agree that their organisations are respected for maintaining and promoting environmental protection. A total of 44.2% agree (20.2% "Agree" and 24.0% "Strongly agree") with the statement. The results reveal that a total of 27.7% disagree (25.6% "Disagree" and 2.1% "Strongly disagree"), whilst 28.2% "Somehow agree" with the above statement.

Further analysis indicates that this lack of corporate respect is a result of either a corporation's disregard for environmental protection matters or, if it is engaged in such environmental protection projects, there is non-disclosure of such information through the corporate external reporting systems, thus ignoring the recommendations of the King III Report (Institute of Directors in Southern Africa, 2009). Lack of focus on natural environmental matters should be a worrisome development for corporate sustainability and future generations.

Statement 7: We treat employees as the most valuable asset of our organisation

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The majority agree that they treat their employees as the most valuable assets of their organisation. A total of 73.6% agree (34.6% "Agree" and 39.0% "Strongly Agree") with the statement, 10.6% disagree, whilst 15.8% "Somehow agree" with the statement. This analysis indicates that most organisations value their employees as a sole source of the human resources for their operations. Employees are the internal stakeholders and indeed should be considered highly in good governance issues.

Statement 8: Our external financial reporting system integrates economic, social and environmental dimensions (triple bottom line reporting)

The majority of respondents report that their external corporate reporting systems take into account the economic, social and environmental elements (the triple bottom line reporting system) as recommended by the King III Report (Institute of Directors in Southern Africa, 2009). A total of 59.9% agree (31.0% "Agree and 28.9% "Strongly agree"), while 31.1% disagree and 9.1% "Somehow agree" with the statement.

The above analysis indicates that whilst many companies have embraced the triple bottom line reporting system, some are not fully adhering to the triple bottom line reporting requirements, signifying the transitional nature of triple bottom line reporting system within corporate reporting and governance systems.

Statement 9: We are open in disclosing wealth distribution to our stakeholders through corporate reporting

The study aimed at ascertaining whether or not organisations are open in distributing their wealth to different stakeholders through corporate reporting systems, as recommended by Szwajkowski (2000). A vast majority (80.9%) of respondents agree (46.0% "Agree" and 34.9% "Strongly agree") that they deploy open resource allocation disclosure. Only 3.1% disagree, while 16.0% "Somehow agree" with the above statement. This analysis demonstrates that most organisations prefer open disclosure of resource allocations which is in line with good corporate governance principles. Disclosure of wealth distribution would ultimately encourage participation by different stakeholders in the overall business activities and corporate sustainability in the long term.

Statement 10: Our managers do not practice corruption that deprives our valuable stakeholders

The study also aimed at determining whether or not corporate executives illegally and inequitably share organisational resources in a corrupt manner. The research findings show that a vast majority of 79.1% agree (25.6% "Agree" and 53.5% "Strongly agree") that their managers do not practise corruption, which deprives the very same stakeholders that an organisation is supposed to interconnect and depend upon. However, some respondents disagree (2.8%) and others (18.1%) only "Somehow agree" with the statement. Although the evidence is slim, the survey results reveal that corruption still occurs amongst managers in Africa, which is against the teachings of the African Ubuntu philosophy and good corporate governance.

Statement 11: Our organisation invests heavily in Supporting employee knowledge

The research findings reveal that most organisations invest heavily in supporting employee knowledge for better understanding of business foundations that include good corporate governance. A total of 77.3% agree (42.4% "Agree" and 34.9% "Strongly agree"), while only 8.3% disagree with the statement. Out of the total number of participants, 14.5% "Somehow agree" with the questionnaire statement. These research findings indicate that most organisations recognise the significance of investing in employee knowledge activities that boost better business understanding, new innovations and overall corporate performance.

Statement 12: Knowledge about the local culture Improves our corporate performance

The study further aimed at assessing the role that knowledge about local culture plays on overall corporate performance. Regarding the contribution of knowledge about local culture towards corporate performance, the majority (74.6%) agree with the above statement, whilst only 7.7% disagree and 17.6% "Somehow agree".

The analysis demonstrates that most corporations recognise the significance of local cultural settings for their operations. Largely, this recognition comes as a result of continued interactions between an organisation and its local communities, which are identified by their unique socio-cultural frameworks. The local community, with its African *Ubuntu* philosophy, is the main provider of the labour force and final consumers for corporations operating in Africa.

Statement 13: We are involved in financially supporting educational projects for our future business operations

Most of the respondents indicate that they are involved in financially supporting educational projects as a basis for the continuity of business operations. A total of 72.6% agree with the above statement. Only 12.1% disagree and 15.2% "Somehow agree". The study findings demonstrate that most organisations make a point of promoting education, thus encouraging the sustainability of future business operations and future generations as well. Unlike other factors of production, such as land and finance, a knowledgeable workforce is considered a critical factor of production in the modern business environment as observed by Drucker (1993).

Statement 14: We take direct responsibility for social problems that we have caused

The study aimed at assessing the level of ethical treatment towards the society in the form of corporate social responsibility. The research findings indicate that most companies take direct responsibility for the social problems that they cause in the course of their operations. A majority of 69.0% agree that they take corporate social responsibilities, while 12.7% disagree and 18.3% “Somehow agree”. The figures from the analysis indicate that issues of corporate social responsibility are still not fully implemented or reported upon by some companies as is recommended by the King III Report (Institute of Directors in Southern Africa, 2009).

Statement 15: Our organisation reserves funds for natural environmental (ecological) pre-sservation projects

A total of 46.2% of the respondents indicate that their organisations reserve funds for the preservation of the natural environment, whilst 28.5% do not. Out of the respondents, 25.6% indicate that they “Somehow agree” that their organisations allocate funds towards natural environmental projects.

These research findings demonstrate that issues of environmental preservation and protection are in transition, as many organisations are still not putting much emphasis on the issue of environmental protection. This finding is worrying, because the sustainability of current and future businesses and generations depends on how organisations conserve the natural environment today. Amidst global earthly calamities, attention to ecological issues should be a hot topic in modern business management systems.

Statement 16: We contribute substantially to the Ove-rall welfare of the society

Generally, the vast majority of respondents indicate that their organisations contribute substantially towards the overall welfare of the local society. A vast majority of 79.1% agree (40.6% “Agree” and 38.5% “Strongly agree”) with the above statement. Only 8.8% disagree and 12.1% “Somehow agree”.

Whilst the majority of the respondents’ organisations recognise the presence of local communities through their contributions, the overall analysis indicates that there are still some companies that are not ploughing back into the local communities in which they operate. Within the framework of the King III Report’s recommendations (Institute of Directors in Southern Africa, 2009), one would expect the majority of companies to adhere to the provisions of good corporate governance and duly report the social and environmental sustainability together with an economic element in their corporate reports.

The above research findings provide insights regarding critical issues that govern the applicability of business ethics and corporate governance within an African socio-cultural framework that is premised on the *Ubuntu* philosophy. The analysis of the sixteen questionnaire statements that were used during the study is summarised in Table 1.

Table 1 : Statistical summary of the univariate analysis on the questionnaire statements

Statement	Rating scale (%)						Mean
	Strongly Disagree	Disagree	Somehow Agree	Agree	Strongly Agree	TOTAL	μ
1. Our organisation puts more emphasis on maximisation of shareholders' wealth than of other stakeholders' wealth	7.5	20.4	26.6	24.3	21.2	100	3.3
2. We recognise the interdependence of relationships of our stakeholders	0.0	0.0	8.3	45.2	46.5	100	4.4
3. Our profitability success is a result of inputs from various stakeholders	0.0	3.9	14.2	47.0	34.9	100	4.1
4. Our primary goal of external reporting is to contribute to an ongoing stakeholder dialogue	0.0	2.8	19.1	40.6	37.5	100	4.1
5. We constantly interact with and help the local community in which we operate	1.3	12.4	23.0	39.0	24.3	100	3.7
6. Our organisation is highly respected for maintaining and promoting environmental protection	2.1	25.6	28.2	20.2	24.0	100	3.4
7. We treat employees as the most valuable asset of our organisation	3.6	7.0	15.8	34.6	39.0	100	4.0
8. Our external financial reporting system integrates economic, social and environmental dimensions (triple bottom line reporting)	1.6	7.5	31.0	31.0	28.9	100	3.8
9. We are open in disclosing wealth distribution to our stakeholders through corporate reporting	2.1	1.0	16.0	46.0	34.9	100	4.1
10. Our managers do not practice corruption that deprives our valuable stakeholders	0.0	2.8	18.1	25.6	53.5	100	4.3
11. Our organisation invests heavily in supporting employee knowledge	0.0	8.3	14.5	42.4	34.9	100	4.0
12. Knowledge about the local culture improves our corporate performance	4.1	3.6	17.6	39.5	35.1	100	4.0
13. We are involved in financially supporting educational projects for our future business operations	2.3	9.8	15.2	41.3	31.3	100	3.9
14. We take direct responsibility for social problems that we have caused	2.6	10.1	18.3	33.3	35.7	100	3.9
15. Our organisation reserves funds for natural environmental (ecological) preservation projects	5.2	23.3	25.6	30.7	15.5	100	3.3
16. We contribute substantially to the overall welfare of the society	2.3	6.5	12.1	40.6	38.5	100	4.1

N=387

Table 1 above indicates that Statement 2: "We recognise the interdependence of relationships of our stakeholders" has the highest mean (μ=4.4) on the response ratings seconded by Statement 10: "Our managers do not practise corruption that deprives our valuable stakeholders" with a mean (μ=4.3). Further analysis of the above table shows that Statement 1: "Our organisation puts more emphasis on maximisation of shareholders' wealth than of other stakeholders' wealth" and Statement 15: "Our organisation reserves funds for natural environmental (ecological) preservation projects" both with a mean (μ=3.3) are registering the lowest response ratings. These lowest ranked statements are seconded by Statement 6: "Our organisation is highly respected for maintaining and promoting environmental protection" with a mean (μ=3.4). The low ranking on Statement 1 confirms that most companies in Africa embrace the stakeholder-centred approach rather than the shareholder-centred approach toward corporate governance as propagated by Rossouw (2009).

Further analysis reveals that both Statement 6 and Statement 15 which were aimed at establishing how corporate managers in Africa deal with issues involving the natural environment give worrisome results. The low average ratings on the two statements demonstrate that there is not much that is being done on the natural environment by our corporate managers. Such a revelation should indeed be of great concern to the corporate managers. Such an apparent neglect on the natural environment would negatively affect the future generations and ultimately performance of various organisations in Africa. Research and debate involving the natural environment has become a hot issue in the modern management systems today.

Overall, all the sixteen statements show means that are above average (μ>3.0), signifying the above-average rankings that organisations give to issues surrounding business ethics and corporate governance within the African framework that is founded on the *Ubuntu* philosophy.

X. Conclusion

This paper has revealed the extent to which companies in Africa deal with issues regarding the business ethics and good corporate governance. It has been established that the Africa's socio-cultural dimensions that are premised on the *Ubuntu* philosophy affect the inclusiveness of corporate governance framework. The study reveals that operations of companies in Africa are revolved around the fulfilment of governance issues based on different phenomena. Largely, companies in Africa are premised on an inclusive stakeholder-centred approach of business ethics and corporate governance rather than on an exclusive shareholder-centred approach in business ethics and corporate governance.

The research findings support the rationale that an inclusive stakeholder-centred approach accommodates all organisational stakeholders, including shareholders, government, customers, suppliers, management and employees, the community and the natural environment. It has also been established that the stakeholder-centred approach to corporate governance is in resonance with the African *Ubuntu* philosophy, where an organisation is seen as a community consisting of different interested members (stakeholders). Therefore, the premises of the *Ubuntu* philosophy that governs the African continent are in support with principles and practices of modern business ethics and corporate governance.

Practically and on moral grounds, all stakeholders as part of the organisational community are supposed to be included in organisational settings and systems. Stakeholders should have a share in terms of information disclosure and wealth distribution. The inclusive stakeholder-centred approach towards governance would therefore ensure continued interdependence and co-existence of all stakeholders and hence the entire corporate and eco-systems system. It is envisaged that the inclusive stakeholder-centred approach towards corporate governance guarantees corporate sustainability for future business operations and profits as well as sustainability of future generations. Therefore, such an inclusive approach towards corporate governance should be deployed by all organisations operating within an African framework.

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Does an Innovation Process Improve Organizational Performance? A Practical Approach for Identifying Opportunities

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Abstract - The article aims in analyzing the maturity level of the organizational process in a centennial company of the welding sector in the State of Minas Gerais, Brazil. The Theoretical Framework emphasizes the concepts of Organizational Processes and Maturity Process. The model developed by Michel Hammer - Process Enterprise Maturity Model (PEMM) - was the basis for analyzing the processes' performance. Data analysis was based on semi-structured interviews. Interviewees expressed their views, values and personal views to all the questions that were asked. Despite being a global and centennial company, there is still a long way to achieve the desired levels of excellence, even that the processes are reliable and stable.

Keywords : maturity model; innovation process; organi-zational performance; entrepreneurship.

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I. Introduction

The globalized and competitive environment requires organizations that are agile, lean and that can develop the necessary skills to make the best decision-making.

According to Hammer (2007), the organizational processes' alignment with its business has been critical for the enterprises. That what had already been questioned a decade ago, that is, the approach based on business process transformation, is now used routinely. The idea that the improvement of business' processes, which extends from the beginning to the end of an organization, can lead to performance gains, which allows the gain of greater value to customers as also generates more profit for the shareholders.

To Malhotra (1998), organizational processes are coordinated activities that involve people, procedures and technology. In fact, the processes in general and business in particular, represent a new approach to coordinating activities across the organization, for it allows the analysis of any type of process, even the non-industrial.

The relevance of this work, for the organizational improvement, is in the assumption that enterprises are searching for competitiveness in a sustainable manner, by elevating management levels and, consequently, the increase of their results. This has leaded them towards improving their organizational processes.

However, it is not uncommon that the results of the management' actions and the improvement process are below the initial expectations. According Champy (2004), the improvement of the manner of running a company is a requirement nowadays, when resources are increasingly scarce, the time response is vital to the organizational issues and service quality is a survival prerequisite. Process management should extend to the entire chain of stakeholders, company, customers, suppliers and partners.

Notwithstanding that the techniques, methodologies and tools for developing management actions and process improvement are already known by the management community in general, its use still needs a better practice.

Organizations should ensure that their business processes are able to provide higher performance through time, in other words, gain maturity. For that to happen, they must develop a number of characteristics of process enablers, which are related to the processes, but also to a set of organizational capabilities to give support to the management processes.

The variables' gradation that comprise these sets allows the organization to identify the level of maturity they are in the business processes, thus allows a better focus on the management and in the establishment of guidelines for future improvement projects and or process management. The question then becomes the extent to which an organization must apply resources / efforts to elevate their performance through their business processes. How to identify where and when those resources / efforts should be applied? Accordingly, this study aims to analyze the organizational processes' maturity level in a centennial multinational welding industry.

II. Literature Review

Not all of the business processes are formed by clearly delineated activities, in terms of content, duration and defined resource consumption, nor do they need to be consistent or performed in a particular sequence

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(Morris and Brandon, 1993). It is necessary to have a horizontal view to enable the identification and improvement of functional interfaces, which are the points in which the work that is being performed is transferred from one organizational unit to the next (Rummler and Brache, 1995).

According to Keen (1997), the processes are the source of the specific competencies of the company that make the difference in terms of competition, and the influence they can have on the strategy, products, and the industry' structure. The process does not only create efficiencies today, but also ensures the future by means of skills that are applied in new products.

The rapid processes' innovation can result in improved organizational skills (Kanter, 1997) enabling, for example, that new products can be more rapidly developed.

In traditional business organizations environment, vertical and overly bureaucratized, will not have space unless they turn and rethink their structures and the way that their human, financial, technical and other resources are managed and leveraged. It is essential that organizations have an increasingly systemic view, in other words, to be part of a whole, the globalized market, the macrosystem and rethink their operations (Hammer 1998).

Insofar as it proposes a way to execute a particular process, being it industrial, commercial or administrative, it triggers a changing process. Organizational changes are particularly dangerous, because with the same easiness that it can lead to success, it can also lead to failure (Hammer, 2007).

Management by maturity levels emerged in the late 1980s, through the definition of the model and maturity questionnaire (Humphrey, 1987). The maturity model and questionnaire evolved over several years of use, and originated the *Capability Maturity Model for Software* (CMM-SW) published by SEI in 1993. In the early 2000s Michael Hammer, together with a group of companies called Phoenix Consortium, developed an itinerary for a performance analysis of the organizational processes, Process Enterprise Maturity Model (PEMM) (Hammer, 2007).

For Hammer (2007) the processes' enablers determines how well a process is capable of operating through time. According to the proposed model, there are five enabler factors: 1) Design / Conception, 2) Performers / Competencies; 3) Owner / Coordination, 4) Infrastructure, and 5) Metrics / Indicators.

For the author, these enablers are present in companies at different levels of intensity, such that they vary in the degree to which they support a process. Strong enablers determine how mature a process is and how it is capable of providing a higher performance over time. The model classifies them into four levels, namely: P1 - the process is reliable and predictable: it is stable; P2 - the process provides superior results because the company designed and implemented in a more systemic form (cross functional); P3 - provides a process with optimized performance and can be integrated as necessary with other internal processes, maximizing the company's performance; P4 - contains the very best, transcends borders and involves the company's suppliers and customers.

But still, according to Hammer (2007), not all organizations can put into practice these enablers, since they do not have the refinement of the following capabilities: Leadership / Sponsorship, Culture, Specialization, and Governance.

According to the model, if all of these capabilities are not in place, it is impossible for the organization to institutionalize the enablers and the maintenance of their processes' performance. The example of the process' enablers for entrepreneurship' capacities are four: E1, E2, E3 and E4. According to the author, strong organizational capabilities strengthen the enabler, which allows a better execution of the processes. Thus, a company E1, with leadership capacities, culture, and governance expertise in this level of maturity will be ready to take their processes on level P1. Companies that are in level E2 will be ready to have their processes at the level P2 and so forth.

III. Materials and Methods

The choice for a qualitative methodology was due to the dynamics that were required for the research, since the researcher would face situations in which qualitative observations would be used as indicators of the structures' operational complexity and organizations (Lasarsfeld Lima, 1999).

The research' option, for this paper, was a case study, not only because it was easier to have access to the targeted company, but also because it is the most appropriate way to obtain the answers of the survey's questions.

This is exactly the case of this paper. Through the survey's information it was possible to analyze the degree of applicability of the topic "processes' studies" and of the aspects related to the management itself and the productivity in different moments over time. The survey had as its objective to gather information in order to qualify the level of maturity of the business's processes in the target organization, being able yet to subsidize with information the development of possible action plans to raise the performance level of these processes.

The object of the study was a multinational industry from the welding sector. The target of the research was the individuals that were responsible and executants of the organizational processes. Focusing on the individual, what was pursued was to extract from each of the respondents, their perception of value as to the actual business processes' performance.

Although the company is a multinational company that is present in all the continents, the objective of the research was its unit, located in the State of Minas Gerais, Brazil. The choice of the individuals and of their respective processes was due to the company's core business. Because it is an eminently industrial company, that has as its distinguishing factor the research and development of materials and techniques for applying products, associated with a strong logistics, it was decided that the managers interviewed would be precisely those responsible for these areas in the organization.

In this research, a semi-structured interview model was used, precisely because it is situated at the threshold between the two forms of interview. Even having a pre-defined script, the people that were involved had the opportunity to discuss the survey's questions in order to clarify feelings and personal views. The interview's itinerary was based on the organizational variables that are enablers and capacitors for the organizational processes, as established by Process Model Enterprise Maturity Model (PEMM) proposed by Hammer (2007).

IV. Results

The following are the results for each enabler variable, according to respondents view:

As the design variable was analyzed, which is related to the techniques that are used by the enterprise for specifying how the process is executed, it is possible to observe that the processes' performance is at the maturity level P1. The evidence presented as techniques for process design are actually drawing flowcharts, whose goal is to detail the flow of activities rather than viewing the processes with the details of the inputs, outputs, interfaces, end to end vision, resources, indicators, roles, responsibilities and so on.

With respect to Performers, referring to the skills that are required for the persons that perform the process, the analysis of the respondents is that process performance is at level P2. It was also observed the need of a small effort to change this variable's level in order to reach level P3. In this case, the academic education contributes to most the managers in engineering, which are more accustomed to the study of processes

The assessment of the respondents about the variable Owner (Responsible), the item concerning the level of responsibility that people have for the process and its results, the processes' performance is also located at level P2. According to some of the managers, the fact they are reporting directly to the CEO, which is also the Industrial Director, creates conditions for greater delegation, due to the volume of responsibilities focused on a single person. Another comment that was made by some of the respondents is related to the fact that the company's current management gives emphasis on having more participation in the organization's strategic planning actions.

About Infrastructure, a variable dedicated to the analysis of the support conditions of the process, the management model and the information technology, where the respondents rated the processes' performance as level P2. For this item the major criticism concerns the fact that the company has a world-class integrated business management and a market leader (SAP) and even so, they still take little advantage of some features that are focused on industrial processes, since focus up to now, has been on the back-office processes.

The metric / indicators variable is focused on the metrics that the company uses to monitor the performance processes. Although the areas employ several controls to be able to check the performance of their processes, especially those used to evaluate performance and quality, a fact easily proven by several evidences that were presented in several of the interviews, these controls are highly personalized according to each manager. The real fact is that this item is the result of the managers' dedication, more than the matter of having a properly structured management model, based on corporate indicators. This is easily proved by the results of the assessment indicating a performance level of P1.

According to the model proposed by Hammer (2007), the enablers' strength determines how mature the process is and how it is capable of providing a higher performance over time. If all the five enablers are facilitators of a process at the P1 level, the process itself is at the P1 level; if all are at the P2 level, the process is P2 and so on. If only four of the five enablers are at a certain level, it is impossible to say that the process has reached this level: it belongs to the previous level. Particularly, if any of the enablers is so weak that it does not meet P1, the process is by default P0. This is the natural state of things when the organization has focused on the development of their business processes, and P0, at this level, represents processes with irregular work.

The consolidated analysis of the respondents' point of view leads to the following result: Design: P1; Performers (Executors): P2; Owner (Responsible): P2; Infrastructure: P2; Metrics / Indicators: P2. Thus, the company in terms of organizational processes' maturity, is at level P1, though very close to reach the level P2, by means of little effort with respect to techniques for process design. The Final Score is equal to P1, where processes are reliable, predictable and stable.

Figures 1 and 2 present a consolidated picture of the mapping, which shows the organizational processes' maturity. The figures are designed to evaluate the maturity of business process and determine how to improve its performance. If a statement is largely true, at least 80% correct, then the mark will be green; if it is somewhat true, between 20 to 80% correct, then the mark will be yellow; and if is largely untrue, less than 20% correct, the mark will be red.

For the enablers' variables, the results in the viewpoint of the interviewed, is the following. For the item leadership, the focus is associated with the level of support that the company gives in the creation and management processes' actions. During the interviews, the managers answered that, although that all have a clear vision of the need to invest more in the processes' improvement actions, such actions end up being restricted to their areas. By analyzing the sub item style of management, that vision becomes clear. They miss a greater integration and collaboration between the areas. The assessment made by respondents indicates a level of maturity E1.

		P1	P2	P1	P2
Design	Purpose	The process has not been designed on end to end basis. Functional managers use the disign primarily as a context for functional performance improvement.	The process has been redesigned from end to end in order to optmize its performance.		
	Context	The process's input, outputs, suppliers, and customers have been identified.	The needs of the process' s are known and agreed uppon.		
	Documentation	The documentation of the process is primarily functional, but identifies the interconnection among the organizations involved in executing process.	There is end to end documentaion of the process design.		
Performers	knowledge	Performers can name the process and identify the key metrics of its performance.	Performers can describe the process's overall flow on how their work affects customers, other employers in the process, and the process's performance; the required and actual performance level.		
	Skills	Performers are skilled in problem solving and process improvement techniques.	Performers are skilled in teamwork and self-management.		
	Behavior	Performers have some allegiance to the process but owe primary allegiance to their functions.	Performers try to follow the process design, perform correctly, and work in ways that will enable other people who execute the process to do their work effectively.		
Owner	Identity	The process owner is an individual or a group informally charged with improving the process.	Enterprise leadership has created na official process owner role and has filled the position with a senior manager who has authority and credibility.		
	Activities	The process owner identifies and documents the process, comunicates it to all the performers, sponsors small-scale change projects.	The process owner articulates the process's performance goalsand a vision of its future; sponsors redesign and improvement efforts; plan their implementation; and ensures compliance with the process design.		
	Authority	The process owner lobbies foe the process but only encourage functional managers to make changes.	The process owner can convene a process, redesign team and implement the new design and has some control over the technology budget fot the process.		
Infrastructure	Information Systems	Fragmented legacy IT systems support the process.	IT systems constructed from functional components supports the process.		
	Human Resources	Functional managers reward the attainment of functional excellence and the resolution of functional problems in a process context.	The process's design drives role definitions, job descriptions, and competency profiles. Job training is based on process documentation.		
Metrics	Definition	The process has some basic cost and quality metrics.	The process has end to end process metrics derived from customer requirements.		
	Uses	Managers see the process's metrics to track its performance, identify root causes of faulty performance, and drive functional improvement.	Managers use the process's metrics to compare performance to benchmarks, best in class performance, and customer needs and to set performance targets.		

Source : Research's Data.

Figure 1 : Mapping of the processes' maturity level

		P3	P4	P3	P4
Design	Purpose	The process has been designed to fit with other enterprise process and with the enterprise's systems in order to optimize the enterprise's performance.	The process has been designed to fit with customer and supplier processes in order to optimize interprise performance.		
	Context	The process owner and the owners of other processes with which the process interfaces has stablished mutual performance expectations.	The process owner and the owners of customer and supplier processes with which the process interfaces have established mutual performance expectations.		
	Documentation	The process documentation describes the process interfaces with, and expectations of, other processes and links to process to the enterprise system and data architecture.	An eletronic representation of the process design supports its performance and management and allows analysis of environmental changes and process		
Performers	Knowledge	Performers are familiar both with fundamental business concepts and with the drivers of enterprise performance and can describe how their work affects other processes and the enterprises's performance.	Performers are familiar with the enterprise's business and its trends and can describe how their work affects interenterprise performance.		
	Skills	Performers are skilled at business decision making.	Performers are skilled at change management change implementation.		
	Behavior	Performers strive to ensure that the process delivered results needed to acheieve the enterprises goal.	Performers look for signs that the process should change, and they propose improvements to the process.		
Owner	Identity	The process comes first for the owner in terms of time allocation, mind share and personal goals.	The process owner is a member of the enterprise senior most decision making body.		
	Activities	The process owner works with other process owners to integrate processes to achieve the enterprises's goals.	The process owner develops a rolling strategic for the process, participates in enterprise level strategic planning, and collaborates with his or counterparts working for customers and suppliers sponsor interenterprise process redesign initiative.		
	Authority	The process owner controls the IT systems that support the process and any projects that change the process and some influence over personnel assignments and evaluation as well as the process's budget.	The process controls the process's budget and exerts strong influence over personnel assignment and evaluations.		
Infrastructure	Information System	An integrated IT system, designed with the process in mind and adhering to enterprise standards, supports the process.	An IT system with a modular architecture that adheres to industry standards for interenterprise comunication supports process.		
	Human Resources	Hiring, development, reward, and recognition systems emphasize the process's needs and results and balance them against the enterprise's needs.	Hiring, development, reward, and recognition systems reinforce the importance of intra and interenterprise collaboration, personal learning and organizational change.		
Metrics	Definition	The process's metrics as well as cross process metrcis have been derived from the	The process's metrics have been derived from interenterprise goals.		
	Uses	Managers present the metrics to process performers for awareness and motivation. The dashboards based on the metrcis for day to day management of the process.	Managers regularlyreview and refresh the process metrics and targets and use them in strategic planning.		

Source : Research's Data.

Figure 2 : Mapping of the processes' maturity level

About culture, the result indicates a level E1. Issues, such as teamwork, customer focus, accountability for results and proactive attitudes to seek changes, were placed as half-truths.

An example given by one of the respondents is the fact that, although the company gives full technical support to its customers, the process of attending complaints has nothing different, since there is no record about customer behavior.

In the respondents' point of view regarding the item skills, the company is at E2 level, although two of them presented a few exceptions. This position is more consistent due to the skill of the respondents than properly due to the company's structural support, considering not adopting any of the BPMS' tools or a corporate methodology specific for the processes' design. It is noteworthy that, as it is an engineering enterprise, the method that is used is for the design and management of workflow diagrams, in other words, handling routines.

The item governance is referred in terms of the process' governance. This means developing and maintaining a map of the corporate processes, showing who is responsible to govern it, that is, to conduct the process in favor of the company's performance and provide favorable conditions for the processes' integration. In this sense, the respondents' assessment pointed to a maturity level of E1. The management model does not consider the existence of formal or informal directive groups with the objective of improving processes actions.

According to the model, the relationship between trainers and enablers is directly proportional. Strong organizational capabilities strengthen the enablers, allowing a better execution of the processes. This means that an enterprise at level E1 is capable of having its processes at level P1. Companies at level E2 are ready to have their processes at level P2, and so on. The consolidated analysis respondents' point of view showed the following result. Leadership: E1; Culture: E1; Skills: E2; Governance: E1. As the result of the company's maturity level's measurement in order to support the processes' design and management actions, the company is at level E1. Comparing with the result that was obtained for the process maturity's level, P1, there is consistency in the data. Figures 3 and 4 present a consolidated framework mapping the company's maturity level. These figures determine if the organization is ready to support a process based transformation. They show the strength levels, E1 to E4 of the capabilities that enterprise need in order to develop their business process. If a statement is largely true (at least 80% correct) then the box will be green; if it is somewhat true (between 20 to 80% correct) then the color will be yellow; and if it is largely untrue (less than 20% correct) then the color will be red.

		E1	E2	E1	E2
Leadership	Awareness	The enterprise's senior executive team recognizes the need to improve operational performance, but has only limited undertanding of the power of business process.	At least one senior executive deeply understand the business process concept how the enterprise can use it to improve performance, and what is envolved in implementing it.		
	Alignment	The leadership of the process program lies in the middle management ranks.	A senior executive has taken leadership and reponsibilty for the process program performance.		
	Behavior	A senior executive endorses and invests in oprational improvement.	A senior executive has publicly set strech performance goals in customers terms and prepared to commit resources, make deeper changes, and move barriers in order to achieve those goals.		
	Style	The senior executive team has started shift from a top down hierarchgical style to na open colaborative style.	The senior executive team leading the process program is passionate about the instruments to change and process.		
Culture	Teamwork	Teamwork is project focused, ocacasional, atypical.	The enterprise commonly uses cross-functional project teams for improvement.		
	Customer focus	There is a widespread belief that customer focus is importante, but there is limited appreciation of what that means. There is also uncertainty and conflict about how to meet customer needs.	Employees realize that the purpose of their work is to deliver extraordinary customer value.		
	Responsibility	Accountability for results rests with managers.	Frontline personnel begin to take ownership results.		
	Attitude toward change	There is growing acceptance in the enterprise about the need to make a modest change.	Employees are prepared for significante change in how work is performed.		
Expertise	People	A small group of people has a deep appreciation for the power of the process.	A cadre of experts has skills in process redesign and implementation, project management, communications, and change management.		
	Methodology	The enterprise uses one or more methodologies for solving execution programs and making incremental process improvements.	Process redesign teams have acess to a basic methodology for process redesign.		
Governance	Process model	The eneterprise has identified some business process.	The enterprise has developed a complete enterprise process model and the senior executive team has accepted it.		
	Accountability	Functional managers are responsible for performance and project managers for improvement projects.	The process owners have accountability for individual processes and a steering committee is responsible for the enterprise overall progress with processes.		
	Integration	One or more groups advocate and support possibly distinct operational improvement techniques.	An informal coordinating body provides needed program management while a steering committee allocates resources for process redesign projects.		

Source: Research's Data.

Figure 3 : Mapping of the company's maturity level

		E3	E4	E3	E4
Leadership	Awareness	The senior executive team views the enterprise in process terms and has developed a vision of the enterprise and the process.	The senior executive team sees its own work in process terms and perceives process management not as a project but as a way of managing the business.		
	Alignment	There is a strong alignment in the senior executive team regarding the process program. There is also a network of people throughout the enterprise helping to promote process efforts.	People throughout the enterprise exhibit enthusiasm for process management and leadership roles in process effort.		
	Behavior	Senior executives operate as a team managing the enterprise through its processes and are actively engaged in the process program.	The members of the senior executive team perform their own work as processes cetered strategic planning on process and developing a new business opportunities based on high performance processes.		
	Style	The senior executive team has delegated control and authority to process owners and process performers.	The senior executive team exercises leadership through vision and influence rather than command and control.		
Cultura	Teamwork	Teamwork is the norm among process performers and is usual among menagers.	Teamwork with customers and suppliers is usual.		
	Customer focus	Employees understand that customers demand uniform excellence and a seamless experience.	Employees focus on collaborating with trade partners to meet the needs of final customers.		
	Responsibility	Employees feel accountable for enterprise results.	Employees feel a sense of mission in serving customers and achieving ever better performance.		
	Attitude toward change	Employees are ready for major multi-dimensional change.	Employees recognize change as inevitable and embrace it as a regular phenomenon.		
Expertise	People	A group of experts have skills in large scale as for change management and enterprise transformation.	Substantial numbers of people with skills in the process redesign and implementation, project management, program management, and change management are present across the enterprise. A formal process for developing and maintaining that skill base is also in place.		
	Methodology	The enterprise has developed and standardized a formal process for process redesign and has integrated it with a standard process for process improvement.	Process management and redesign have become core competencies and are embedded in a formal system that includes environment scanning, change planning, implementation, and process-centered innovation.		
Governance	Process model	The enterprise process model has been communicated throughout the enterprise and used to drive project priorization and is linked to enterprise level technologies and data.	The enterprise has extended its process model to connect with those of customers suppliers. It also uses the model in strategy dvelopment.		
	Accountability	The process owners sdhare accountability for the enterprises's performance.	A process council operates as the senior management body; performers share accountability for enterprise performance and the engterprise has established steering committes with customers and suppliers to drive interenterprise process change.		
	Integration	A formal program management office headed by a chief process officer coordinates and integrates all process projects and process council manages interprocess integration issues. The enterprise manages and deploy all process improvement techniques in an integrated manner.	The process owners work with their counterparts in customer and supplier enterprises to drive interenterprises process integration.		

Source : Research's Data.

Figure 4 : Mapping of the company's maturity level

As a final result, the research points to a level of consolidated maturity process at P1, but very close to P2. In this case, the variable to be addressed refers to the processes design's techniques, design, particularly in the categories purpose and context. That is, the processes must be designed with a vision end to end, which will allow a perfect identification and integration between the processes with a defined purpose and expected result.

Maturity Process P1: The processes are reliable, predictable and stable. Company's Maturity E1: The structural support that the company provides for the development of actions designing and managing processes is proportional to the results obtained by the processes.

V. Conclusion

Hammer's study originated from the year 2000 onwards when a group of people began to develop an itinerary for the execution of processes. The goal of this group was to understand, plan and evaluate transformation efforts based on process. This group's main motivator was the realization that, despite the intentions and business investment in transformation-based processes, the results were not satisfactory. The logic behind this finding is that the design of new business processes involves more than rearranging workflows: who does what, where and in what sequence.

When the proposed model was applied, what was possible to observe was that this division of analysis, segmented into two sets of variables, makes total sense. With the technological resources and management models that are currently available for the organizations, to invest in organizational transformations based on processes viewing a better performance, does not have, apparently, nothing that is complicated. While it is necessary to master the techniques and tools, trained personnel and resources in the necessary quantity and quality to obtain the desired results, it also depends on other structural variables.

With the results obtained in the case study, it is possible to conclude that, although the organization that was researched is a centennial and globalized company, its greater competencies refer to the technological mastery of the business. Being the market leader, their focus is exactly on the production processes, which gives them recognition and positioning.

Regarding the processes' performance it is evident the low level of maturity. The processes' performance is more related to the performance and the managers' competence than the processes themselves. The structural conditions that are offered by the company are bellow of what would be desired in all variables, both from the point of view of business capabilities or from the enablers.

The processes' maturity level P1, reliable and predictable, is very little for an industry leader and recognized for its detached technological position. It was expected to find a company that was organized and well managed with relation to their organizational processes with superior performance, proportional to its technological performance.

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Critical Analysis of Profile of Industrial Employees in Andhra Pradesh, India

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Abstract - The profile of the employees since globalization has undergone changes. The demographic studies show the influence of generation X in near future. The profile analysis of the workforce is useful in understanding the psychological, sociological and economic composition. The Human Re-source processes and systems are influenced by the profile of the employees. A study was undertaken by administering a questionnaire on 570 female and 358 male employees who belong to 13 public sector and 5 private sector organizations in the State of Andhra Pradesh. The sex and sector-wise analysis is presented on personal factors such as age, religion and caste, marital status, structure of the family, housing, migration, urbanization, education, job position and expe-rience, income and unionization to know the profiles of the industrial female, male, public and private sector employees.

GJMBR-A Classification : JEL Code: J54, J53

CRITICALANALYSISOFPROFILEOFINDUSTRIALEMPLOYEESINANDHRAPRADESHINDIA

Critical Analysis of Profile of Industrial Employees in Andhra Pradesh, India

Prof. P. Devaki Devi [α] & G. Venkat Rao [σ]

Abstract - The profile of the employees since globalization has undergone changes. The demographic studies show the influence of generation X in near future. The profile analysis of the workforce is useful in understanding the psychological, sociological and economic composition. The Human Resource processes and systems are influenced by the profile of the employees. A study was undertaken by administering a questionnaire on 570 female and 358 male employees who belong to 13 public sector and 5 private sector organizations in the State of Andhra Pradesh. The sex and sector-wise analysis is presented on personal factors such as age, religion and caste, marital status, structure of the family, housing, migration, urbanization, education, job position and experience, income and unionization to know the profiles of the industrial female, male, public and private sector employees.

I. Introduction

The behavior of organization is viewed as the overall performance assessment on the basis of interaction between the individuals and groups in all fields of management, the key arena being human resource management. The managers are expected to understand the integrated systems, human resources profile and their activities and human resources processes as 'people systems' aiming at longevity of high performing individuals. In this process the factors at consideration may be said as (a) individual differences to recognize the diverse needs (b) perceptions that are built out of life time experiences and accumulated values (c) employee as a whole person being affected by job life (d) motivated personality being exhibited by the employee based on his profile as well by the profile of the organization (e) design of involvement for the employee self-efficacy and mutual benefit and (f) value of the person as people expect to be treated as humans differently from machines (Stahl, 1995: 279). The psychological framework of the employees plays a pivotal role in designing and continuously improving the organizational processes and systems, the essence of the total quality management (Bratton, J and Gold J. 1994). The operating human resource management systems develop flexibility among the employees while adopting new work design, high product and process quality, high employee commitment and strategic integration which culminate and develop from the profile of the employees, both managers and operatives. All the more, it is presently expected that human resource management practices are based on 'unitarist' way of relationship between employer and the employed instead of 'pluralist' view of divergent interests between the 'two sides' (Cave, 1994,71 : 78). In the background of the preceding theoretical base, the analysis of the profile of the employees in the work organizations under the changing global industrial scenario is considered meaningful.

The Personal factors among the socio-economic characteristics treated under the employee profile are (1) age. (2) religion and caste, (3) marital status, (4) structure of the family, (5) housing, (6) migration, (7) urbanization, (8) educational level, (9) job position and experience, (10) income and (11) unionization.

II. Method of the Study

The profile of the industrial employees is analysed based on the data collected by administering a questionnaire on 570 female and 358 male employees by frequency matching who belong to 13 pubic sector and 5 private sector organizations in the State of Andhra Pradesh under the UGC Major Research Project(2002). The distribution of sample is shown in Annexure –I. The sex and sector-wise analysis is presented. The tabular data are presented in Annexure – II i.e., Table 1 to Table 13. Some tables show the data of only those employees who revealed information and hence totals vary.

a) Age

As behavioral dimensions change along with age, any profile at the outset is evidenced by the age. The average age of the employees is 36.69 years. The employees are distributed almost evenly in the age groups of 25 to 60 years (Table – 1). Those who are aged below 40 years i.e., youth form 55.60 per cent and the rest 44.41 per cent are aged 40 years and above.

The majority of the female employees (62.28%) are associated with the age groups of below 40 years while the male employees in this category form only 44.98 per cent. The females under 30 years age come to 35.14 per cent and the male proportion in this category is 19.56 per cent. Male employees (53.92%) are highly located in 40-55 years age group. The

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average age of the female and the male employees work out to 35.23 years and 39.03 years respectively and the mean difference is significant (t: 5.84).Sector-wise analysis indicates that the employee group who are under 40 years age forms 86.62 per cent in the private sector while this category in the public sector works out to only 40.86 per cent. The same trend is noticed even in the age groups of below 30 years (private sector: 59.53%; public sector: 15.58%). The average also shows that the mean age of the private sector employees is only 29.61 years while the same is 40.04 years in the case of the public sector employees and the mean difference is significant (t :17.51).

Sex and sector-wise analysis shows that among the males the private sector employees (50.73%) are more associated with the lower age groups (below 30 years) than the males of the public sector (12.11%). In case of the female employees also, the private sector females (62.18%) are more associated with lower age groups (below 30 years) than the public sector females (18.53%).

The males are slightly more aged than the females in the private sector. About half of the male employees (50.73%) in the private sector belong to less than 30 years age group while female employees in this category form 62.18 per cent. However, the mean difference is not significant (t: 1.01) between males and females in the private sector. In the public sector, the male employees category under 30 years age group works out to 12.11 per cent while the females form 18.53 per cent. Males higher than the females are located in the age groups of 40 years and above. The mean difference between the males and females in the public sector in significant (t: 2.69).

b) Religion and Caste

The people in Andhra Pradesh internalize their religion and caste in their family and job life, which influence the functioning and performance of the organization. The data on religion indicate that most of the employees among those who revealed their religion are Hindus (88.38%), next higher proportion (7.01%) belongs to Islam, 3.40 per cent to Christianity and 1.20 per cent belongs to other religions. Those who do not like to reveal information form 1.62 per cent (Table – 2).

The caste analysis (Table-2) indicates that most of the employees (74.68%) belong to the Forward castes, next proportion (18.53%) to Backward castes, next in order are the Scheduled Castes (5.60%) and the Scheduled Tribes (1.19%).

The female-male distribution reveals almost the similar trends. The public vs. private sector distribution shows that the Forward caste employees are in higher proportion in the Private sector (81.27%) than in the public sector (71.54%), hence reserved categories seem to be more in the public sector.

III. Marital Status

Marital status is another factor which influences behaviour and forms one of the elements of the profile. The data on marital status (Table 3) indicate that 97.84 per cent of the sample (908) reveals information. Among them 81.50 per cent are married, 18.39 per cent live alone as they are either separated, widowed or divorced from the spouse and 0.11 per cent are unmarried.

The female-male distribution reveals that among the females 78.38 per cent are married, while this category in males is 86.40 per cent. A group of 21.62 per cent are either separated, widowed or divorced in case of the females and this group forms only 13.31 per cent among the males. Among this group, in case of both the males (95.74%) and females (88.33%), the separated are the highest. 'Others' category is higher in the private sector (34.50%) than in the public sector (10.84%).

IV. Structure of the Family

In contemporary times, the nuclear family structure is a sociological phenomenon. As the people move away from native places in search of employment, it is common that nuclear family structure exists in case of industrial employees.

The analysis also depicts that 80.28 per cent of the responded employees have nuclear family. Of them, 65.34 per cent have complete family and the rest (14.95%) have incomplete family. Those who live in joint family form 19.72 per cent and of them 12.24 per cent have the vertical family structure and the rest (7.47%) has the lateral family structure (Table 4). The female-male analysis reveals that in both the cases (82.17%) females and 77.38% males) nuclear family structure is common.

Sector-wise analysis depicts that more number of the employees in the public sector have nuclear family set up (83.73%) compared to the private sector (71,74%). Sector and sex-wise analysis indicates that in the private sector no difference exists between males and females while in the public sector male employees (21.22%) with joint-family set up are higher than the females (12.25%).

V. Housing

As to how the employees in the industries have housing facilities is a matter of analysis. A group of 78.23 per cent of the sampled employees (726) reveals their housing facility. Among them, a majority of the employees (56.61%) own a house, the next higher proportion (38.98%) has rented accommodation and the rest (4.41%) reside in the company quarter (Table – 5). The female-male distribution depicts that 61.26 per cent of the males, more than females (53.30%) have own house and more female employees (41.98%) than the males (34.77%) reside in rented house. The males (3.97%) and females (4.72%) who live in the company quarter are almost similar.

Sector-wise analysis indicates that while majority of the public sector employees (60.07%) have own house, majority of the private sector employees (53.51%) live in rented house. It is a fact that only public sector employees reside in the company quarter (5.91%).

Sector and sex-wise analysis shows that in the public sector, a majority of males (63.11%) and the females (57.58%) have their own house; in case of the private sector, majority of males (53.45%) have own house while majority of the females (56.69%) reside in rented house.

VI. Migration

The employees' mobility is known from the migratory character. The data analysis reveals that 87.15 per cent belong to the native State and those from other States form 12.85 per cent (Table – 6). However, inter-district migration is found to be common.

It is noticed that the females (15.54%) more than the males (8.63%) come from other States. Sector-wise analysis depicts that more public sector males (10.18%) than the private sector males (1.54%) come from other States and more females in the private sector (20.55%) than the females in the public sector (12.20%) move from other states. Male-female differences are glaring only in the private sector, the females (20.55%) more than the men (1.54%) come from other States.

VII. Urbanisation

The most of the sampled industries are urban based. As to how the employees are associated with nativity, either urban or rural is analysed. The data reveal that majority of the employees (68.15%) are urban by birth and about one-third (31.85%) have rural background indicating that the second generation employees emerged in the cities (Table-7).

Female-male distribution shows that more females (71.80%) than the males (62.61%) have the urban background. Sector-wise analysis depicts that glaring difference does not exist between public (69.31%) and the private sector (65.65%) employees. However, in both the sectors, females with urban background and males with rural background are higher.

VIII. Education

Education is a key factor of the profile which influences the behaviour of the employees. The data on educational level reveal that most of the employees are highly educated, either up to collegiate (42.56%) or post-graduate level (47.74%) as they are urbanites (Table – 8). The average education level of the employees works out to 15.49 years.

Female-male distribution indicates that there is no variation (t : 1.41) between the educational levels of the males (X : 15.72 years) and the females (X: 15.34 years).

Sector-wise analysis shows that education of the public sector employees (X: 15.75 years) is higher than the private sector employees (X: 14.93 years) and the mean difference is significant (t : 2.91). There are no sex-wise glaring differences in between the sectors.

IX. Job Position

The designation or the job position moulds the attitudinal and behavioral pattern of the employees and is another key element of the profile. The data indicate that the highest proportion of the employees (25.86%) is in junior management cadre, next higher proportion (18.43%) is workers (Table – 9). The middle management cadre forms 17.89 per cent and the clerical staff work out to 16.16 per cent. The supervisory staff forms 10.88 per cent. The doctors, pharmacists, nurses etc., come to 8.73 per cent, and the top management employers in the sample form 2.05 per cent. Overall, the management cadre works out to 45.80 per cent. The presence of more managerial personnel is attributed to the inclusion of the software companies.

The female-male differences are not noticed. Sector-wise analysis indicates that the managers group is slightly higher in the private sector (50.84%) than in the public sector (43.41%). However, the workers category is more common in the private sector (34.75%) than in the public sector (10.81%). The clerical staff is in higher proportion in the public sector (22.42%) compared to the private sector (3.01%). The supervisory staff is found to be in higher proportion in the public sector (14.3%) than in the private sector (3.68%).

The item-wise analysis on job position and caste depicts that 89.47 per cent of the senior managers belong to Forward castes. Among the Backward castes, the highest proportion (28.49%) belongs to worker category and the next group (26.16%) to junior level management (Table – 10). Among the Scheduled Castes, three-fifths (59.62%) belong to either clerical (34.62%) or worker cadre (25.00%). About one-fifth of the Scheduled caste employees (21.15%) are in managerial position. The Scheduled Tribe employees belong to either junior-management (45.45%) or supervisory cadre (36.36%). It is also true that among the managers, 81.41 per cent belong to Forward Castes while their presence in the sample is 74.68 per cent.

a) *Job Experience*

Maturity in job handling also is one of the prime characteristics of a profile. The data on this aspect show that most of the employees are having job experience of below 20 years (86.64%). Among the employees, majority (60.99%) have job experience of 10-20 years

(Table –11). The average experience level is 13.26 years.

The female-male analysis reveals that most of the females (88.95%) and the males (82.96%) have job experience of below 20 years. However, the females with job experience of below 10 years form 31.93 per cent while in male group it is only 15.64 per cent. The average experience of the males (15.56 years) and the females (12.70 years) vary significantly (t : 6.05).

The sector-wise distribution indicates that while 85.62 per cent of the private sector employees have job experience of below 15 years, the group in the public sector forms only 33.86 per cent. The public sector employees (X: 13.82 years) and the private sector employees (X: 12.08 years) differ significantly in the job experience. It is also true that the males (X: 12.41 years) and the females (X: 11.98 years) of the private sector vary in case of job experience (t: 2.29) while no significant difference is noticed in the public sector (t: 1.01) between the males (X: 13.90 years) and the females (X : 13.82 years).

X. Income

The economic level of the employee has impact on formation of his attitudes and behavioral pattern. The average salaried income of the employee is Rs.9, 321. The details (Table – 12) indicate that most of the employees (79.85%) receive salary between Rs.3, 000 and 15,000. The highest proportion of the employees (28.34%) has income of Rs. 6,000 – 9,000. The next highest proportion (20.26%) gets monthly income of Rs. 12,000-15,000. Those who draw below Rs. 3,000 form only 6.79 per cent and Rs. 24,000 and above account to 0.86 per cent.

The female-male analysis depicts that the most of the employees among the females (79.64%) and the males (80.17%) get salary between Rs. 3,000-15,000. The variations in individual groups between females and males are marginal. The average income shows that the males draw more (X = Rs.10, 160) than the females (x = Rs.8, 794/-) and the difference is significant (t : 3.34).

The sector-wise details indicate that the highest proportion of the private sector employees (32.44%) draw salary of Rs. 12,000 –15,000 and in case of the public sector, highest proportion (36.41%) draw income of Rs. 6,000-9,000. It is also noticed that the private sector employees who draw salary below Rs. 3,000 are higher (13.71%) than the public sector employees (3.50%). However, the mean difference in salary of the public and private sector employees is not significant (t : 1.02). But the difference is noticed (t = 3.71) in between the males and females of the public sector employees.

XI. Unionisation

An attempt is made to find out the pattern of the employee unionisation. The data indicate that among the total sample, only 28.66 per cent accept that they have membership in a union and most of the employees (71.34%) are not unionized (Table – 13).

The male-female distribution depicts that slightly more males (3.40%) than the females (26.82%) are unionized. Sector-wise data show that higher proportion of the public sector employees (33.23%) compared to the private sector employees (19.06%) are unionized. It is also true that slightly more number of males (36.33%) than the females (30.59%) in the public sector and more number of females (20.00%) than the males (15.94%) in the private sector are unionized.

XII. Conclusions

The profile of the industrial employee of Andhra Pradesh is characterized by the following features: The average age of the employees is 36.69 years and the female lower age and the private sector employees with significantly differ from the male and public sector employees. Most of the employees (88.38%) are Hindus and belong to Forward castes (74.68%). Sex-wise variation is not found. However, Forward caste employees are noticed to be higher in the private sector (81.27%) than in the public sector (71.54%) as reserved categories find place more in the public sector. About four-fifths of the employees (81.50%) are married, and more females (21.62%) than the males (13.31%) are living without spouse and this is more common in the private sector.

The four-fifths of the employees live in nuclear family and no variation is found between the males and the females but more private sector employees compared to the public sector have nuclear family setup. Majority of employees (56.61%) own a house. More males and the public sector employees have own house. Most of the employees belong to the native State, females in more number migrate and intra-district migration is common.

About two-thirds of the employees are urban by birth indicating the second generation employees. More females than the males have urban background. The employees are highly educated with 15.49 years of average education with no variation between males and the females. However, public sector employees are more educated than the private sector employees.

The employees highly belong to the management cadre which may be due to the inclusion of software professionals and flat structure is common. The sex and sector-wise differences are absent. It is also true that most of the senior managers belong to Forward castes, workers group to Backward castes, Scheduled castes to supervisory cadre and Scheduled Tribes to junior management cadre. It is true that

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worker cadre is highly found in the private sector while supervisory cadre is more common in the public sector.

Most of the employees have below 20 years of job experience with average experience of 13.26 years and the males and females significantly differ in their experience as females have lower experience. The public sector employees with higher experience significantly differ from the private sector employees.

The salary level is Rs. 9,321 and females draw significantly lesser salary than the male employees and variation is found based on sector distribution.

Surprisingly only 28.66 per cent of employees accept that they have membership in a union and most of them (71.34%) are not unionized. The males (32.40%) slightly higher than the females (26.82%) are unionized. The public sector employees are highly unionized (33.23%) than the private sector employees (19.06%).

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Annexure 1 : Sample Distribution

Sl.No.	Sector	Name of the Organisation	No. of Females	No. of Males	Total
1	Public	Rashtriya Ispat Nigam Limited (Visakhapatnam Steel Plant), Visakhapatnam	34	30	64
2	Public	Bharat Heavy Plate and Vessels, Visakhapatnam	46	42	88
3	Public	Hindustan Shipyard Limited, Visakhapatnam	50	35	85
4	Public	Hindustan Zinc Limited, Visakhapatnam	25	24	49
5	Public	Electronic Corporation of India Limited, Hyderabad	102	95	197
6	Public	Mishra Dhatu Nigam Limited, (MIDHANI) Hyderabad	3	3	6
7	Public	HMT Bearings Limited, Hyderabad	4	5	9
8	Public	Nizam Sugars Limited, Hyderabad	7	1	8
9	Public	CMC Limited, Hyderabad	34	28	62
10	Public	Andhra Pradesh Foods Limited, Hyderabad	12	13	25
11	Public	India Government Mint, Hyderabad	5	3	8
12	Public	D.A.V. Public School, Visakhapatnam	9	0	9
13	Public	King George Hospital, Visakhapatnam	9	10	19
14	Private	Satyam Computers Software Limited, Hyderabad	137	32	169
15	Private	Chitivalsah Jute Mills Limited, Chitivalsah	43	9	52
16	Private	Priyadarshini Spinning Mills Limited, Hyderabad	36	21	57
17	Private	Annapurna Cotherm Controls S (P) Limited, Hyderabad.	3	0	3
18	Private	Godrej and Boyce Manufacturing Company Limited, Hyderabad	11	7	18
		Total :	570	358	928

Annexure 11

Table 1 : Age Wise Distribution

	Male			Female					
Age in years	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females	Total Private Sector	Total Public Sector	Total Employees
1. Below 20	4 5.80%	1 0.35%	5 1.40%	8 3.48%	0	8 1.40%	12 4.01%	1 0.16%	13 1.40%
2. 20 - 25	12 17.39%	7 2.42%	19 5.31%	71 30.87%	13 3.82%	84 14.74%	83 27.76%	20 3.18%	103 11.10%
3. 25 - 30	19 27.54%	27 9.34%	46 12.85%	64 27.83%	50 14.71%	114 20.00%	83 27.76%	77 12.24%	160 17.24%
4. 30 - 35	13 18.84%	39 13.49%	52 14.53%	33 14.35%	43 12.65%	76 13.33%	46 15.38%	82 13.04%	128 13.79%
5. 35 - 40	9 13.04%	30 10.38%	39 10.89%	26 11.30%	47 13.82%	73 12.81%	35 11.71%	77 12.24%	112 12.09%
6. 40 - 45	9 13.04%	56 19.38%	65 18.16%	7 3.04%	72 21.18%	79 13.86%	16 5.35%	128 20.35%	144 15.52%
7. 45 - 50	1 1.45%	81 28.03%	82 22.91%	15 6.52%	74 21.76%	89 15.61%	16 5.35%	155 24.64%	171 18.43%
8. 50 - 55	1 1.45%	45 15.57%	46 12.85%	4 1.74%	36 10.59%	40 7.02%	5 1.67%	81 12.88%	86 9.27%
9. 55 - 60	1 1.45%	3 1.04%	4 1.12%	2 0.87%	5 1.47%	7 1.23%	3 1.00%	8 1.27%	11 1.19%
	69	289	358	230	340	570	299	629	928
Total	100	100	100	100	100	100	100	100	100

Table 2 : Caste of the Employees

Marital status Caste	Male			Female					
	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females	Total Private Sector	Total Public Sector	Total Employees
1. Forward Castes	54 78.26%	206 71.29%	260 72.63%	189 82.17%	244 71.76%	433 75.96%	243 81.27%	450 71.54%	693 74.68%
2. Backward Castes	13 18.84%	64 22.15%	77 21.51%	38 16.52%	57 16.76%	95 16.67%	51 17.06%	121 19.24%	172 18.53%
3. Scheduled Castes	2 2.90%	17 5.88%	19 5.31%	2 0.87%	31 9.12%	33 5.79%	4 1.34%	48 7.63%	52 5.60%
4. Scheduled Tribes	0	2 0.69%	1 0.56%	1 0.43%	8 2.35%	9 1.58%	1 0.33%	10 1.59%	11 1.19%
Total	69 100.00	289 100.00	358 100.00	230 100.00	340 100.00	570 100.00	299 100.00	629 100.00	928 100.00

Table 3 : Marital Status

Marital Status	Public Sector			Private Sector			Total Males	Total Females	Total Employees
	Males	Females	Total	Males	Females	Total			
1. Married	264 91.99%	287 89.71%	551 89.16%	41 62.12%	148 66.07%	189 65.17%	305 86.40%	435 78.38%	740 81.50%
2. Unmarried	0	0	0	1 1.52%	0	1 0.34%	1 0.28%	0	1 0.11%
3. Others a. Divorces	1 0.35%	3 0.91%	4 0.65%	0	0	0	1 0.28%	3 0.54%	4 0.44%
b. Widowed	1 0.35%	9 2.72%	10 1.62%	0	2 0.89%	2 0.69%	1 0.28%	3 0.54%	12 1.32%
c. Separated	21 7.32%	32 9.67%	53 8.58%	24 36.36%	74 33.04%	98 33.79%	45 12.75%	106 19.1%	151 16.63%
Others Total	23 8.01%	44 13.29%	67 10.84%	24 36.36%	76 33.93%	100 34.48%	47 13.31%	120 21.62%	167 18.39%
Total	287 100%	331 100%	618 100%	66 100%	224 100%	290 100%	353 100%	555 100%	908 100%

Table 4 : Structure of the Family

Structure of the family	Public Sector			Private Sector			Total Males	Total Females	Total Employees
	Males	Females	Total	Males	Females	Total			
Nuclear Family a) Complete	156 63.67%	217 71.85%	373 68.19%	39 65.00%	95 55.88%	134 58.26%	195 63.93%	312 66.24%	507 65.34%
b) Incomplete	37 15.1%	48 15.89%	85 15.54%	4 6.67%	27 15.88%	31 13.48%	42 13.44%	75 15.92%	116 14.95%
Total A	193 78.78%	265 87.75%	458 83.73%	43 71.67%	122 71.76%	165 71.74%	236 77.38%	387 82.17%	623 80.28%
Joint Family a) Vertical	32 13.06%	27 8.94%	59 10.79%	10 16.67%	27 15.88%	37 16.09%	42 13.77%	53 11.25%	95 12.24%
b) Lateral	20 8.16%	10 3.31%	30 5.48%	7 11.67%	21 12.35%	28 12.17%	27 8.85%	31 6.58%	58 7.47%
Total B	52 21.22%	37 12.25%	89 16.27%	17 28.33%	48 28.24%	65 28.26%	69 22.62%	84 17.83%	153 19.72%
Total A & B	245 100%	302 100%	547 100%	60 100%	170 100%	230 100%	305 100%	471 100%	776 100%

Table 5 : Housing

Type of housing	Public Sector			Private Sector			Total	Total	Total
	Males	Females	Total	Males	Females	Total	Males	Females	Employees
Own	154 63.11%	171 57.58%	325 60.07%	31 53.45%	55 43.31%	86 46.49%	185 61.26%	226 53.30%	411 56.61%
Quarter	12 4.92%	20 6.73%	32 5.91%	0	0	0	12 3.97%	20 4.72%	283 38.98%
Rented	78 31.97%	106 35.69%	184 34.01%	27 46.55%	72 56.69%	99 53.51%	105 34.77%	178 41.98%	32 4.41%
Total	244 100%	297 100%	541 100%	58 100%	127 100%	185 100%	302 100%	424 100%	726 100%

Table 6 : Migration

Migration	Public Sector			Private Sector			Total Males	Total Females	Total Employees
	Males	Females	Total	Males	Females	Total			
From other States	28 10.18%	40 12.20%	68 11.28%	1 1.54%	45 20.55%	46 16.20%	29 8.53%	85 15.54%	114 12.85%
Within the State	247 89.82%	288 87.80%	535 88.72%	64 98.46%	174 79.45%	238 83.80%	311 91.47%	462 84.46%	773 87.15%
Total	275 100%	328 100%	603 100%	65 100%	219 100%	284 100%	340 100%	547 100%	887 100%

Table 7 : Urbanisation

Category	Public Sector			Private Sector			Total	Total	Total
	Males	Females	Total	Males	Females	Total	Males	Females	Employees
Urban	172 64.18%	221 73.91%	393 69.31%	34 55.74%	138 65.66%	172 65.65%	206 62.61%	359 71.80%	565 68.15%
Rural	96 35.82%	78 26.09%	174 30.69%	27 44.26%	90 34.34%	90 34.35%	123 37.39%	141 28.20%	264 31.85%
Total	268 100%	299 100%	567 100%	61 100%	201 100%	262 100%	329 100%	500 100%	829 100%

Table 8 : Educational Level of the Employees

Education	Male			Female			Total Private Sector	Total Public Sector	Total Employees
	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females			
1. Primary (5 years and below)	4 5.80%	1 0.35%	5 1.40%	10 4.35%	1 0.29%	11 1.93%	14 4.68%	2 0.32%	16 1.72%
2. Secondary (6 - 10 years)	10 14.49%	17 5.88%	27 7.54%	21 9.13%	26 7.65%	47 8.25%	31 10.37%	43 6.84%	74 7.97%
3. Collegiate (11 - 15 years)	28 48.58%	137 47.40%	165 46.09%	64 27.83%	166 48.82%	230 40.35%	92 30.77%	303 48.17%	395 42.56%
4. Post-graduation (16 years and above)	27 39.13%	134 46.37%	161 44.97%	135 58.70%	147 43.24%	282 49.47%	162 54.18%	281 44.67%	443 47.74%
Total	69 100.00	289 100.00	358 100.00	230 100.00	340 100.00	570 100.00	299 100.00	629 100.00	928 100.00

Table 9 : Job position or Designation of the employees

Job position	Male			Female			Total Private Sector	Total Public Sector	Total Employees
	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females			
1. Senior manager	4 5.80%	4 1.38%	8 2.23%	4 1.74%	7 2.06%	11 1.93%	8 2.68%	11 1.75%	19 2.05%
2. Middle manager	11 15.94%	57 19.72%	68 18.99%	52 22.61%	46 13.53%	98 17.19%	63 21.07%	103 16.38%	166 17.89%
3. Junior manager	9 13.04%	79 27.34%	88 24.58%	72 31.30%	80 23.53%	152 26.67%	81 27.09%	159 25.28%	240 25.86%
4. Supervisory staff	7 10.14%	45 15.57%	52 14.53%	4 1.74%	45 13.24%	49 8.60%	11 3.68%	90 14.31%	101 10.88%
5. Worker	22 31.88%	34 11.76%	56 15.64%	81 35.22%	34 10.00%	115 20.18%	103 34.45%	68 10.81%	171 18.43%
6. Clerical staff	9 13.04%	47 16.26%	56 15.64%	0	94 27.65%	94 16.49%	9 3.01%	141 22.42%	150 16.16%
7. Others (Doctors, Pharmacists, nurses, etc.)	7 10.14%	23 7.96%	30 8.38%	17 7.39%	34 10.00%	51 8.95%	24 8.03%	57 9.06%	81 8.73%
Total	69 100%	289 100%	358 100%	230 100%	340 100%	570 100%	299 100%	629 100%	928 100%

Table 10 : Job Position and Caste

S.No.	Designation/Job position	Forward Castes	Backward Castes	Scheduled Castes	Scheduled Tribes	Total Employees
1	Senior Manager	17 2.45%	2 1.16%	0	0	19 2.05%
2	Middle Manager	144 20.78%	16 9.30%	6 11.54%	0	166 17.89%
3	Junior Manager	185 26.70%	45 26.16%	5 9.62%	5 45.45%	240 25.86%
4	Supervisory staff	75 10.82%	19 11.05%	6 11.54%	1 9.09%	101 10.88%
5	Worker	108 15.58%	49 28.49%	13 25.00%	1 9.09%	171 18.43%
6	Clerical Staff	104 15.01%	24 13.95%	18 34.62%	4 36.36%	150 16.16%
7	Others (Doctors, Pharmacists, Nurses and etc.)	60 8.66%	17 9.88%	4 7.69%	0	81 8.73%
	Total	693 100.00%	172 100.00%	52 100.00%	11 100.00%	928 100.00%

Table 11 : Job Experience of the Employees

Job Experience	Male			Female			Total	Total	Total
	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females	Private Sector	Public Sector	Employees
1. Below 5 years	20 28.29%	7 2.42%	27 7.54%	131 56.96%	11 3.24%	142 24.91%	151 50.50%	18 2.86%	169 18.21%
2. 5 - 10 years	18 26.09%	11 3.81%	29 8.10%	26 11.30%	14 4.12%	40 7.02%	44 14.72%	25 3.97%	69 7.44%
3. 10 - 15 years	18 26.09%	75 25.95%	93 25.98%	43 18.70%	95 27.94%	138 24.21%	61 20.40%	170 27.03%	231 24.89%
4. 15 - 20 years	11 15.94%	137 47.90%	148 41.34%	19 8.26%	168 49.41%	187 32.81%	30 10.03%	305 48.49%	335 36.10%
5. 20 - 25 years	1 1.45%	37 12.80%	38 10.61%	4 1.74%	37 10.88%	41 7.19%	5 1.67%	74 11.76%	79 8.51%
6. 25 - 30 years	0	14 4.84%	14 3.91%	3 1.30%	10 2.94%	13 2.28%	3 1.00%	24 3.82%	27 2.91%
7. 30 - 35 years	1 1.45%	8 2.77%	9 2.51%	3 1.30%	3 0.88%	6 1.05%	4 1.34%	11 1.75%	15 1.62%
8. 35 - 40 years	0	0	0	1 0.43%	2 0.59%	3 0.53%	1 0.33%	2 0.32%	3 0.32%
Total	69 100.00	289 100.00	358 100.00	230 100.00	340 100.00	570 100.00	299 100.00	629 100.00	928 100.00

Table 12 : Income level of the Employees

Salary per month	Male			Female			Total	Total	Total Employees
	Private Sector	Public Sector	Total Males	Private Sector	Public Sector	Total Females	Private Sector	Public Sector	
1. Below Rs. 3000	9 13.04%	6 2.08%	15 4.19%	32 13.91%	16 4.71%	48 8.42%	41 13.71%	22 3.50%	63 6.79%
2. Rs. 3000 - 6000	23 33.33%	44 15.22%	66 18.44%	46 20.00%	43 12.65%	89 15.61%	69 23.08%	87 13.83%	156 16.81%
3. Rs. 6000 - 9000	11 15.94%	83 28.72%	84 26.26%	23 10.00%	146 42.94%	169 29.65%	34 11.37%	229 36.41%	263 28.34%
4. Rs. 9000 - 12000	8 11.59%	60 20.76%	68 18.99%	5 2.17%	62 18.24%	67 11.75%	13 4.35%	122 19.40%	135 14.55%
5. Rs. 12000 - 15000	7 10.14%	52 17.99%	59 16.48%	90 39.13%	39 11.47%	129 22.63%	97 32.44%	91 14.47%	188 20.26%
6. Rs. 15000 - 18000	3 4.35%	22 7.61%	25 6.98%	30 13.04%	19 5.59%	49 8.60%	33 11.04%	41 6.52%	74 7.97%
7. Rs. 18000 - 21000	2 2.90%	15 5.19%	80 5.03%	4 1.74%	6 1.76%	10 1.75%	6 2.01%	21 3.34%	27 2.91%
8. Rs. 21000 - 24000	2 2.90%	2 0.69%	4 1.12%		4 1.18%	4 0.70%	2 0.67%	6 0.95%	8 0.86%
9. Rs. 24000 & above	4 5.80%	5 1.73%	9 2.51%		5 1.47%	5 0.88%	4 1.34%	10 1.59%	14 1.51%
Total	69 100%	289 99.99%	358 100%	230 100%	340 100.01%	570 99.99%	299 100%	629 100.01%	928 100%

Table 13 : Unionisation of the Employees

Membership in union	Public Sector			Private Sector			Total Males	Total Females	Total Employees
	Males	Females	Total	Males	Females	Total			
1. Yes	105 36.33%	104 30.59%	209 32.23%	11 15.94%	46 20.00%	57 19.06%	116 32.40%	150 26.32%	266 28.66%
2. No	184 63.67%	236 69.41%	420 66.77%	58 84.06%	184 80.00%	242 80.94%	242 67.60%	420 73.68%	662 71.34%
Total	289 100%	340 100%	629 100%	69 100%	230 100%	299 100%	358 100%	570 100%	928 100%

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Satisfactory Level of Undergraduate Students with Academic Library: A Case Study of Faculty of Management Studies and Commerce, University of Jaffna, Sri Lanka

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Abstract - An academic library plays a vital role in order to contribute to its users in an efficient and effective manner to satisfy their thirst of knowledge as well as in our information society. They help to connect people with the ever changing world of information. This article investigates satisfactory level of undergraduates of Faculty of Management Studies & Commerce with the facilities offered by the main library, University of Jaffna. A self-developed questionnaire was used to measure the satisfaction on the statements relating to four dimensions with a sample of 202 students. Mean analysis reflects that students were relatively most satisfied with competence of library staff, followed by information sources, library environment and library general services. According to the regression analysis, library facilities have an impact on undergraduate satisfaction at the rate of 20.1 % which is significant at 0.05 levels.

Keywords : library facilities; students' satisfaction; academic library.

GJMBR-A Classification : JEL Code: J28

SATISFACTORYLEVELOFUNDERGRADUATESTUDENTSWITHACADEMICLIBRARYACASESTUDYOFFACULTYOFMANAGEMENTSTUDIESANDCOMMERCEUNIVERSITYOFJAFFNASRILANKA

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N. Sivathaasan

Abstract - An academic library plays a vital role in order to contribute to its users in an efficient and effective manner to satisfy their thirst of knowledge as well as in our information society. They help to connect people with the ever changing world of information. This article investigates satisfactory level of undergraduates of Faculty of Management Studies & Commerce with the facilities offered by the main library, University of Jaffna. A self-developed questionnaire was used to measure the satisfaction on the statements relating to four dimensions with a sample of 202 students. Mean analysis reflects that students were relatively most satisfied with competence of library staff, followed by information sources, library environment and library general services. According to the regression analysis, library facilities have an impact on undergraduate satisfaction at the rate of 20.1 % which is significant at 0.05 levels.

Keywords : library facilities; students' satisfaction; academic library.

I. Introduction

Academic library functions as the heart of any university and supports their universities' goals of developing and maintaining successful research programs. In other words, an academic library is a library that is attached to an academic institution above the secondary level, serving the teaching and research needs of students and staff. According to Kotso (2010), libraries assist research process by collecting, presserving and making available an array of information resources relevant to their research community. An effective and efficient library system can significantly contribute to the lecturers, students and other users' development in a wider perspective. Nwalo (2003) describes the effectiveness of a library as how well the library meets the users' needs relative to the library goals and objectives.

The academic libraries are currently facing their greatest challenge due to global digital revolution (Chandrasekar and Murugathas, 2012). Users can access the libraries' resources without stepping into the library building. They can also easily access those resources online. Daisy (2006) found that most respondents were somewhat or very satisfied with overall library services and staff performance; moderately satisfied with the print collection; and least satisfied with space and ventilation; lack of study areas and the noisy environment. The helpfulness of the staff was rated the best.

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II. Research Problem

Satisfying users' needs in the academic libraries has been the primary objectives of libraries and librarians (Norliya, 2009). Generally, academic libraries receive new students from various faculties with different needs and expectations every year. Students' satisfactory level is an important issue in terms of survival of an academic library. Because, the user community is the most important component of a library. Every information service exists for the sole aim of satisfying its users (Daisy, 2006).

In the library field, researchers usually approach user satisfaction in traditional way in which researchers emphasize the investigation of user material needs and fulfillment - what users requested and received from libraries (Fei Yu, 2006). Because, the physical objects (e.g., books and journals) are the main focus of these studies. Library literature usually interprets the fulfillment of user needs by assessing whether users have obtained the materials they were seeking. The impact of educational services provided by a university on the satisfaction level has largely been an area that remains unexplored (Muhammed Nauman Abbasi *et al.,* 2011).

The present study is initiated to find out that whether undergraduates are satisfied with the facilities offered by Main Library or not? Further, it measures how library facilities influence on students' satisfaction.

III. Objective of Study

The main object of the study is to find out the satisfactory level with the library facilities offered by the main library and sub objectives are:

- To identify the relationship between library facilities and undergraduate satisfaction.
- To identify the impact of library facilities on students' satisfaction.
- To provide suggestion to improve the satisfactory level by using Library.

IV. Review of Literature

Satisfaction is generally defined in Oxford Dictionaries as fulfillment of one's wishes, expectations, or needs. Kotler *et al.* (2009) define satisfaction as "a person's feeling of pleasure that result from comparing a product's perceived performance or outcome to their expectation". It means if the performance matches the expectation, the customer will be satisfied. Thus number of studies has been done by number of scholars. Velnampy and Sivesan(2008) have expressed that job satisfactions are positively associated with employee performance.

Thiruchelvam. S J and Velnampy T (2010) internal and external organizational elements have a relationship with employee Psychological Empowerment. Velnampy (2008), in his study on job attitude and employees performance concluded that job satisfaction contains positive influence on the performance of the employees as it enhances job involvement and the higher performance also makes people feel more satisfied and committed to the organization. The satisfaction and performance of the employee works in a cycle and are interdependent. Job satisfaction and involvement of the employee leads him to have high levels of performance. The concept of the psychological contract is at least as important in understanding and managing motivation as the technical elements of the economics and transactions aspects of incentives (Velnampy, 2006).

Students have many reasons for using the facility. Akobundu (2007) found out that text books usage account for most reasons for library visits. Popoola (2001) observes that information availability does not mean accessibility and use, and that academic libraries should stimulate primary demand for their products and services. An under resource library will therefore not serve its cardinal purpose and hence undermine effective academic in improving the academic facility to suit its general expectations.

Numerous studies have addressed the issue of service quality and student satisfaction. For instance, Fitri *et al.* (2008) have observed service quality dimension i.e. tangibility, responsiveness, reliability, assurance, and empathy as positive contributions towards student satisfaction. Effectiveness must be measured in terms of how well a service satisfies the demand placed upon it by the users (Lancaster, 1993).According to Chandrasekar and Murugathas (2012), study clearly enumerated that the efficiency of some of the services currently available such as inter-library loan, selective dissemination of information and current awareness services were not met the undergraduates' expectations. But, Muhammed Nauman Abbasi *et al.* (2011) studied that student satisfied with many core services or facilities like teaching, administrative support, library, labs, accommodation, medical and sports, while satisfaction has been reported only in three augmented areas like transportation, class room and prayer facilities. Further, he noticed that no significant differences of opinion have been recorded among male and female respondents. But, Omehia and Boma (2008) wrote that there are considerable and significant divergences between students and academic discipline (science, social sciences and humanities and arts) on their use of library services. They studied the differences among academic disciplines, year of study, and socio-economic background as independent variables in students' use of library services in the University of Uyo and found the variation in library use based on academic discipline. Williams (1995) surveyed Canadian undergraduate library use, and found that active learners who participate more in class, and who read, write and study more are regular and active library users. Fowowe (1989) found differences in the frequency of library use of by faculty and students, and that 94.8% of students use library facilities.

The present study of measuring satisfaction is a follow up of the previous study and seeks to determine the satisfactory level of undergraduates with the library facilities offered, as no significant study has probed the issue of student satisfaction of the Faculty of Management Studies and Commerce, University of Jaffna.

V. Data Collection

The researcher excluded the five respondents who were initially used for the validation of the instrument and questionnaire was pretested to check for its clarity and the redesigned to address the objectives of the assessment. The primary and secondary data were collected for the study. Primary data were collected through questionnaires and secondary data were collected from books, journals, and magazines, research reports etc.

VI. Population and Sample

The general population for this study is composed of Faculty of Management Studies and Commerce's students. This survey was conducted during August to October 2012 and data was collected on variables related to the services provided at the Main Library such as library usage, information sources available, library facilities, library environment and capacity of library staff. Total population was seven hundred (700) students of the Faculty of Management Studies and Commerce. A sample of 248 students who were using the library facilities at the time of the survey was randomly selected according to the table for determining sample size from a given population (Krejcie and Morgan, 1970) at 95% of confidence level. The researchers gathered 220 questionnaires, yielding a response rate of 89.7 per cent. Finally, 202 (81.4 per cent) questionnaires were fully and correctly completed. All data collection procedures were designed to ensure the anonymity.

Table 1 : Number of respondents by Demographic Information

Characteristics		Frequency	Percent
Year of Study	First Year	52	25.7
	Second Year	64	31.7
	Third Year	37	18.3
	Final Year	49	24.3
Gender	Male	105	52.0
	Female	97	48.0
Specialization	Accounting	55	27.2
	Finance	79	39.1
	Marketing	34	16.8
	HRM	34	16.8

It should be noted that every questionnaire was personally handed over and instructions were given to each students before completing the questionnaire. In terms of demographic findings, 52 % of respondents were males, and the remaining 48 % were females. The majority of the respondents with 31.7 % were second year students.

VII. Methodology

As stated above, this study aims to measure student satisfaction in Faculty of Management Studies and Commerce, University of Jaffna. A survey instrument in the form of self-administered questionnaire was developed for the purpose of collecting the main data for the study. The instrument is composed of three parts such as Part A, Part B and Part C.

Part - A deals with personal information such as year of study, specialization subject, sex, age, ethnicity.

Part - B consists of library facilities which include four variables such as information sources, library environment, library staff and library general services. The numbers of statements under each variable vary from 4 for library staff, 5 for information sources, 13 for library environment and 8 for library general services.

Part - C consists of undergraduate satisfaction which includes 10 statements. The satisfactory level for each of the dimensions is measured using a group statements on a scale of 1 to 4 where: 4= very satisfied; 3= satisfied; 2 = somewhat satisfied, and 1= dissatisfied.

VIII. Mode of Analysis

In this study, various statistical methods have been employed to analyze data collected from 202 respondents from various specialization. A well known statistical package called "SPSS" (Statistical Package for Social Science) 16.0 version has been used to analyze data the researcher collected. These methods include;

- Descriptive analysis- to find out the percentage and express the trend of the variables.
- Bivariate Analysis- Correlation analysis (r) is used to evaluate correlation between the independent and dependent variables and the degree of relationship between them. Decision rule as follows.

  If $X= (-1)$, perfect Negative (-) correlation
  If $-1 < X < -0.5$, strong Negative (-) correlation
  If $-0.5 =< X < 0$, weak Negative (-) correlation
  If $X=0$, no correlation
  If $0 < X =< 0.5$, weak positive (+) correlation
  If $0.5 =< X < 1$, strong Positive (+) correlation
- Multiple Regressions (r^2) – is carried out to find out the impact of library facilities on students satisfaction.
- Analysis of Variance (ANOVA) is carried out to find out the significance of the model.

IX. Conceptualization

The following conceptual model was formulated to show the relationship between library facilities and satisfaction. Undergraduate satisfaction is considered as dependent variable whereas library facilities are the independent variables.

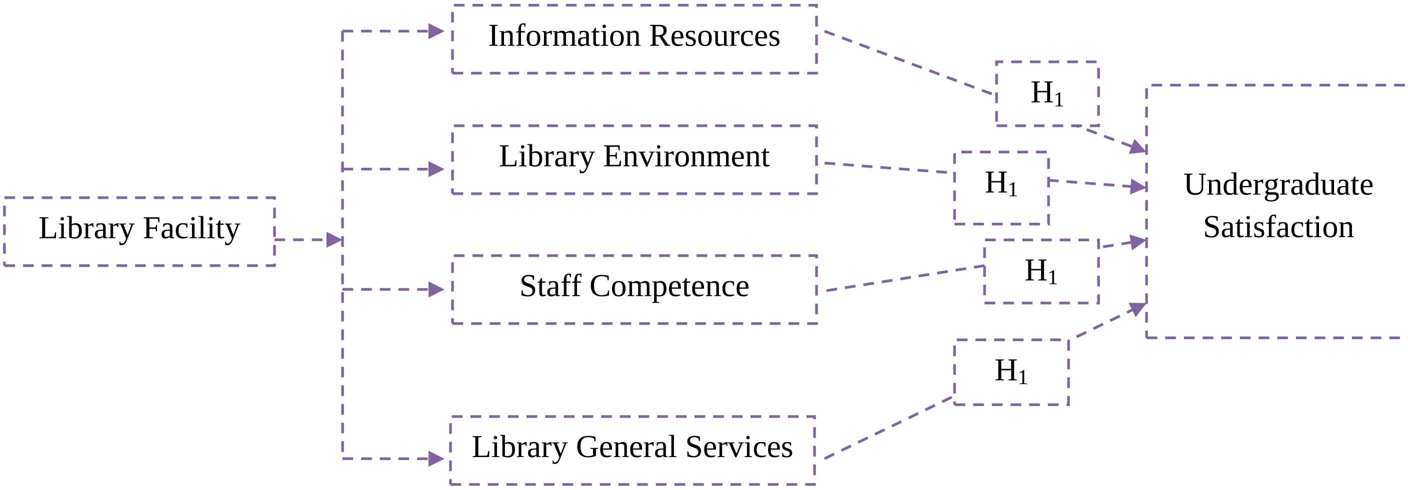

Figure 1 : Research Model

X. Hypotheses

Following hypothesis are taken for the present study.

H1 - There is a positive relationship between library facilities such as information sources, library environment, library staff and library general services and undergraduate satisfaction.

H2 - Library facilities such as information sources, library environment, library staff and library general services have an impact on undergraduate satisfaction.

XI. Results and Discussion

a) Reliability Analysis

The internal reliability of the data collected was verified by Cronbach's alpha. Malhotra (2000) and Cronbach (1951) suggested that satisfactory value of alpha is required to be more than 0.6 for the scale to be reliable.

Table 2 : Cronbach's Alpha

Variables	Alpha
Information Sources	.758
Library Environment	.709
Library Staff	.726
Library General Services	.753
Undergraduate Satisfaction	.806

As shown in table 2, Cronbach's alpha in this study were all much higher than 0.6, the constructs were therefore deemed to have adequate reliability.

b) Multi-Collinearity

Two major methods were utilized in order to determine the presence of multi collinearity among independent variables in this study. These method-logies involved calculation of both a Tolerance test and Variance Inflation Factor –VIF (Kleinbaum *et.al,* 1988). The results of this analysis are presented in Table 3.

Table 3 : Test of Collinearity

Variable	Collinearity Statistics		Durbin-Watson
	Tolerance	VIF	
Information Sources	.683	1.464	1.928
Library Environment	.536	1.864	
Library Staff	.562	1.779	
Library General Services	.642	1.588	

As per the data, none of the Tolerance level is less than 0.02 and VIF value is well below 10. Therefore, independent variables used in this study do not reach multi-co linearity. The acceptable Durbin-Watson range is between 1.5 and 2.5. In this analysis, Durbin-Watson of 1.928, which is between the acceptable ranges, shows that there was no auto correlation problems in the data used in this research.

c) Descriptive Statistics

Undergraduate satisfaction is measured thro-ugh four dimensions such as information sources, library environment, competence of library staff and library general services. The table 4 shows the overall mean and median scores for satisfaction.

Table 4 : Mean scores for library facilities

Dimensions	Mean (M)	Median (md)	Std. Deviation
Library staff	2.84	3.00	.424
Information sources	2.75	2.80	.460
Library environment	2.74	2.77	.380
Library general services	2.72	2.75	.412

The above table presents the mean scores of four variables which collectively and individually manifests the students' satisfaction on the library staff. The overall mean (2.84) and median (3.00) indicates that overall satisfaction towards the library staff is closed to satisfaction level. Information source is second in terms of providing satisfaction to the students. Based on the median scores of 2.80, the majority of students are satisfied with the library collections such as reference collections, lending collections, periodicals, archival materials and e-resources available in the library. The users are just over somewhat satisfied with library environment (M=2.74) and library general services (M=2.72).

d) The Relationship between Library Facilities and Satisfaction

Correlation analysis is used to evaluate correlation between the independent and dependent variables and the degree of relationship between them. Library facilities consist of four variables such as information sources, library environment, library staff and library general services. Using the Pearson's Correlation with two – tailed test of significance, the correlation analysis is carried out to investigate the relationship between independent and dependent variables as follows.

- Correlation between information sources and undergraduate satisfaction.
- Correlation between library environment and undergraduate satisfaction.
- Correlation between library staff and undergraduate satisfaction.
- Correlation between library general services and undergraduate satisfaction.

Table 5 : Relationship between Library Facilities and Undergraduate Satisfaction

		Satisfaction	LF	IS	LE	LS	LGS
Satisfaction	Pearson Correlation	1					
	Sig. (2-tailed)						
Library facilities (LF)	Pearson Correlation	.379**	1				
	Sig. (2-tailed)	.000					
Information Sources (IS)	Pearson Correlation	.273**	.778**	1			
	Sig. (2-tailed)	.006	.000				
Library Environment (LE)	Pearson Correlation	.427**	.819**	.479**	1		
	Sig. (2-tailed)	.000	.000	.000			
Library Staff(LS)	Pearson Correlation	.294**	.821**	.513**	.617**	1	
	Sig. (2-tailed)	.003	.000	.000	.000		
Library General Services(LGS)	Pearson Correlation	.229*	.773**	.435**	.561**	.490**	1
	Sig. (2-tailed)	.022	.000	.000	.000	.000	

According to the results of the Pearson's correlation shown in the Table 5, the correlation values between library facilities such as information sources, library environment, competence & helpfulness of Library staff and the students' satisfaction are 0.273, 0.427, and 0.294 which are significant at 0.01 levels. It means that library facilities such as information sources, library environment, competence & helpfulness of Library staff are positively associated with satisfaction of the students. Further, general services offered by the library are positively associated with satisfaction of the students at the significant level of 0.01.

e) Impact of Library Facilities on Students' Satisfaction

The multiple regression analysis is carried out in order to investigate the simultaneous impacts of all the independent variables on the dependent variable. The results of regression, four (04) indicators of library facilities (independent variables) against the dependent variable (undergraduate satisfaction) are shown in the Table 6.

Table 6 : Impact of Library Facilities on Undergraduate Satisfaction

Model Summary[a]						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F-Value	Sig.
1	.448[a]	.201	.167	.48715	5.967	.000

a. Predictors: (Constant), IS, LE, LS, LGS

b. Dependent Variable: Satisfaction

The specification of independent variables in table 6 reveals the ability to predict undergraduate satisfaction. R^2 value of 0.201 in the model denotes that 20.1 % of observed variability in satisfaction can be explained by the differences in the independent variables. Remaining 79.9 % variance in the satisfaction is related to other variable which is not explained here. R square value indicated that there may be number of variables which can have impact on the above satisfaction that need to be studied. Hence, this area is indicated as a scope of future research.

The hypotheses formulated are tested with the assistance of the proposed models. Hypothesis (H1) states that there is positive relationship between library facilities such as information sources, library environment, library staff and library general services and undergraduate satisfaction. The table 5 shows correlation between library facilities and undergraduate satisfaction. According to table, results indicate that the library facilities are weakly but positively correlated with undergraduate satisfaction. P-value is less than significant level at 5 % (r= .379**, $p < 0.05$), which illustrates that there is a significant positive relationship between library facilities and undergraduate satisfaction. As a result, H1 is accepted. The hypothesis (H2) states that Library facilities have an impact on undergraduate satisfaction. Table 6 depicts F-value and R square to understand overall significance of the regression model. Research model yielding significant p-values ($p < 0.05$) and R square around 20 percent of the variance in undergraduate satisfaction was explained. Therefore, H2 is supported by the collected data. Library facilities have an impact on undergraduate satisfaction at the rate of 20.1 % percentage.

Table 7 : Coefficients for predictors of satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.508	.270		5.587	.000
Information Sources	.067	.085	.087	.781	.437
Library environment	.336	.113	.371	2.966	.004
Library staff	.050	.102	.061	.495	.621
Library general services	-.017	.098	-.020	-.171	.864

The results of the regression analysis in table 7 show that the coefficient for all four variables except library environment is not significant. Further, t-value for the variable of library environment is significant at 0.05 levels.

XII. Conclusion and Recommendations

The study has investigated on students' satisfactory level with the facilities such as information sources, library environment, library staff and library general services offered by the main library. The study found that on the average, students are closed to satisfactory level with the competence and helpfulness of library staff, information sources, library environment and library general services as a whole. Respondents are relatively most satisfied with competence and helpfulness of library staff (M= 2.84), followed by information sources (M= 2.75) and library environment (M= 2.74) and lastly library general services to users (M= 2.72) in order. Further, results revealed that students' satisfaction is influenced by the library facilities by 0.201. Therefore, library facilities have an impact on undergraduate satisfaction at the rate of 20.1 % which is significant at 5 % level.

As suggested by Chandrasekar and Murugathas (2012) in their previous study, the book collections need to be improved by incorporating new and latest edition of book. Further, inter-library loan service, photocopying service and selective dissemination of information service should also be concentrated for improvement. Contributions found in this study will be useful to the improvement of library facilities and betterment of the library profession and serves as a contribution to the body of knowledge in the area on students' satisfaction on the library facilities.

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- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

Acknowledgements: Please make these as concise as possible.

References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

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Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.

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Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

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21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

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26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

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34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

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Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

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Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

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- Separating a table/chart or figure - impound each figure/table to a single page
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· Keep on paying attention on the research topic of the paper

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· Present your points in sound order

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- Fundamental goal
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- Significant conclusions or questions that track from the research(es)

Approach:

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- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
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- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
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Approach:

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Approach

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Approach:

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Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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