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Mbali Conference 2021 Proceedings

Management, Business, Administration and Legal Initiatives

Beyond COVID-19: Rejuvenation, Rebirth, A New World Order

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Editors

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Foreword

COVID-19 is considered to be biggest disruptive force in the 21st century, more so than any single event, person or idea. It has forced us to redesign working, business and living environments across the world. Prior to the pandemic, the idea of any dramatic change in our working and living habitat would be unthinkable and only a gradual diffusion of digital into our familiar modes of operation was introduced at our leisurely convenience. However, the great disrupter changed all this. For example, MBALI, for the first time, had to introduce a blended conference format that, to our delight, attracted many more local and international papers than we did in our past face-to face conferences.

It was a Herculean effort to use the technologies available to us to have a smooth blended conference, but it worked well with the excellent support from the Information and Communication Technology (ICT) and Communication and Media Division (CMD) of the University of Zululand. These collective efforts made for a conference that was a resounding success and gained us many accolades.

The 2021 MBALI Conference was branded as an interdisciplinary one, the idea for which was the innovative brainchild of Prof. Greyling, for it attracted 40 interdisciplinary papers. The MBALI Conference attracted a total of 140 papers, of which 10 went into our conference proceedings, and 80% were submitted to high impact journals for publication. There were 20 UNIZULU papers that we could not include in the proceedings to preserve the SAPSE accredited status of the journal that requires 75% external papers and 25% internal (UNIZULU) papers.

We are grateful to all those external researchers who have published in the current proceedings for investing their trust in us; with this kind of support, we can only rise to new heights.

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The Impact of Technological Advancement on the South African Labour Market

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ABSTRACT

The main objective of this study is to critically analyse the impact of technological advancement on the labour market in South Africa from 2002 to 2019. Research and development (R&D), information computer and telecommunication equipment, mobile subscription (per 100 people) and Internet fixed broadband subscription (per 100 people) are used as technology proxies. The study employed ARDL bound cointegration and ECM to determine the long-run and short-run impact of technological advances on the labour market in South Africa. The study concludes that there is a long-term effect on the overall work market and technological advancement in South Africa over the period reviewed, which agrees with most of the empirical studies. This means that technological advancement would have a positive impact on the labour market in the long term and residual tests asserted that the results of both the bound test and the ECM for the ARDL model are true and not misleading.

Key words: Total labour market, technological advancement, autoregressive distributed lag, bound cointegration, South Africa.

INTRODUCTION

In recent years, the labour market in South Africa has changed significantly as the economic and social environments in which companies work have contributed to the growing demands for transformation due to globalisation and rapid technological

advancement (Berntson *et al.*, 2006). The South African economy has seen a transition from primary industries to the service sector with regards to the labour market since the 1970s and has also undergone rapid capital boosts, led by the excessive use of microelectronics and information technology (Burger and Woolard, 2005). Even though the economy has expanded at a reasonable speed since then, this growth has not been sufficiently quick to provide jobs for the increasing workforce in the market.

Employment has increased over the period 1995-2015. The growth in jobs, however, is not rapid to digest all the overall entries into the work force, leading to an increase in unemployment or a 65.3% rate of employment absorption (Festus *et al.*, 2016).

According to Businessstech (2019):

“The real gross value added (GVA) data provided by the South African Reserve Bank are seen at constant 2010 prices and represent real contributions from various types of economic activity. Finance and construction industries surpassed other sector classifications with an annual employment growth rate of more than 6% and a real GVA growth rate of approximately 5%”.

The agricultural sector has witnessed a decrease in employment growth. This is proof of the systemic change in the labour market towards the increased need for highly skilled labourers (Businessstech, 2019).

This growing trend in the demographics of the labour market has led to an increase in the skills needed by modern labour force and has challenged the status quo of workers who are uneducated in terms of digital technological skills (Bhorat and Hodge, 1999). According Ibrahim and Dandago (2013), to face the challenges of growing competition in the labour market in the 21st century, most companies need labourers with some information communication and technology (ICT) skills today. For example, Capitec Bank reported that the bank is in urgent need of trained computer engineers, machine-learning workers, and IT experts (Businessstech, 2019).

Over the decades, technology has progressed at an ever-growing rate. This technological advancement has driven employers to integrate technology as a key component of their overall objective (Le Roux, 2018). Advancements in technology has expanded the “versatility and usability of robotics, making robots smarter, safer and more accessible across a wider spectrum of processes that produce more reliable and better-quality goods” (Millington, 2017). The use of modern technology in the

labour market can be advantageous by helping employees perform tasks faster and communicate more effectively.

Dengler and Matthes (2018) argued that the emerging technological improvements might be affected by radical consequences for the labour market. The apprehension that the technological revolution will overtake employment is a major worry in both general and theoretical debates. Also, the effect of automation (technological advancement) on the labour market rests on whether technology supports or replaces staff in those markets (Millington, 2017).

The underlining issue of the rise of technology's effect on the labour market is the displacement of work, which Le Roux (2018) discussed by presenting cases in which the demand for human labour, in some industries, is reduced or eliminated due to technological advances. The technological revolution could have a significant effect on the labour market in that more than half of all global existing employment can be automated over the next 10 to 20 years (Dengler and Matthes, 2018). In South Africa, industries that employ about "2.6 million employees, of which 900 000 are working as labourers, have high percentage of 80% - 89% chance of being automated" (Le Roux, 2018). An example of this is McDonald's outlets which launched self-service portals, meaning that most of McDonald's existing employees may lose their jobs in the near term.

From 2006-2018, the average annual GDP growth was 2% annually, down from 3.4% in the last decade. South Africa's stagnated employee productivity was a key variable in that economic poor performance. Unemployment remained very high and wage growth was despondent in this period, because of various problems, including low education levels, skills development, and poor education quality (Magwentshu *et al.*, 2019). The widespread adoption of technology has contributed to significant adjustments in the segregation of labour, and the increase in demand for skilled workers (Le Roux, 2018).

A broader spectrum of occupations that are automated implies that the process of job creation will affect those whose skills are replaced by technology, as they lack the skills needed for new jobs (Millington, 2017). Therefore, the rise in the technological intensity of production will be expected to reduce the "demand for unqualified and low-skilled labour and will being replaced but increase the demand for more skilled labour needed to run and maintain the new capital technology" (Bhorat and Hodge, 1999). Le

Roux (2018) used the example of a cotton picker to elaborate further: the “need for manual cotton-picking skills will diminish but the demand for skills relating to the development, processing, repair and maintenance of mechanical pickers will increase”.

Given this background, this study seeks to investigate the impact of technological changes on the labour market. In this paper is organised section two gives an overview of technological changes and labour market in South Africa; section three discusses the theoretical and empirical literature that underpin the study; section four outlines the methodology, section five gives the findings; and section six concludes the study.

AN OVERVIEW OF THE SOUTH AFRICAN LABOUR MARKET AND TECHNOLOGICAL CHANGES

Since 1994, post-apartheid, the South African labour market has experienced major improvements leading to the removal of various legislative limitations on access and participation in the labour market (Development Policy Research Unit, 2018). This has added to the strong increase of the labour market, which surpassed the rise of the working-age population. While job growth has been able to match up with the increase of the working-age population, it has not been able to keep up with the labour market, causing a dramatic rise in the unemployment rate (Development Policy Research Unit, 2018). Like the condition in other countries, the South African labour market comprises of supply and demand.

According to Stats Sa (2018):

“The labour pool of the populace, alluded to as the economically productive population or labour force, has two dimensions: the employed and the unemployed. Labour demand can also be divided into two main categories: work / filled work and work vacancies / unfilled employment”.

South Africa witnessed positive real GDP growth during the post-apartheid period, before a sudden shift, triggered by the global financial crisis of 2008/09, which was accompanied by slower economic growth. The economy has struggled to generate sufficient jobs in this weak economic climate, especially at lower levels of skills, to prevent the rise in unemployment rates (Development Policy Research Unit, 2018).

The United Nations University World Institute for Development Economics Research (UNU-WIDER) (2016) stated that although there have been significant steps in

providing access to education in the last 20 years, quality education continues to be a key obstacle, driven by the rising demand for skilled labour. South Africa has experienced job losses in primary industries, such as mining, the manufacturing sector failing to produce large-scale employment, and the services sector that has stepped in to fill the void (UNU-WIDER, 2016). Figure 1 plots the labour force trends from 1999 to 2019.

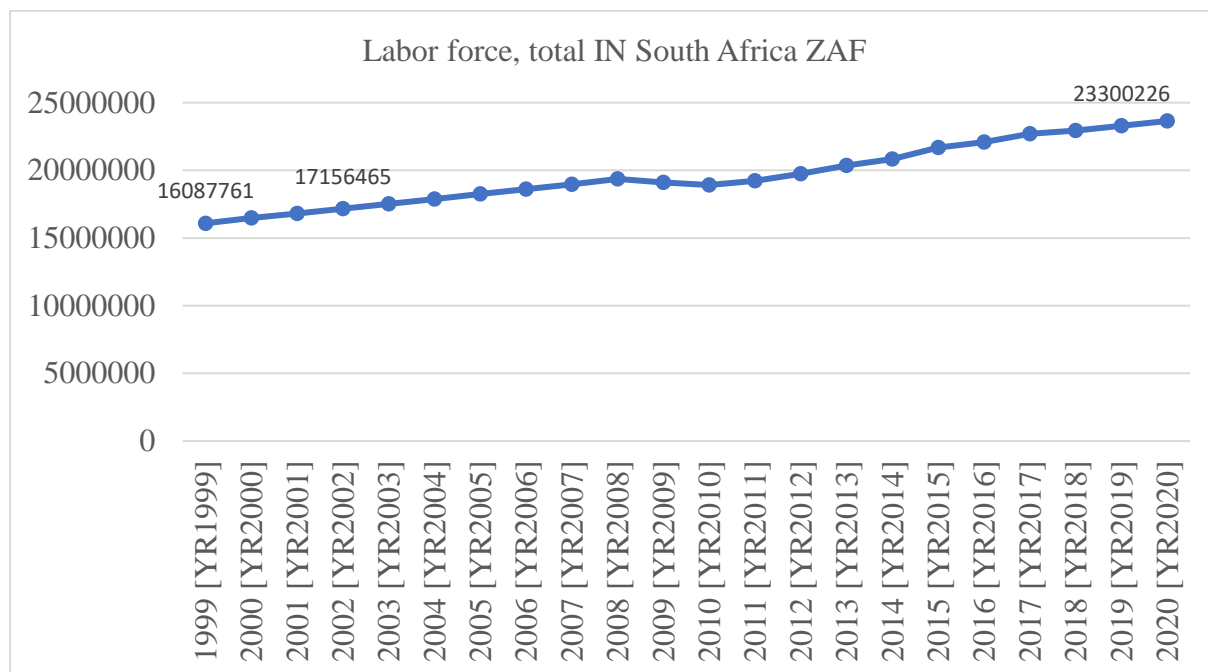


Figure 1: Total Labour force trends from 1999 to 2019

Source: World Bank, 2020

Figure 1 demonstrates the total labour force market in South Africa from 1999 to 2019. The trend shows that there was total labour force of 1 608 776 in 1999 and 17 156 465 in 2002. The total labour force increased until 2009, where it started to decline. This could be a result of the 2008 crises where labourers were discouraged to join the labour force. In 2011, the total labour force continued to rise and the trend line shows growth in the total labour force. The consequence of the recession was job losses that took the economy nearly four years to recover. Employment levels have generally experienced an upward trend, but this has not been fast enough to decrease unemployment levels as the work force continues to expand.

Information and communication technologies (ICTs) is characterised as a worldwide network in which ideas are shared, or information and knowledge are exchanged, utilising communication tools like mobile phones and computers to connect people (Mdlongwa, 2012). According to ICT Policy Review (2015), the ICT industry in South

Africa is a diversified one. It covers broad fields, such as broadcasting and national content, digital media, postal systems, telecommunications and IT, among others, serving both public and private interests.

These industries are backed by electronics production, repair, and installation. Considering their role in the current transformation of industrialised economies, ICTs deliver the prospect of new market and job possibilities, along with higher productivity development, but also new skills demands (Lopez-Bassols, 2002). The possible benefits of ICT on labour market are evident: it is proposed that ICT-based programmes have the ability to solve remote and distance issues; provide more reliable and comprehensive information on job openings in the labour market; provide a more sensitive and collaborative service provision model; and facilitate social networking among disadvantaged groups.

Mobile Broadband

According to South Africa's Broadband Policy (2013), broadband networks are provided over copper cables, fibre optics, satellite, and wireless. This involves our infrastructure for the electronic communication network, the implementation of which is an ongoing national challenge. The problems of lack of connectivity and poor penetration, particularly of broadband and Internet infrastructure, in rural areas of South Africa are extreme and intensify the digital divide.

Although the South African information and communication technologies (ICTs) market continues to demonstrate dynamic growth, mainly powered by the mobile sector, the growth has not reached the national goal of affordable access to a full range of communication services. Mobile network coverage continues to increase, but broadband access (particularly fixed broadband access) continues to be very poor relative to other low-middle-income countries, while rates for all communication services remain high at both African and global levels. (Gillwald *et al.*, 2012).

Mobile Phones

Mobile phones have become so common and essential that, whatever their socio-economic backgrounds, individuals usually have access to mobile phones. According to Stats Sa (2015), telephones have advanced immensely over the last century and have, in many ways, transcended voice communication by introducing electronic communication through SMS and the Internet through cellphone technologies. Telephone contact remains a fast, effective, and reliable way of communicating. Even

though accessibility is high, high airtime and data prices continue to hinder improved access to it.

According to Dammert *et al.* (2014), mobile phone technologies can influence both the rate at which the application arrives and the likelihood of obtaining a job offer by delivering quicker, cheaper, and up-to-date information about job openings via SMS. Dammert *et al.* (2014) further indicated that mobile phones have positive and substantial short-term job impacts due to the enhanced knowledge of job opportunities, conveyed through digital channels, that drives positive impacts.

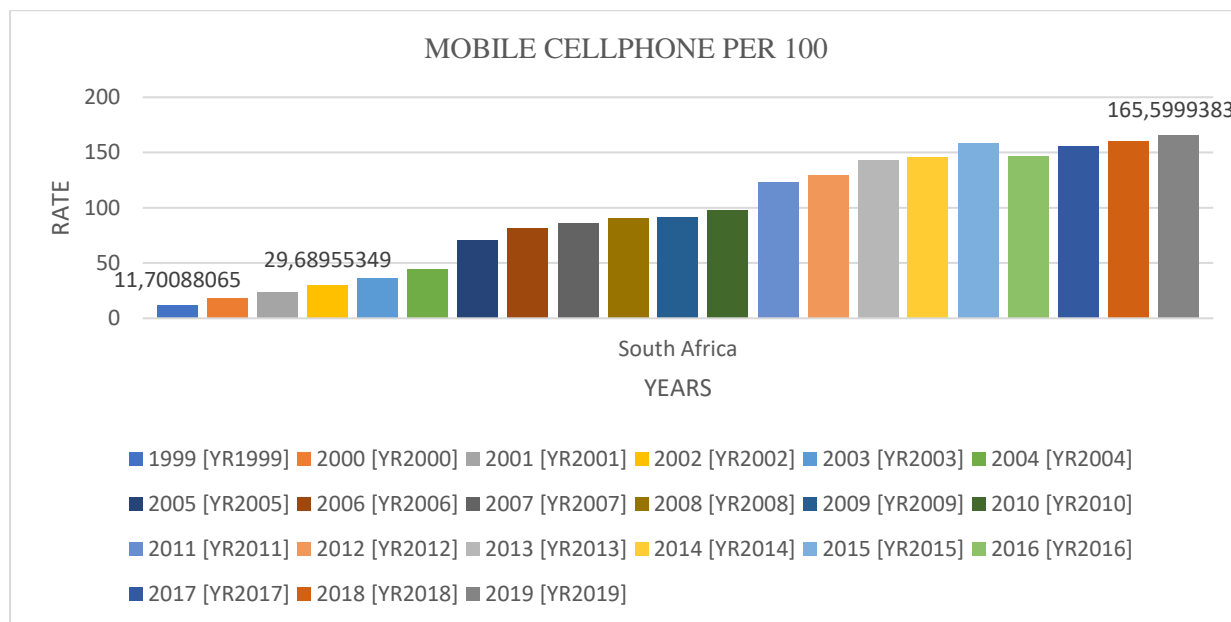


Figure 2: Mobile cell phone per 100

Source: World Bank, 2020

Figure 2 shows that mobile phone ownership has been increasing since 1999. In contrast to the SIMs used for non-human activities, such as satellite tracking, personal ownership of cellphone SIMs on the market is 86% of the adult population (15 years or older). The ongoing uptake and growing usage of cellphones has been encouraged by cheaper prices for the availability of ‘smart’ devices and by decreases in service costs (Gillwald, 2012). Figure 2 shows the positive trend of the mobile cellphones in South Africa.

Due to improved technology, there has been an intra-sectoral shift in production techniques towards more technology-intensive practices, and, as a consequence of modernization, favouring skilled workers at the expense of unskilled labour. Employees in skilled professions are more prone to stay in the same profession than

those working in semi-qualified and low-qualified professions. Professional jobs and tertiary sectors are correlated with higher rates of job retention. The job retention rate in the tertiary sectors was 92.4% between Q3 and Q4: 2018 (Stats Sa, 2020).

LITERATURE REVIEW

This paper is supported by the technological determinism theory which is the idea that technology is the primary driving force behind the transformation of society. The origin of this theory is mainly attributed to American sociologist Thorstein Veblen, who discussed the causal relationship between technology and society (Hauer, 2017). Technological determinism is infused with the concept that technological advancement is equivalent to social progress and the shaping of society and, therefore, capitalist evolution (Papageorgiou and Michaelides, 2016).

Technology requires both human/social elements and an aspect of artefacts for its successful functioning. The fact that different technologies appear to vary in the “degree to which they are 'socially-shaped' or 'technologically-determined' is explained in terms of the technology complex because different elements of the technology complex may be 'drivers' of primary or secondary design in any specific technology” (Fleck and Howells, 2001). According to Hackett *et al.* (2008), technological determinism persists in the measures undertaken and in the rationales given by several writers; it continues to be used by analysts to gain understanding of the advancement of technology in a wide range of social settings; it persists in the manifold theoretical and abstract accounts of the relationship between technology and society; and it prevails in the responses that we all encounter in the face of technological and human issues.

According to Liker *et al.* (1999), from a technological-determinist viewpoint, a conventional labour-management relationship is usually presumed. For example, employees and union should be involved at the technology design stage so that there is an element of artefact for technological efficient functioning.

Furthermore, labour market segmentation theories developed as an approach to the neoclassical concepts of labour and labour markets by Rubery (1970), who provided stimulus in comparative jobs systems. Labour market segmentation is defined as the historical process by which political and economic influences facilitate the separation of the labour market into distinct submarkets or segments, characterised by unique

traits of the labour force and behavioural law (Reich, 1973). Labour market segmentation happens when the labour market is divided or organised in a way that is represented in the aspects of the employment relationship or contract. It explains the division between core and atypical employment in some contexts, and that between 'formal' and 'informal' employment in others. In developed economies atypical labour is in the form of part-time employment, fixed period and contracting employers and casual modes of labour, such as zero-hour contracts, working deals and "false" or "sham" self-employment (Deakin, 2013).

The various segmentation approaches express an insight of the labour market as a multiple entity, muddled into separate sub-markets that subject market participants to distinct rules and thus operate according various logics. These submarkets provide job opportunities which vary significantly in quality, resulting in a corresponding division of labour force into higher and lower-value workers (Berndt, 2014).

In terms of empirical literature, Ibrahim and Dandago (2013) explored the impact of technological advancement on the employability business education graduates in the Nigerian labour market. The study showed that the content of business education curricula in Nigeria does not equip students with the generic skills necessary for their employability in the Nigerian labour market in the current advanced technological age.

Massa (2015) conducted a study to review and discuss empirical studies on economic/social, social/environmental and environmental/economic trade-offs resulting from technological change in the manufacturing sector, with emphasis on developing countries generally. The results of this study showed that developing nations are undergoing technological changes that are primarily skill-based, which is a direct result of skill-based technology being increasingly cheaper. In addition, increased skill supply has been found to influence technological improvements further in favour of skilled labour.

Olalekan (2012) explored the effect of information technology skills on the productivity of labour in Nigeria. The findings of the study show that the Nigerian economy is a labour-intensive economy that utilises more human resources and less capital resource. Additionally, the ICT (PC and Internet) skills of people in Nigeria are inferior, as opposed to some other developing nations.

Imran *et al.* (2014) examined the effect of technological developments on the performance of employees in the banking industry in Pakistan, with the aid of previous

literature reviews on technological advancement and employee efficiency available on databases and websites. Vashisht (2017) carried out a study to forecast the effect of technology on jobs in Indian manufacturing, three technological advancement proxies, such as imported capital, ICT capital, and foreign exchange spending on royalty, and technical expertise, and how they have a very strong and positive impact on employment. There was a positive, but statistically insignificant, coefficients of the other two proxies, total factor productivity (TFP) and R&D expenditure.

Goaied and Sassi (2019) investigated the relationship between information and communications technologies (ICT) and labour from a macroeconomic perspective to explain some uncertainty on the overall job impact of short-term and long-term ICT adoption. The findings of the study showed that the main impact of ICT adoption is short-term labour savings, and that this adverse effect continues in the long run, resulting in increased structural unemployment. The labour market displacement induced by the adoption of ICT is real, continuous and standardised.

Matuzeviciute *et al.* (2017) analysed the impact of technological innovations on unemployment as a major factor of long-term productivity and economic growth, utilising data from 25-euro nations for the 2000-2012 period. Overall, the research estimates do not suggest the effect of technological innovations on unemployment.

Le Roux (2018) aimed to identify the potential future impact of the adoption of progressively advanced computing technologies for labour demand in South Africa. The results revealed that the:

“occupations held by of 3.6 million South African workers, just over 27.3% of all workers in the world, are highly susceptible to computerisation through advances in artificial intelligence and robotics. It was found, furthermore, that over 3.2 million of these workers are from previously disadvantaged population groups (Black/Coloured/Indian)” (Le Roux, 2018, 11).

METHODOLOGY

This study employs the autoregression distributed-lag (ARDL) technique to test cointegration between total labour force and technological changes. The decision to follow this econometric approach is influenced by its effectiveness to yield satisfactory results because it defines and correct multicollinearity, non-stationarity, and serial correlation. The autoregressive distributed lag (ARDL) model is the ordinary least

square (OLS) based model that is valid for both non-stationary time series and time series with a mixed order of integration. This model takes enough lags to capture the process of generating data in a general to specific modelling context (Shrestha and Bhatta, 2018).

This study uses annual time series data covering the period 2000 to 2019. The data used in this analysis are gathered from two reliable sources, namely the South African Reserve Bank (SARB) and World Bank.

Empirical Model

This study adopts and modifies Goaid and Sassi's (2017) study, which investigated the effect of ICT adoption on labour demand on a sample of developing and developed countries.

Goaid and Sassi (2017) expressed it as follows:

$$emp_{it} = f(gdp_{it}, wage_{it}, internet_{it}, mobile_{it})$$

where *emp* represent total employment, *gdp* is the gross domestic product per capita, *internet* is internet per 100 people and *mobile* is mobile per 100 people. The empirical model of this paper is as follows:

$$tlf_t = f(\beta_1 r\&d_t, \beta_2 gdppt, \beta_3 internet_t, \beta_4 mobile_t, \epsilon_t)$$

Where *tlf_t* is total labour force, *R&D* is gross fixed capital formation: Total *R&D*, *gdpp* is gross domestic product per capita, *mobile* is mobile subscription (per 100 people) and *internet* is internet fixed broadband subscription (per 100 people). It should be mentioned that data on the variables under analysis are converted into natural logarithmic (L) in effort to minimize variation between the data sets and to maintain that the growth rate of these variables is established.

The linear regression of the model in logarithms is presented as follows:

$$ltlf_t = \beta_0 + \beta_1 lr\&d_t + \beta_2 lict_t + \beta_3 lmobile_t + \beta_4 linternet_t + \epsilon_t$$

Estimation and Diagnostic Procedures

To demonstrate the ARDL modelling framework, the following step and procedures were taken.

Unit Root/Testing for Stationarity

According to Nkoro and Uko (2016), a:

“time series is assumed to be a trend-stationary cycle if the trend is absolutely predictable and not volatile, whereas if it is not predictable, we call it difference or integrated stochastic trend or stationary difference phase. Furthermore, the existence of a unit root indicates that a time series under review is non-stationary, whereas its absence suggests stationary time series”.

To ensure that the examination of time series data leads to reliable results, it is crucial that the data are evaluated according to the order of integration, that is stationarity (Van Wyngaard, 2019). Therefore, this study employs the ADF, PP unit root tests.

Augmented Dickey-Fuller Test (ADF)

The augmented Dickey-Fuller (ADF) test is the most popular test approach for root units and deemed superior due to its wide application. The ADF test adjusts the DF test to take control of potential autocorrelation in error terms by adding the lagged difference term to the dependent variable (Nkoro and Uko, 2016).

The ADF test is based on estimating the test regression.

$$y_t = \beta' D_t + \phi y_{t-1} + \sum_{j=1}^p \psi_j \Delta y_{t-j} + \varepsilon_t$$

By which D_t is a variable for deterministic terms (constant, trend, etc.). The p lagged difference terms, Δy_{t-j} , have been utilized to estimate the error structure, and the p value is established so that the Δt error is serially uncorrelated. The term error is also believed to be homoscedastic (Nkoro and Uko, 2016). The null and alternative hypothesis for ADF follows the traditional Dickey-Fuller, where $H_0: \delta = 0$ (there is a unit root or the time series is nonstationary, or it has a stochastic trend), and $H_1: \delta < 0$ (the time series is stationary, possibly around a deterministic trend) (Gujarati and Porter, 2006). If the findings of ADF are statistically significant at 1%, 5% and 10% confidence level, the null hypothesis of the unit root is rejected, and the alternative is accepted, and the series is stationary.

Cointegration: ARDL Bound Test

According to Belloumi (2014), the ARDL technique basically measures long-term relationships amongst variables, using the bounds test method, while the short-term

elements are performed utilising ECM. In addition, the model has the potential to define a single cointegrating vector between numerous cointegrating vectors; the method can differentiate independent and dependent variables in which a single long-term relationship is established. In comparison to other techniques, ARDL co-integration technique does not require pre-tests for unit roots. Consequently, ARDL co-integration technique is optimal when engaging with variables of different order, I (0), I (1), or mixture of both, and reliable when there is a single long-term relationship between the underlying variables in a small sample size (Nkoro and Uko, 2016).

The model specification of ARDL (p, q1, q2 qk) is expressed as:

$$\phi(L, p)y_t = \sum_{i=1}^k \beta_i(L, q_i)x_{it} + \delta w_t + u_t$$

Where

$$\begin{aligned} \phi(L, p) &= 1 - \phi_1 L - \phi_2 L^2 - \dots - \phi_p L^p \\ \beta(L, p) &= 1 - \beta_1 L - \beta_2 L^2 - \dots - \beta_q L^q \quad \text{for } i=1, 2, 3, \dots, k, u_t \sim iid(0; \delta^2). \end{aligned}$$

L is a lag operator that is a vector of deterministic variables, including the intercept term, time patterns, seasonal dummies, or exogenous variables with fixed lags, such as $L^0 y_t = X_b$, $L^1 y_t = y_{t-1}$ and w_t . $P=0, 1, 2, \dots, m$, $q=0, 1, 2, \dots, m$, $i=1, 2, \dots, k$: a total of $(m+1)k+1$ various models of ARDL. The maximum order of lag, m , is selected by the user. Duration sample, $t = m+1, m+2, \dots, n$ (Nkoro and Uko, 2016).

According to Ghouse *et al.* (2018), the benefit of the ARDL bound cointegration method is that it offers clear tests for the existence of a single cointegrating variable, rather than assuming the uniqueness that showed asymptotically true inferences on short-run and long-run parameters that could be made using ordinary least square ARDL model estimates. Thus, the order of the ARDL model is properly enhanced to provide a contemporary connection between the stochastic elements of the data generation mechanisms involved in the estimation.

The following is ARDL hypothesis-testing framework in cointegration tests where H_0 : No cointegration (no long-run impact) and H_1 : Cointegration (long-run impact) Therefore, in evaluating both two hypotheses, the ARDL model integrates an F-test, as well as a series of two critical limits, namely the upper and lower bounds. Where $I(0)$ is the lower bound and $I(1)$ is the upper bound. Provided that the F-statistic is seen

to be higher than any of these critical bound levels, the H0 of no long-term co-integration can be rejected.

Error Correction Model (ECM)

The Error Correction Model (ECM) can be extracted from ARDL model by means of a simple linear function, combining short-run changes with long-run equilibrium all without compromising long-run data. The related ECM model requires a reasonable number of lags to represent the data generation mechanism in general within different modelling structures. Cointegration provides a stronger statistical and economic foundation for the empirical error correction model, that incorporates short-term and long-term knowledge in forecasting variables (Nkoro and Uko, 2016).

FINDINGS

This section presents the results for formal unit root tests carried out in this study to determine the order of integration for the key variables of this study. As discussed in the previous section, this study makes use of the augmented unit root tests.

Unit roots results are presented in Table 1:

Table 1: Unit root results for augmented Dickey-Fuller

Variables	At level			At first difference		
	Intercept	Trend & intercept	None	Intercept	Trend & intercept	None
LLabour F	-0.1287	-2.2003	1.839	-5.682***	-6.097***	-5.800***
Lr&d	-4.111***	-4.037	-1.346	-	-	-
Lgdp	-5.138***	- 1.802	-0.298	-	-	-
Lmobile	-4.380**	-1.420	4.141	-	-	-

The results of the augmented Dickey-Fuller unit root test in Table 1 show that the null hypothesis, that variables LR&D, LGDP, LMOBILE are non-stationary, is rejected under 'intercept' model specification. Hence, the order of integration for variables LR&D, LGDP and LMOBILE is 0 under the 'intercept' model specification. However, the null hypothesis, that LF is non-stationary, is only rejected at 1% level of significance after first differencing. Therefore, the order of integration for LF is 1. This study generally concludes that the maximum order of integration for the variables are I(1) and I(0).

Optimal Lag Length Selection

Brooks (2008) emphasised that selecting optimal lags is important when building VAR/VECM and ARDL models. Table 2 provides the values for Akaike information criterion (AIC), Schwarz information criterion (SIC), and Hannan Quinn criterion (HQIC) at lags 0,1 and 2 respectively.

Table 2: Lag length selection criteria

Lag	LogL	LR	FPE	AIC	SIC	HQIC
0	129.1794	NA	4.30e-11	-12.51794	-12.31879	-12.47906
1	224.4794	142.9500*	1.62e-14*	-20.44794*	-19.45221*	-20.25356*

Notes: * represents the lag length selected by the information criterion

Source: Author's own calculations using Eviews 12 Software

Table 2 indicates that lag 1 is selected by all information criteria. Therefore, the optimal lag is 1. Thus, the ARDL model to be estimated is ARDL (1, 1, 1, 1, 1) if the lags would be permitted to be fixed across all the variables.

ARDL Bound Test to Cointegration Analysis

The unit root tests proved that the key variables of this study are integrated to the order of 0 and 1. This is the satisfaction of the main assumption of the ARDL framework, which states that the variables should be stationary only at level and/or first difference (Mosikari and Eita, 2020). Table 3 provides the results for the ARDL bound test.

Table 3: ARDL bound test results

Model	Calculated F-Statistic	Conclusion
$lf = f(mobile, r\&d\ gdp)$	8.982499*	Cointegration

Notes: α sig. level: Critical F statistic at $I(0)$ and $I(1)$

1%: 3.65 4.66

5%: 2.79 3.67

10%: 2.37 3.2

*/**/*** represents statistical significance at 1%, 5% and 10% respectively

Source: Author's own calculations using Eviews 10 Software

Table 3 shows that there is only one cointegrating model/vector. The decision on the presence of cointegrating relationship is based on the fact that the calculated F statistic is greater than the critical F statistic at the upper limit/bound ($I(1)$), at all levels of significance.

ARDL Long and Short Run Model Estimates

This study showed the presence of cointegration between the dependent variable and independent variables. As determined by the lag length selection criteria, the optimal lag for dependent and independent variables is 1 respectively.

Table 4 presents the ARDL long run relationship estimates for the model ARDL (1,1,1,1,1).

Table 4: Long Run Estimates for ARDL (1,1,1,1,1) Model

Dependent Variable: DLLF

Regressor	Coefficient	Standard Error	t-Statistic	Probability V.
C	21.677	3.280	6.608	0.000
LLF (-1)	-0.603	0.242	-6.612	0.0000***
LGDP (-1)	0.003	0.004	0.926	0.3712
LMOBILE	-0.010	0.0023	3.673	0.0012**
LRD(-1)	0.199	0.0041	2.371	0.0339*

Notes: */**/** represents statistical significance at 10%, 5% and 1% respectively

Source: Author's own calculations using Eviews 12 Software

In the long run, the results presented in Table 4 show that 1% increase in mobile, which is a proxy for information technology, significantly leads to 0.010% decrease in the demand for labour holding all other factors constant. The finding from the study are in line with Goaid and Assi (2007), who found a negative relationship between labour market and information, communication and technology in the long run. These results suggest that technological upgradation has hampered the labour market in South Africa. Furthermore, the results in Table 4 show that 1% increase in GDP leads to 0.003 increase in the labour market or labour demand, holding all other factors constant in the long run. However, the impact of economic growth is insignificant as shown by the t-statistics.

In addition, the results show that in the long run, research and development has a positive impact on the labour market or labour demand. Hence a 1% increase in research and development significantly leads to 0.199 increase in labour demand. These results show that investment in research and development does not hamper the labour market in South Africa.

Table 5: Short Run Estimates for ARDL (1,1,1,1,1) Model

Dependent Variable: D (LLF)

Regressor	Coefficient	Standard Error	t-Statistic	Probability V.
D(LGDP)	-0.02904	0.00489	-5.93792	0.0000***
D(LRD)	0.04390	0.0053	0.827524	0.4229
ECT	-0.60357	0.209244	-7.66366	0.0000***

Notes: ***/**/* represents statistical significance at 10%, 5% and 1% respectively

Source: Author's own calculations using Eviews 12 Software

The error correction term is -0.60357 and it is statistically significant. This implies that 60.35% of disequilibrium in the model is corrected in the period (year) and, hence, the model adjusts very quickly towards an equilibrium steady state. This is satisfactory, as 60.35% is greater than 50%.

Residual Diagnostics

The diagnostic tests are carried out to test whether the model used in this study meets the criteria of satisfaction and efficiency. Table 6 presents results residual diagnostics.

Table 6: Residuals diagnostic test results

Test	Type of the test	Probability	Conclusion
Heteroscedasticity test	No Cross terms	0.846	Fail to reject H_0
Normality test (Cholesky covariance Lutkepohl)	Jacque Bera	0.945*	Fail to reject H_0
Auto Correlation	LM Test	0.157	Fail to reject H_0

The residuals diagnostic result in Table 6 demonstrates that the probability value of heteroscedasticity, normality, and auto correlation test is above the 5% significance level. Therefore, we fail to reject the null hypothesis. In conclusion, residuals are homoscedastic, normally distributed, and residuals have no serial correlation. Overall, the regression model meets the criteria of satisfaction.

CONCLUSION

The policy implication raised by this paper is that this research is important as it will allow policy makers to make crucial decisions, as well as provide a need to explore long-term outcomes. Policy action, such as labour market transition measures, would

be vital to help employees whose roles are changing and to adapt, broaden and improve skills development assistance for employees joining the workforce (Gelb and Khan, 2016). Labour market policies, such as skills development, training, and education, would ensure that work losses resulting from technological advancements are replaced by new technical employment opportunities.

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The Conceptual Framework of Moral Capital as an Intellectual Property: A Perspective Study

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ABSTRACT

Intellectual property rights (IPR) have become increasingly serious as the information age has progressed, with digital recording, storage, and transmission becoming the standard. Computer programmes that cost tens of thousands of dollars may be duplicated in a matter of seconds. Digital bootleg copies of almost all musical artists are accessible at rock-bottom costs. Furthermore, there is a basic imbalance in people's views toward physical and intellectual property. It is hoped that any examination of intellectual property ownership and digital information will aid teaching and study in this rapidly developing subject. In addition to vehicles, computers, land, and other tangible goods, intellectual property law permits individuals to obtain ownership rights to works of literature, musical compositions, manufacturing techniques, computer software, and other intangible things. The major topic of this study is to justify intellectual property rights, which may be defined as moral capital. One of the most notable characteristics of the information era is that these problems take on a global perspective when analysing IPR in depth. It is understood that generating hypotheses to these difficulties is conceptually demanding.

Key words: Moral capital, intellectual property, digital recording, copy rights and patents, trademarks.

INTRODUCTION

The term 'moral capital' is derived from the Latin words '*morale*' (property) and '*capitae*' (value), and refers to a social man's social value and ethics as possessed by him in society or in his surrounding environment. The essential qualities and forms of moral capital are discussed in the broad meaning of capital. It also emphasises the distinction between moral capital and traditional capital, which reflects or criticises the capitalist social system and its economic relations as posited in Marx's political economic theories. Whereas morality, which is scientifically defined or meets the demands of the times, has capitalist attributes when it exerts a spiritual influence on the formation and increment of value. Morality as "capital" may be seen from the perspectives of individuals and society. Morality consists of exhortations to participate in virtuous actions on the positive side, and the observance of regulations prohibiting specific forms of conduct on the negative side. The problem of "moral capital depletion" is more acute in poorer countries, where justice institutions are weak and commerce is hampered by government arbitrariness, nepotism, cronyism, state patronage, excessive regulation, public authority lack of transparency and accountability, and inherited cultural constraints on market processes.

Moral capital has bolstered capitalism and democracy throughout history by investing in opportunity (slavery, suffrage, and civil rights), resulting in long-term economic development and greater equality. Moral capital represents the missing link in the theory of capitalism development, which in turn leads to long-term economic growth and greater equality—by focusing on university research—which is critical in promoting technological innovation, economic equality, and economic security—that creates a large, well-functioning middle class (The Economist, March 2015).

The notions of moral capital and human capital overlap at the edges, yet they are clearly and effectively differentiated. Human capital is defined as the store of skills and information acquired through education, training, and experience that improves a person's earning potential and the efficiency of economic decision-making (Rosen 1997, p. 682). Earning power is derived through increased productivity of value to oneself (as in self-employment), a corporation, or society at large (Becker, 1964). The ethical principles related to the profession, such as legal ethics and medical ethics, are covered in good professional education. Certain guilds and tradesmen's groups also require knowledge of applicable ethics as part of their membership requirements. As a result, training can help to build moral capital.

Moral capital, on the other hand, is a broader term. It extends beyond the requirements of certain professions or jobs, and it is based on a variety of variables other than schooling. In the sense that they translate to just behaviour or beneficence, work ethics and moral capital intersect. As a result, diligence in the performance of contractual commitments is fair behaviour, and delivering more than what is promised is beneficence.

RESEARCH OBJECTIVES

The following research objectives informed this research article:

- a) To study the moral capital value and its social effect in the minds of human beings and how it reflects in their social behaviour related with the environment.
- b) To study the value of intellectual property related with the human beings' cognitive process of creativity and innovative things such as new product generation, production, design, patents, copyrights, and designs etc. which are being duly approved by the World Intellectual Property Rights Organizations (WIPRO), which enhances the creativity of innovators to a great extent and society's day-to-day life consumption and use.

LITERATURE REVIEW

This paper follows empirical techniques of research study to review similar and related publications to substantiate the research title.

The term 'moral capital' is frequently used in discussions of social elements that aid or impede societies' ability to flourish. Among the more well-known studies of social capital are Putnam (1993) on the role of civic tradition in Italian democracy; Loury (1977) and Light (1972) on racial income differences; Coleman (2000) on the creation of human capital; and Jacobs (1961) on the role of community networks in crime prevention.

Human capital is defined as the skills and information acquired through education, training, and experience that improve a person's earning potential and the efficiency of economic decision-making (Rosen, 1997, p, 682). Earning power is derived through increased productivity of value to oneself (as in self-employment), a corporation, or society at large (Becker, 1964). According to Niehm, Swinney and Miller (2008), a

community-based firm's socially responsible acts will be rewarded over time by loyal consumers, workers, suppliers, and other stakeholders.

In management research, patents are the most talked-about protection method (Candelin-Palmqvist, Sandberg and Mylly, 2012; Levitas and McFadyen, 2009; McGahan and Silverman, 2006). Mechanisms such as copyrights, lead time, and secrecy, in contrast, have gleaned far less attention in the literature (Bos *et al.*, 2015). Furthermore, some research implies that owing to a lack of resources, smaller businesses, particularly technical startups (Block *et al.*, 2014), prefer to use informal protection measures (Olander, Vanhala, and Hurmelinna-Laukkanen, 2014).

IPR protection is now regarded as a source of competitive advantage, in addition to being leveraged by businesses to attract investment (Glass and Saggi, 2002; Smarzynska, 2004) and produce wealth (Schneider, 2005). (Singh, 2015). IPR protection safeguards innovations from being exposed without protection and exploited by competitors, giving them a share of market power and, in some cases, monopoly power, manifest in the exclusive use and commercialization of their innovations, as they are legally protected from potential violations (Sey, Lowe and Poole, 2010).

Piketty's key explanation of the present rise in inequality, according to Soskice (2014), makes little sense because it is based solely on neoclassical mathematical analysis. Acemoglu and Robinson (2015) stated that "General economic rules are ineffective as a guide to understand the past or anticipate the future because they neglect the important role of political and economic institutions in influencing the allocation of resources in society".

However, these opponents appear to have overlooked the most important aspect of capitalism, which is that it is an evolutionary process, as Marx and Schumpeter both stated. If this is the case, then some general rules and institutions are required to explain its evolution; for example, what are the system's driving forces? More to the point, Hopkins (2014) argued that excluding government from the tale of capital leaves people with an incomplete picture: "Even though the actuality of capital accumulation may answer to an economic logic, the process, as does the reconstitution of capital, is enmeshed in a profoundly political logic".

The idea of intellectual property is defined at the most practical level in Anglo-American copyright, patent, and trade secret legislation, as well as in continental

European theory's moral rights granted to writers and inventors. Although these property regimes cover most of what is considered intellectual property, they do not cover the full terrain [1].

BACKGROUND OF RESEARCH STUDY

All intellectual property rights owned by or licenced to a project partner at the commencement of a project are referred to as “background IPR”. Intellectual property rights include patents, utility models, rights in inventions, registered designs, rights in designs, trademarks, copyright and neighbouring rights, database rights, moral rights, trade secrets, and rights in confidential information and knowledge (all whether registered or unregistered, including any renewals and extensions thereof).

METHOD OF STUDY

Due to the massive effect of the COVID-19 pandemic, the researcher was not able to collect the data directly from the respondents but primary and secondary (empirical study) data, from various published and unpublished sources, such as data collected from company manuals, web sites, statistical data from government and non-government sources were collected.

HYPOTHESIS

In this section, the following hypothesis were unanimously drawn for justifying the aforesaid research problem and its outcomes.

1) Hypothesis (H₀)

This hypothesis states that the subject matter of intellectual property has no impact on people for acquired innovative and creativity activity related with social value and moral ethics.

2) Alternative Hypothesis (H_e)

This hypothesis states that the innovative and creativity mindsets of people are prime assets which enhance the creative work, involving in product design, patent filling and claims for copy writings and it has a great impact on the moral and social value of people.

COMPONENTS OF MORAL CAPITAL

Moral capital consists of several components, such as connection, reflection, agency, enabling and environment, communication, connection, and reflective practice, as seen in Figure 1.

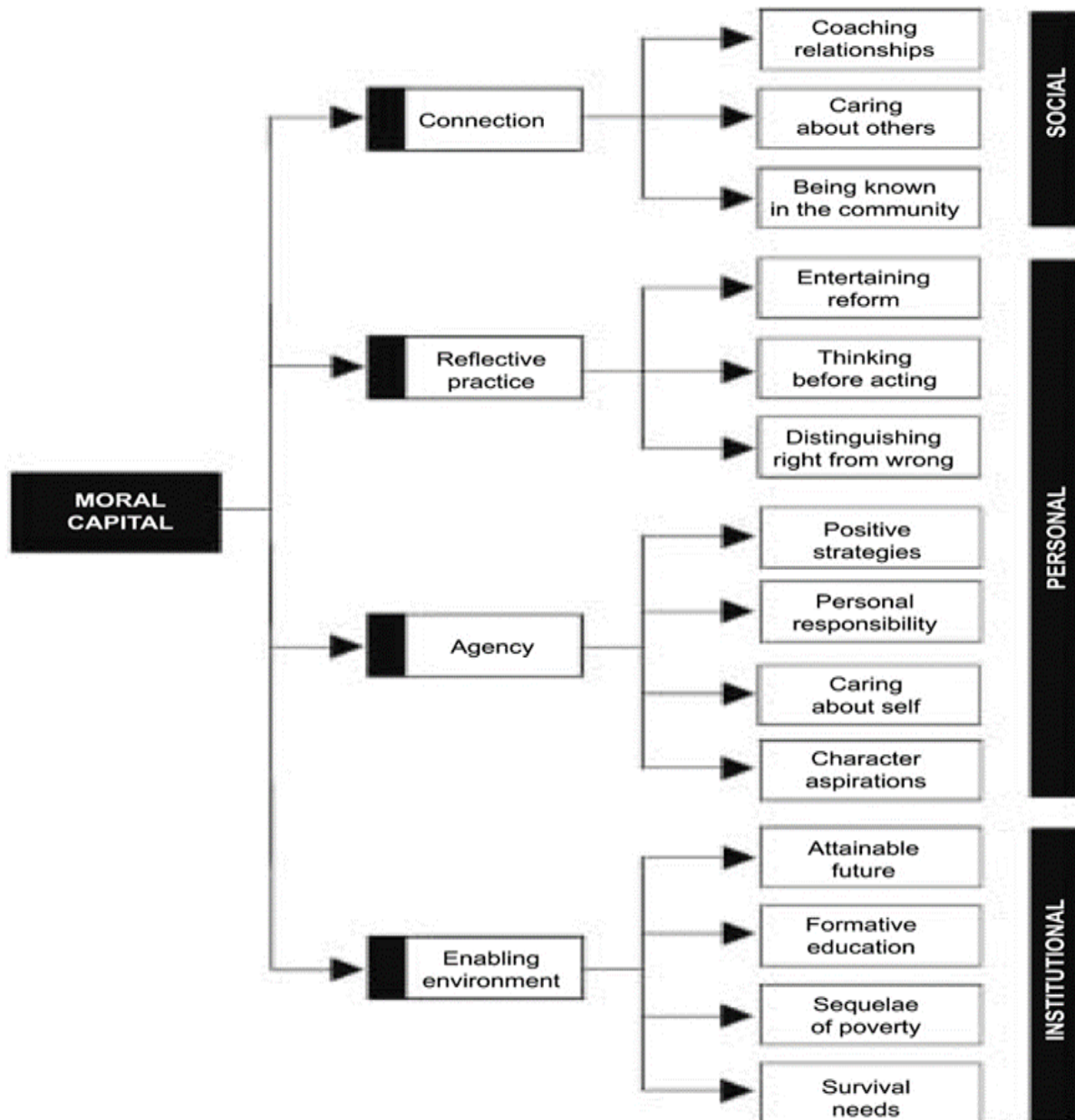


Figure 1: The Components of Moral Capital

THE DOMAIN OF INTELLECTUAL PROPERTY

1) Copyright

The subject matter of copyright protection is defined under Section 102 (a) of the 1976 Copyright Act. Copyright protects original works of writing that are fixed in any physical

medium of expression, now known, or hereafter devised, from which they may be seen, reproduced, or otherwise transmitted, either directly or indirectly. Literary works, musical works with words, theatrical works with music, pantomimes and choreographic works, pictorial, graphic, and sculptural works, motion pictures and other audio-visual works, sound recordings, architectural works, and computer software are all examples of authorship [2].

Copyright's scope or subject matter, as specified by federal law or the Copyright Act, is restricted in three ways. To begin, anything that is protected must be unique. As a result, the creative process that results in an expression becomes more significant. Regardless, the requirements for originality have a low bar. In the context of a copyrighted work, original means that the work "owes its origin" to the author, not that it must be unique, inventive, or even entertaining. The work must be the author's own work; it cannot be duplicated [3], and courts evaluate phrases rather than the abstract concepts from which the expressions are formed when considering questions of originality and copyright infringement [4].

The term must be "nonutilitarian" or "non-functional" in nature, which is a second restriction on what can be copyrighted. Utilitarian items, or things that are helpful for labour, fall under the jurisdiction of patents. The nonutilitarian requirement, like the originality requirement, has a low bar since the distinction is debatable. Copyright protection of computer software is an example of intellectual work that violates the "non-functional" criterion. While a computer program's object code and source code are both functional and helpful for generating things, they are termed protectable expressions.

Finally, statutory copyright protects only concrete expressions, which means that only expressions that are established in a tangible and permanent medium can be protected [5]. The fact that the work has a tangible manifestation is essential. Furthermore, the copyright system does not protect the abstract concept of intellectual property [6]. The author's rights only apply to the actual physical expression and its derivatives, not to the abstract ideas themselves. For example, copyright law does not protect Einstein's theory of relativity, as articulated in different essays and publications. Anyone could read these articles and explain the concept in their own words, and they could even be able to obtain a copyright for it. These rights may cause some worry, but they are not protected by copyright law [7]. Even if people plagiarise abstract

concepts and express these in their own language, they cannot be held accountable for copyright infringement.

The "merger theory" arose from the disparity between the protection of fixed phrases and abstract ideas: a copyright cannot be established if there is no way to separate an idea from expression. For example, assume someone comes up with a new hot Chinese noodle recipe, and there is only one or a limited number of ways to communicate the concept. If this is the case, copyright protection is impossible to obtain since the idea and the expression have been combined. The right to control the abstract concepts that make up the recipe would be granted by establishing a copyright to the recipe. Many copyright theorists believe that such a broadening of copyright would be terrible [8].

Owners of copyrights have five different rights, each of which is limited by three key considerations [9]. The five rights are the right to copy the work, change or create derivative works based on it, distribute copies of the work, publicly exhibit the work, and publicly perform the work [10]. Each of these rights can be broken down and sold separately. According to the Copyright Act, "the owner of any particular exclusive right is entitled, to the extent of that right, to all of the protection and remedies granted to the copyright owner by this title" [11].

Furthermore, a distinction between a copyright owner and a copyright owner must be made (the physical object in which the copyrightable expression is embodied). Even though the two people appear to be identical, they are usually not. Any of the five rights stated are not available to owners of copies or particular expressions who do not hold the copyright. A person who buys a book from a publisher has the right to sell or transfer it, but not to duplicate it, write a movie based on it, or read it in public.

Fair use, the first sale doctrine, and limited term are the three fundamental constraints on the bundle of rights that surround copyright. Although the word "fair use" is notoriously difficult to define, it is a widely accepted copyright concept. Every author or publisher is granted a restricted permission to use another person's copyrighted work for criticism, commentary, news reporting, teaching, scholarship, and research. As a result, the passage of fair use restricts copyright holders' power.

The first sale theory, defined in section 109(a), restricts copyright holders' ability to control tangible representations of their work after the first sale [12]. The copyright owners' interest in the material object (the copy or the phone record) is not

extinguished when a work is successfully transferred; rather, it persists, allowing the copyright owners to dispose of the copy or phone record as they desire [13]. The first sale rule prohibits a copyright holder from interfering with the subsequent sales of copies of a protected work. Finally, copy owners are free to do anything they want with their property, if they do not infringe on the above-mentioned copyrights.

The third significant constraint is that the copyright holders' package of rights contains a built-in 'sunset', or fixed lifetime. All five rights in works for hire expire fifty years after the author's death, seventy-five years after publication, or one hundred years after creation, whichever comes first [14].

2) Patents

The most powerful type of protection is patent protection, which grants an exclusive twenty-year monopoly on any expression or execution of the protected work. The production and discovery of unique and valuable procedures, apparatus, manufactured goods, or material mixes is the topic or subject matter of patent law. Utility patents, design patents, and plant patents are the three sorts of patents.

A utility patent covers any original, valuable, and non-obvious new and useful method, machine, piece of manufacture, or composition of matter, as well as any new and useful improvement to that process, machine, article of manufacture, or composition of matter. Any unique, distinctive, and attractive design for a manufactured thing is protected by a design patent. Finally, a plant patent protects each new plant type. Patent protection is subject to the same limitations as copyright protection. According to the Patent Act, the subject matter must be useful, inventive, and non-obvious. If the innovation can fulfil at least one of its stated goals, the utility criteria are often met.

Due to the high cost of acquiring a patent, most equipment, items of production, and methods are only valuable in this limited sense. According to a stricter requirement on patent subject matter, the innovation stated in the claim for patent protection must be innovative or unique. Several events can be used to predict and invalidate a patent claim, and they are all controlled by law. In general, the novelty requirements render patent claims invalid if the invention was known to the public before the patent applicant created it.

The third constraint on patentability, after usefulness and invention, is non-obviousness. The innovation must not have been evident to a person of ordinary ability in the relevant art at the time the invention was produced, according to US patent law.

The patent holder is granted the right to make, use, sell, and authorise others to sell the patented object in return for public disclosure and subsequent distribution of knowledge that purports to add to social usefulness. Unlike copyright, patent law protects the entire notion, expression, and invention. A patent's set of rights also prohibits anybody from producing, using, or selling the invention, regardless of whether they developed it separately. The owner of a patent enjoys a total monopoly on any embodiment of the notion for twenty years.

Patent rights, like copyright, have a limited lifespan. Unlike copyright protection, these rights prevent others from patenting or marketing their own ideas if they independently uncover the same technique or equipment. As a result, acquiring a patent on a novel machine prevents others from designing a similar machine, protecting the owner's rights. Trade secrets are almost limitless in terms of the substance or subject matter that may be protected, and they frequently rely on private procedures rather than government action to maintain exclusivity.

3) Trade Secrets

Any knowledge that may be utilised in the running of a business or other activity that is sufficiently valuable and confidential to provide an actual or potential economic advantage over others is referred to as a trade secret. Almost any type of knowledge or creative work can be protected as a trade secret provided certain definitional criteria are met. It might be a chemical compound formula, a manufacturing process, a material treatment or preservation procedure, a machine or other equipment design, or a list of clients.

THUMB RULES OF INTELLECTUAL PROPERTY RIGHTS (IPR)

The two primary limits on the domain of trade secrets are the necessity for secrecy and the desire for a competitive edge. The following three rules of thumb are used to determine secrecy:

1. An intellectual endeavour is not a secret if it is well-known in the business.
2. It has been published in trade journals, reference books, or other publications.
3. It is easily replicated from commercial items.

The secret is no longer protected if the proprietor of a trade secret distributes a product that in any way reveals the secret. Imagine discovering Coca-Cola's secret recipe with

a simple taste test. If this is the case, Coca-Cola's trade secret protection would be revoked. Competitive advantage is a softer condition that might be satisfied if the trade secret helps a company or its owner.

Despite the lack of a built-in sunset, trade secret rights are severely limited in one important sense. For as long as the secret is kept concealed, the owner of a trade secret has exclusive rights to exploit it. If the owner makes the secret public, it loses its trade secret status and may be used by anybody. In addition, the owner's rights do not exclude independent invention or discovery. Trade secret owners have management rights and are protected from misappropriation by the secrecy obligation. This last precaution is likely the most important, given the prevalence of industrial espionage and employee theft of intellectual property.

Continental Intellectual Property Systems and Moral Rights

“Moral rights”, as defined by Article 6bis of the Berne Convention, are recognised in continental European intellectual property law. It states that an author has the right to claim authorship of the work and to object to any distortion, mutilation, or other modification of the work, or any other derogatory action in relation to the work, that would be detrimental to the author’s honour or reputation, regardless of the author's economic rights. The concept is known in France as “*droits moraux*,” or “moral rights,” and it defends the personal rights of artists rather than their financial rights.

Moral rights include the right to create and publish in any format desired, the right of the creator to claim authorship of his work; the right to prevent any deformation, mutilation, or other modification of the work; the right to withdraw and destroy the work; the prohibition against excessive criticism; and the prohibition against all other injuries to the creator's personality. The Berne Convention has adopted much of this doctrine: when artists create, whether a writer, painter, sculptor, architect, or musician, they do more than create a one-of-a-kind thing with only exploitative potential, they project a part of their personality into the world and exposes it to the results of public usage. More various than financial loss, there are other sorts of injury that may be done to a creator that are not covered by copyright rules. It is worth noting that establishing moral rights like these extends beyond the Anglo-American history of offering property owners rights. Authors and inventors, in other words, have the rights to control the results of their intellectual labours that are independent of, and often at odds with, societal and economic benefit.

SYSTEMS OF PROPERTY

Within the Anglo-American tradition, there are several exceptions to the subject matter, rights, and limitations stated. A firm may be given a nuclear device patent but not the authority to use it, for example. (Please refer to the applicable legislation or code, as well as Hohfeld and Honeré's study of rights, for a more detailed description of the rights bestowed on property holders under each system).

TYPES OF MORAL CAPITAL ECO-SYSTEM

There are various types of moral capital which influences the moral ethics and social values of human beings such as:

- Ecosystem of moral capital.
- Social values and moral ethics.
- Moral capital of education.
- Moral ethics in behaviour.
- Morality and human psychology.
- Moral capital and humanity.
- Moral capital and socialism.

These values are useful for enhancing social values and morality to a great extent.

An ecosystem model of moral capital and ecosystem has been given here. Some models and their contributions are thus explained.

Social-economic model: The social-economic model refers to members of society's ability to grasp economic development and social concerns to address problems via social collaboration among diverse persons in society. The social-economic model may take a form as a social-value network among the citizens of India and abroad or as a type of publicness property which enhancing the moral capital and intellectual property.

Meaning and concept of socio-economic: Socio-economics is sometimes used by the politician and social worker as an umbrella term for various areas of inquiry when they have the need. "Use of economics in the study of social science, anthropology, history, political science, and other topics connected to society" is a wide definition of

“social economics”. In a narrow sense, social contemporary and practice considers behavioural interactions, social ethics, values, social behaviour standards of individuals and groups through social and moral capital in social “markets”.

For example, a wedding couple being marriage is a social interaction process which is belongs to socio-moral ethics and codes of conduct and the formation of social norms. In the relation of economics to social values, the socio cultural and economic developments are possible through the development of socio-economic model, developed by reformers of the present society.

According to the new definition, a subject or discipline is studied by people for the reciprocal relationship between economic science on the one hand, and social philosophy, ethics, and human dignity on the other, toward social reconstruction and improvement, or for highlighting multidisciplinary methods from fields like sociology, history, and political science, among others. Furthermore, many critics have criticised mainstream economics for its supposed weak philosophical foundations and the failure of the socio-economic model in such a circumstance, yet it is extremely beneficial to everyone and every society in the globe.

For example, because of its rigid rules, such proponents prefer to characterise social economics as heterodox in the pursuit of self-interest and disregard dysfunctional economic connections. Here, a social-economic-environmental model has been given for reader’s perusal and consideration. [Please see the Figure 2 of Socio-Ecology Model in Health].

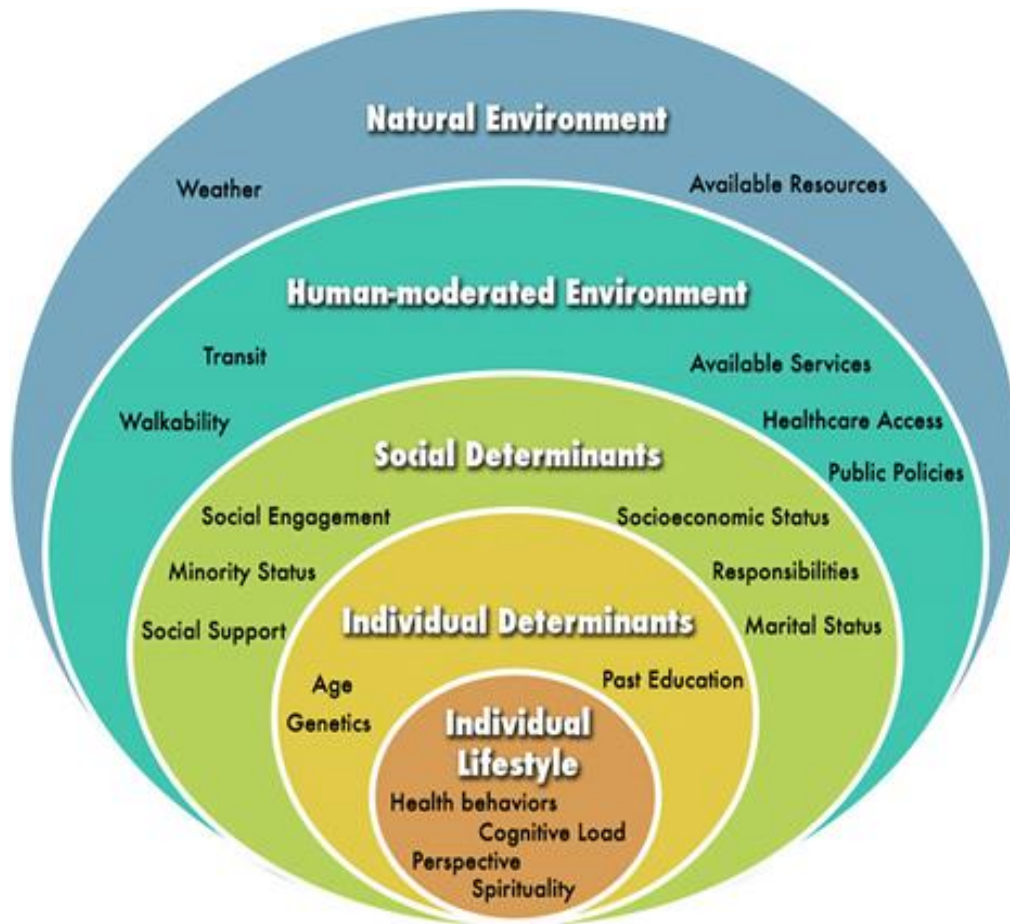


Figure 2: The Components of Moral Capital

1) Individual

The first level identifies biological and personal history factors that increase a person's likelihood of being a victim or perpetrator of violence. These factors include age, education, income, substance use, and addiction history, to name a few. Prevention techniques encourage anti-violence attitudes, beliefs, and behaviours at this level. Specific strategies include conflict resolution and life skills training, social-emotional learning, and safe dating and healthy relationship skill programmes.

2) Relationship

The second level examines close relationships that might lead to someone being a victim or perpetrator of violence. In people's closest social circle, peers, lovers, and family members influence their behaviour and improve their experience. At this level, parenting or family-focused preventative programmes, as well as mentoring and peer programmes, can be utilised to improve parent-child communication, promote positive peer norms, improve problem-solving abilities, and develop healthy connections.

3) Community

The third level looks at places where people form social bonds, such as schools, workplaces, and neighbourhoods, to uncover features of these environments that are associated with becoming victims or perpetrators of violence. At this level, prevention efforts are aimed at improving the physical and social environment in these settings (for example, by creating safe spaces for people to live, learn, work, and play), as well as addressing other variables that contribute to community violence (e.g., neighbourhood poverty, residential segregation, and instability, high density of alcohol outlets).

4) Societal

The fourth level examines the broad sociocultural elements that determine whether an environment is favourable to violence. Among these characteristics are social and cultural norms that accept violence as a legitimate manner of resolving differences. Policies that contribute to the perpetuation of economic and social inequality, such as health, economic, educational, and social policies, are also key sociocultural concerns. Preventative initiatives at this level include efforts to promote anti-violence cultural values, as well as measures to improve household financial stability, education and work prospects, and other policies that impact the structural determinants of a healthy lifestyle.

SOCIO-ECOLOGY MODEL

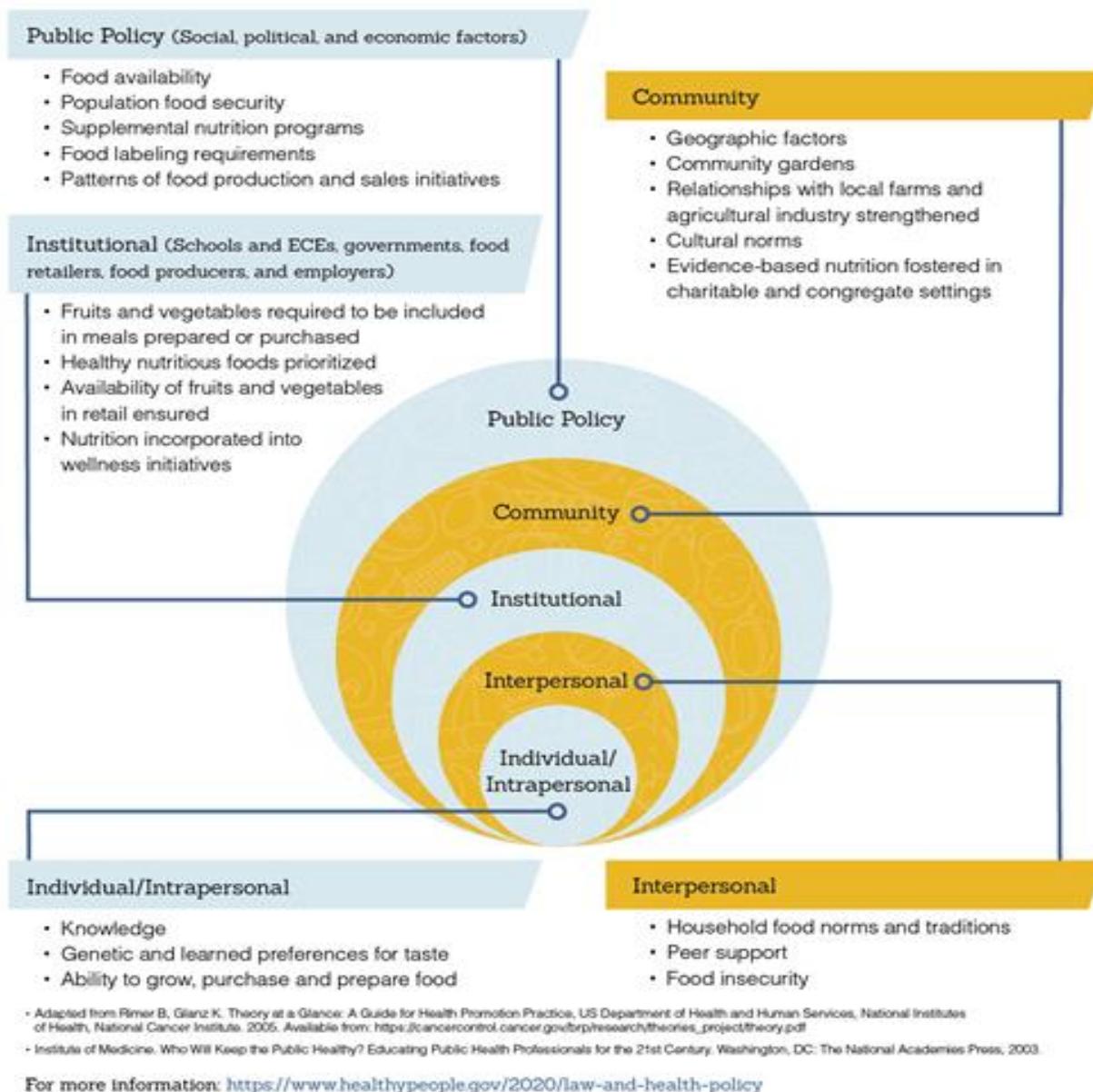


Figure 3: The Socio-Ecology Model

This model is the ideal approach for increasing people's moral capital and social values by applying social values, moral ethics, and ecological principles to create a healthy and enriched environment in which greater learning can take place.

Socio-Education Model

In today's world, the socio-educational concept of moral capital plays a critical role in virtually every element of human life. Most research researchers have become increasingly interested in the socio-education model throughout time.

SOCIOLOGICAL MODEL OF MORAL CAPITAL

The study of society, human social interaction, and the norms and processes that connect and divide individuals as members of organisations, groups, and institutions is known as sociology. It is mostly about how political, economic, and social factors influence how things function. (Giddens and Birdsall, 2001; Bourdieu *et al.*, 1991). The following figure shows a sociological model, related to social and family life.

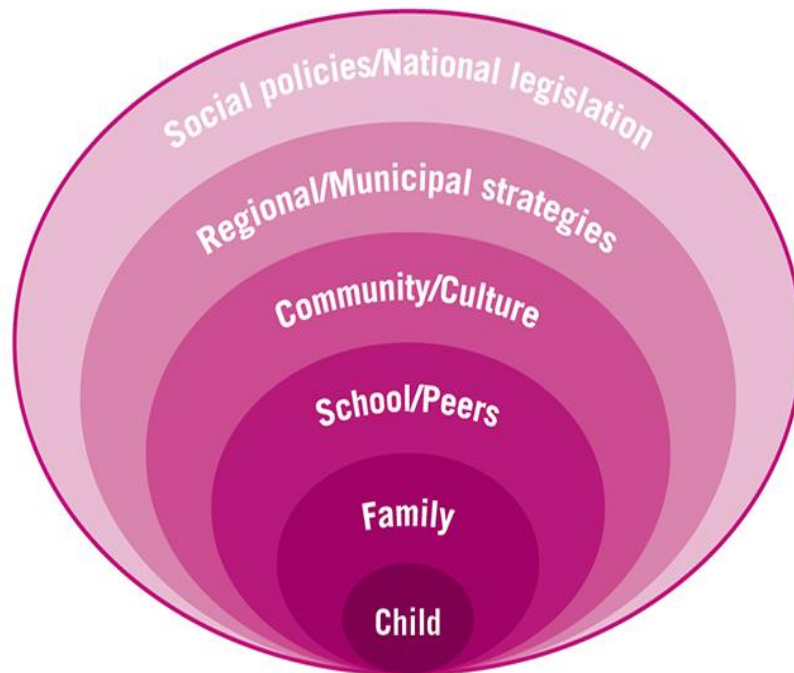


Figure 4: Models of Sociological model related with social and family life

EDUCATION MODEL OF MORAL CAPITAL

In this strategy, all children learn a great deal from their education, beginning with their family, school, college colleges, peer groups, and so on. The knowledge has been reflected in this model with the association of excellent instructors and students, by which most children/students gain the moral principles of education and students create a brighter and more successful profession and future by studying.

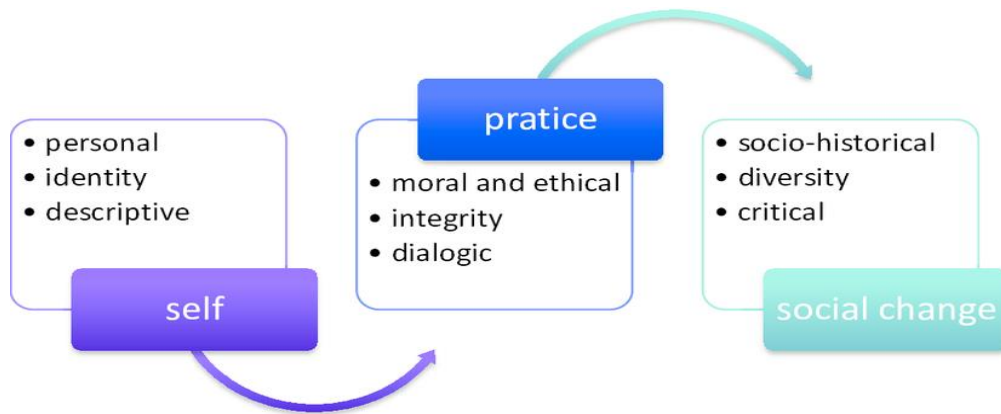


Figure 5: Reflective Teaching Practice Model

Source: https://www.researchgate.net/figure/Reflective-practice-teaching-model-2015_fig1_305887814

Table 1: Estimated global perspectives data on intellectual property and moral capital (2015)

Country	GDP	Innovation	Opportunity	Moral capital	Wealth	% of IPR Contribution	Rank
Measure	PPP	GEI Ranking	Education Rank	Volunteering	In Billionaires		
USA	\$45,336	01	03	01	01	28.12	02
Sweden	\$34,926	05	12	40	29	20.36	21
South Arabia	\$27,346	31	34	47	23	17.74	23
China	\$7,958	61	91	121	02	09.05	46
India	\$3,390	104	97	69	04	02.58	51
Nigeria	\$2,295	84	152	21	60	01.74	83
Brazil	\$10,264	100	79	90	07	07.76	39
South Africa	\$13,311	52	75	39	31	12.65	27
Total	\$144,826					100.00	

Source: Global Perspectives data on Intellectual Property and Moral Capital (2015) GEI Global Index 2015 of WIPRO, USA]

Table 1 proves that United States is the highest contribution in IPR and moral capital due to the following reasons:

- United States—good ecosystem, weak on opportunity.
- Europe—good ecosystem, weak on moral capital and entrepreneurship.
- Saudi Arabia—average ecosystem, weak moral capital.
- China—average ecosystem, weak moral capital, and entrepreneurship.
- Brazil—weak ecosystem, weak moral capital, opportunity, and entrepreneurship.
- India—weak ecosystem, weak moral capital, opportunity, and entrepreneurship.
- Nigeria—weak ecosystem, limited opportunity, and moral capital.
- South Africa – weak ecosystem, weak moral capital, opportunity, and entrepreneurship.

While there are no worldwide numbers on moral capital, the global stock of capital is estimated to be over \$200 trillion (Economist, June 2015, p. 93). What is the global size of moral capital? If the United States has 10% moral capital, the rest of the world should have \$20 trillion in moral capital.

We have \$150 trillion in capital if we include non-US countries, and moral capital should be approximately \$15 trillion. Approximately half of this is held by the 0.01%. If we had 2,000 billionaires with a reasonable estimate of 10 billion dollars each, moral capital in the twenty-first century would be equal to the US average. Actual moral capital in the world today, however, is closer to 1.5%. An amount of three-quarters of global capital is located outside the United States, but three-quarters of charity is located within the country. This is the twenty-first century's challenge. "The Economy of Ideas," John Barlow of the Electronic Frontier Foundation argues that the traditional legal institutions of copyright and patent cannot accommodate the "galloping digitization of everything not obstinately physical". Rather than trying to "patch" or "retrofit" these legal institutions, Barlow claims that digital property must be protected by moral norms and new technological mechanisms such as encryption.

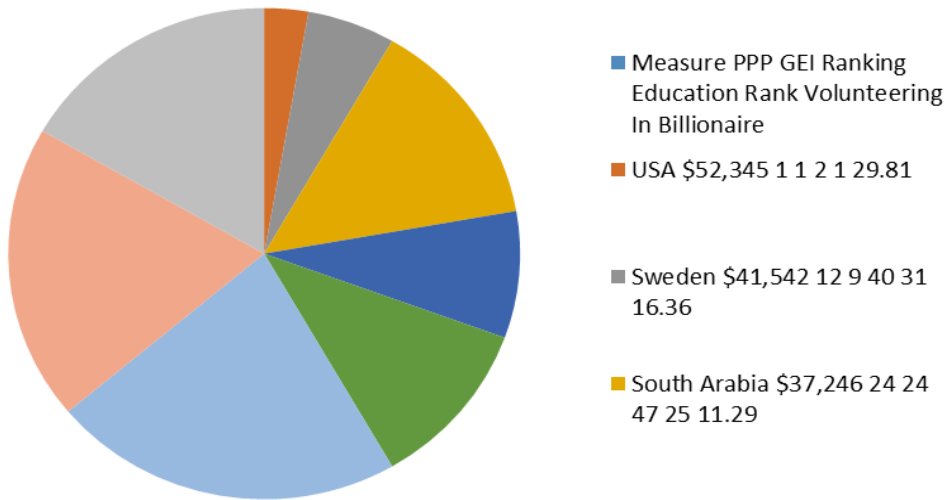
Table 2: Estimated Global Perspectives data on Intellectual Property and Moral Capital (2021)

Country	GDP	Innovation	Opportunity	Moral Capital	Wealth	% of IPR Contribution	Rank
Measure	PPP	GEI Ranking	Education Rank	Volunteering	In Billionaires		
USA	\$52,345	01	01	02	01	29.81	01
Sweden	\$41,542	12	09	40	31	16.36	02
South Arabia	\$37,246	24	24	47	25	11.29	05
China	\$47,243	08	13	128	02	15.04	03
India	\$23,132	52	16	69	05	11.42	04
Nigeria	\$12,453	76	113	21	45	02.34	08
Brazil	\$16,913	87	67	90	13	05.30	07
South Africa	\$21,734	41	43	39	28	08.44	06
Total	\$252,608					100.00	

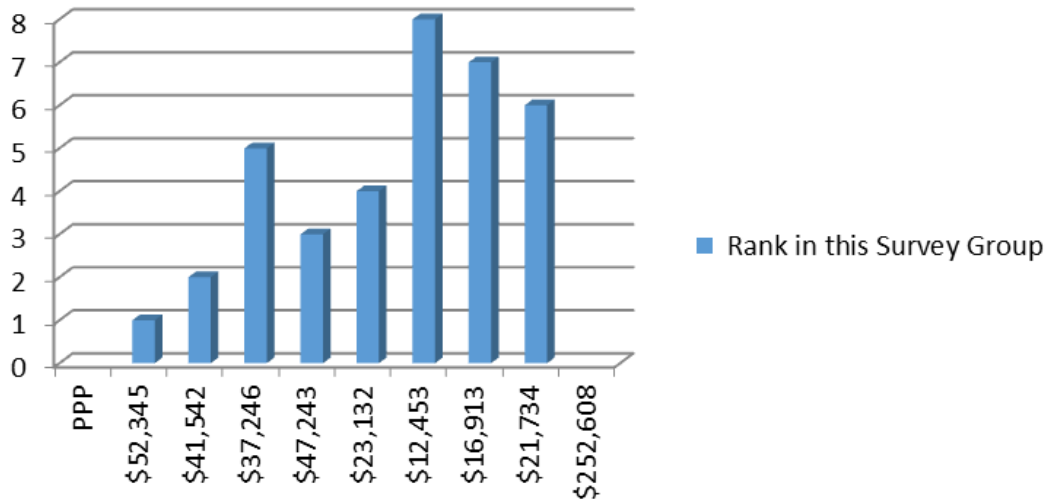
Source: Global perspectives data on intellectual property and moral capital (2021)

Table 2 is of the estimated global perspectives data on intellectual property and moral capital for the year 2021, which is the key indicators of IPR and moral capital contributed by various countries in world. Graph 1 - 3 also give a perception on this. Researchers have taken a micro perspective level of study for the purpose of justifying the taken research problem and their findings prove that most of the countries are trying to develop their moral capital as related to the IPR, which is the most valuable property for innovation and creativity.

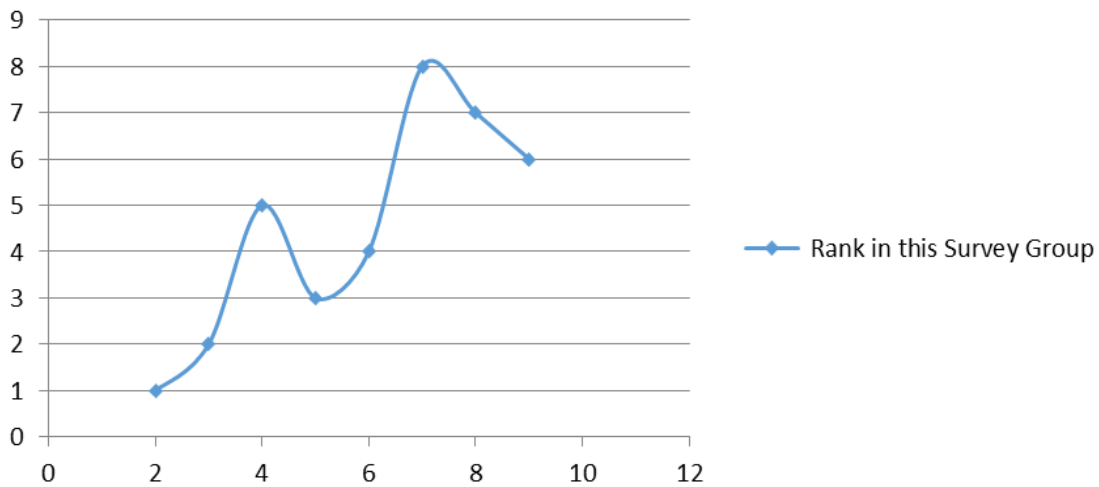
Graph 1: Moral Capital and IPR in a Semiotic Model of Pie Chart



Graph 2: Moral Capital and IPR in a Semiotic Model of Bar Graph



Graph 3: Moral Capital and IPR in a Semiotic Model of Scatter plots



HYPOTHESIS TESTING

In this section, from the shown data tables, the hypothesis may be compared and analysed. Here, the null hypothesis has no significance because there is no validation effect on people's mindset and moral ethics as related with their social value IPR and moral capital. Whereas, the alternative hypothesis (H_e) has a great importance for innovation of new things, products, writing skills, patents, copy rights, design, innovative things in trademarks and service management etc., by various innovators from academia and industries, such as scientists, engineers, professors, writers etc. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted due to its highly impact in the minds of individuals for creativity and innovations.

CONCLUSION

To summarise, despite the widespread adoption of the internet and the World Wide Web into everyday life, as well as the corresponding international concerns of the information "haves" and "have-nots", those with a vested interest in the control of intellectual property and digital information have grown in number. One of the reasons why intellectual property ownership has become a contentious and topical subject in applied ethics is because of this. As we go deeper into the information era, which is defined by the shift from an industrial to an information-based economy, philosophical clarity is necessary to build ethically justified intellectual property norms and institutions. This article should help to promote and advance philosophical study in this crucial field.

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Higher Education Pedagogy Amid COVID-19: Evaluating the Contextual Issues Impeding Transformation of the Traditional Education System from a South African Perspective

By

L. Ramaccio Clavino

ABSTRACT

Colonialism, apartheid, and epistemological traditions form an integral part of the fibre of the South African higher education system. Despite South Africa adopting a progressive constitution that guarantees equality, the reconstitution and systematic progress of the higher education system in South Africa to address socio-economic developmental needs, such as an all-encompassing system that provides equal access to higher education has been lamentable.

The impact of the COVID-19 pandemic has again emphasised the need to reevaluate the fundamental teaching and learning pedagogy of the higher education system, as social distancing and legislative restrictions resulted in most universities rapidly pivoting towards online teaching and learning. Although online learning enables universities to continue teaching despite social distancing restrictions, the integration of online learning as part of the traditional educational system is not without challenges. Similarly, the incorporation of online learning with traditional teaching practices, systematic and institutional challenges, as well as socio-economic constraints, especially at rural-based institutions, may have inadvertently widened the rift that was already present in an historically-fractured educational system.

It is against this background, and by adopting a qualitative methodological approach, that content analysis identified relevant reports, as well as national and international publications, related to the transformation of higher education and the impact that COVID-19 pandemic has had on higher education pedagogy. The role that technology can play in encompassing online learning as part of the new way of higher education pedagogy is explored, in addition to identifying contextual issues that may encumber higher education transformation. The outcome of the research concludes whether the integration of online learning with the traditional educational model requires fundamental restructuring and reconstitution in transforming the higher education

system in South Africa. Ultimately the conclusion synthesises insights that can be applied to enhance educational development.

Key words: COVID-19, digital divide, online learning, pedagogy, transformation, contextual issues.

INTRODUCTION

The South African higher education system is shaped and strongly influenced by a lingering history of colonialism, apartheid, and discrimination (Cloete, 2016). Consequently, social, political, and economic inequality has resulted in a deeply-divided system, where higher education was mostly reserved for a specific category of people that were of a certain class, race, and gender (Heleta, 2016). Despite the end of the oppressive apartheid system in 1994, the practice of eradicating engrained teaching practices and transforming higher education to an all-encompassing system that redresses the inequality and social injustices associated with apartheid policies, are still encumbered by socio-economic and systematic challenges (Cloete, 2016).

Transformation in terms of higher education is regarded as “a comprehensive, deep-rooted and ongoing social process seeking to achieve a fundamental reconstitution and development of our universities to reflect and promote the vision of a democratic society” (Department of Education, 2015). The need for transforming the higher education system was acknowledged in the Education White Paper (1997) as an important part of the South African governmental strategy to eradicate all forms of discrimination, especially in respect of the marginalised poor (Ngubane-Mokiwa, 2017).

Consequently, the National Plan of Higher Education reiterated that universities should actively work towards the elimination of any institutional, social, material, or intellectual obstacle that may impede an all-encompassing educational system and academic equality (Department of Education, 2015). The White Paper for Post-School Education and Training (2013) furthermore acknowledged that the use of information communication technologies (ICT) may be the vehicle by which transformation can be carried forward by providing an integrated framework committed to deepen the transformation of the higher education system.

Despite policies on higher education designed to address macro-structural, planning, governance, regulatory and funding challenges at universities across South Africa,

issues such as effective and efficient higher education and the equity of access to education still need to be reconsidered to address the educational divide (Department of Education, 2015).

The impact of the Sars-CoV-2 virus and the global COVID-19 pandemic has recently re-emphasised the need to exploit innovative and alternative teaching and learning solutions that may potentially transform the rigid traditional teaching model and, at the same time, make higher education more accessible (Maphalala and Adigun, 2021). Accordingly, the drive to migrate to online learning amid COVID-19 may be the catalyst required to re-evaluate the traditional higher education system and possibly expedite academic development and transformation.

The COVID-19 Pandemic and its Impact on Higher Education

The impact of the COVID-19 pandemic has left economies in turmoil, health departments in crisis and given rise to issues of sociality as educators were required to reflect on the basic purpose of education and the pedagogic models best suited for online learning (Peters *et al.*, 2020).

Traditionally, brick and mortar universities offer their curriculum by way of contact classes and assess their students by way of summative assessments (Karodia, 2019). Although some universities include technology in their teaching methods by developing hybrid teaching models, such as blended learning, contact classes remain a crucial component of blended learning (Le Grange, 2020). Consequently, prior to COVID-19, the integration of learning platforms, such as learning management systems (LMS), were mostly utilised to provide students access to additional teaching materials that were accessible at any time and from anywhere (Astalini *et al.*, 2019).

In March 2020, universities across South Africa were mandated to close campuses and suspend all contact classes in an endeavour to limit the spread of the COVID-19 virus (IAU Global Survey Report, 2020). The prohibition of large gatherings, as well as provisions enforcing social distancing, consequently resulted in the cessation of contact classes and therewith the disruption of the traditional teaching educational system (IESALC, 2020). In addition, academic calendars were adjusted to provide for the continuity of the curricula by way of virtual campuses (IESALC, 2020).

As most universities rapidly transformed to emergency online teaching, lecturers had to enhance their technological skills and consider innovative and alternative teaching methods to ensure pedagogical continuity (IAU Global Survey Report, 2020).

Lecturers consequently had to adapt hastily to a digital teaching framework by amending their lecture materials to construct online resources in the face of emergency online teaching (Scherer *et al.*, 2021).

In addition, in striving to remain active in terms of financial sustainability, as well as academic activities, most universities had to reallocate financial resources to upgrade the technological infrastructure of campuses and acquire software to facilitate online teaching and learning (Doyumğaç, Tanhan and Kiyamaz, 2021). Accordingly, as part of the migration to online teaching and learning, immediate digital transformation was required to provide the technical infrastructure to move from contact classes to online learning (Le Grange, 2020).

Consequently, technical support centres had to be established to provide lecturers and students with the required technical support to enable them to engage with online teaching and learning (Scherer *et al.*, 2021). In addition, digital devices such as laptops had to be made available to lecturers working from home, whilst students had to be assisted in acquiring a device to enable them to partake in online learning (Jili, Ede and Masuku, 2021). Information technology, digital platforms and technical tools thus enabled academics to personalise learning by providing online teaching as a new educational paradigm (Abreu, 2020).

The students were probably the worst affected by the impact of the COVID-19 restrictions as they had to return home or find alternative accommodation, gain access to digital devices and access to the internet, whilst also acquiring technical skills to engage with a new virtual learning environment that brought along a change in social modality (IAU Survey Report, 2020). In addition to the immediate impact COVID-19 has had on students, the long-term implications will probably only be fully appreciated once students have to secure employment and start repaying their study loans in a time of economic downturn (Martin-Barbero *et al.*, 2020).

Consequently, emergency remote teaching, facilitated by digital platforms such as Moodle, the use of technological tools as a mode of delivering course material, and communicating with and assessing students, may be regarded as the phenomenon that saved the 2020 academic year. The significance of technology and the potential of utilising and integrating technology as a means to continue teaching in the absence of contact classes, especially during COVID-19, can therefore not be overestimated (Ngubane-Mokiwa, 2017).

At the same time, one cannot disregard the challenges related to replacing contact teaching with online teaching, especially in the case where the South African educational system is already grappling with providing an all-inclusive academic environment for all students.

Contextual Challenges

In encompassing online teaching and learning within the higher educational system, core issues such as university governance, management, student access, staff involvement and skills development, teaching and learning practices, knowledge systems, institutional equity and funding are all vital in the transformation process (Department of Education, 2015). According to Sen (1992), these factors can be classified as either structural, institutional, environmental, or individual factors that may either enable or impede individuals in achieving their goals.

In adopting online learning within the higher education system, it is accordingly important that each of these conversion factors be considered in establishing the developmental needs of individuals to ensure that the required support is provided to facilitate transformation (Sen, 2021). Consequently, by adopting a capability approach as a theoretical framework to the research, the developmental needs of individuals are evaluated by considering conversion factors (Gore, 2021). Structural challenges, such as poverty, digital divide and rigid traditional educational models should, for that reason, be considered in determining to what extent these factors may have on including online teaching and learning in transforming the higher education system (Gore, 2021).

Moreover, institutional cultures and individual and external factors should likewise be valued, as these factors may influence a person's perception of transformation and possibly hamper the adoption of online learning (Ngubane-Mokiwa, 2017). In this regard, Sen (1992) is of the view that it is inadequate to evaluate transformation purely based on the human capital theory, as institutional efficiency cannot be judged only on inputs and outputs (Gore, 2021). Consequently, one should extend the human capital theory to include broader, non-economic effects, as provided for in terms of the capability approach (Sen, 1992). In this regard, the most significant conversion factors hampering the transformation of higher education include universities failing to adequately address a digital divide amongst students, the lack of developing systems

and measures to integrate online learning, as well as lecturers and students having poor technical skills to fully engage with online learning (Gore, 2021).

The Bigger Picture: Infrastructure, Systematic and Personal Challenges

The challenges surrounding transforming higher education to include online learning requires an interrelated approach, where institutional, systematic, and interpersonal factors are evaluated to achieve academic development (CHE, 2014). Therefore, institutions should not only provide an appropriate technological infrastructure, but also ensure that such a structure has the required systems in place, such as technical support, to allow students and lecturers the use of compatible teaching tools best equipped to provide online learning (Carolan *et al.*, 2020).

Providing a Technological Infrastructure to Support Access to Education

The ability of ICT to transform education and create better access to quality education for all, whilst bridging the digital divide and social exclusion, was acknowledged in the Draft White Paper on E-Education, in 2003. Although strides have been made in extending internet access and improving bandwidth connectivity throughout South Africa, a recent survey conducted in 2020 concluded that between 25 and 50% of the South African population still did not have access to the internet (UNICEF, 2020). The magnitude of the lack to internet access is further evident from a 2020 survey that concluded that only 29% of face-to-face teaching has been transferred to online teaching in Africa (IAU Global Survey Report, 2020).

Although the National Integrated ICT Policy White paper (2016) would enable the release of high-demand spectrum (radio frequencies used to supply future mobile broadband networks), and therewith deliver robust 4G infrastructure to mobile consumers, government has been delaying the issuing of an integrated broadband strategy (Writer, 2021). Accordingly, the lack of access to fast uninterrupted connectivity to access and disseminate course material are fundamental challenges that not only require universities to reallocate resources to the development of technical infrastructures, but also governmental intervention to ensure better and faster internet connectivity throughout South Africa.

In addition to some universities having poor access to uninterrupted internet connectivity, many students, especially from rural areas, have to grapple with poor internet access at their family homes (Jili *et al.*, 2021). In this regard, the World Database of the International Telecommunication Union (2020) recorded that Africa

has the lowest percentage of household connectivity in the world. The closing of university campuses during lockdown, and with that the inability of students to access internet connecting from the university campuses, further exacerbated the challenge of restricted internet access (Di Pietro *et al.*, 2020).

Data costs are an additional constraint that impacts student engagement with online learning (World Database of the International Telecommunication Union, 2020). Although a 2020 survey indicated that the South African government is one of 86 countries that provide governmental support to digital websites and applications with content, many students face challenges when trying to access course material and upload their assessments (UNICEF, 2020). Consequently, many students view the lack of adequate internet access as their major challenge in adapting to online learning (Mishra, Gupta and Shree, 2020). This may indicate an opportunity for universities to re-evaluate their teaching methods and to redesign their teaching materials and activities to be more accessible for online use (UNESCO, 2020).

Furthermore, it should be noted that students from middle to high income households were generally found to have access to digital devices and internet connectivity, and are possibly better equipped to interact with digital technology and resources (Cloete, 2015). At the same time, students from previously disadvantaged backgrounds, and in particular students attending rural based institutions where digital infrastructure may be lacking, generally have less access to digital devices, challenges in accessing stable bandwidth connectivity and have poorer technological skills (Di Pietro *et al.*, 2020). Consequently, the student who probably requires the most technological support and most assistance in accessing digital tools, is most likely also the student who lacks infrastructure availability and has the least access to digital technology (Davids, 2020).

Developing countries, and in particular students in low to medium income households, are therefore most disadvantaged by the lack of internet access (Davids, 2020). This view is supported by the World Bank's Education Global Practice (2020) that acknowledged that technology, and in particular online learning, has the potential to disproportionately benefit the already advantaged student (Arkorful and Abaidoo, 2014). This viewpoint was also shared by the United Nations Sustainable Developmental Goals who advocated "not leaving any student behind". Consequently, UNESCO acknowledged equal opportunities as one of six principles in ensuring that "the right to

education be to all within a framework of equal opportunities and non-discrimination” (UNESCO, 2020).

Accordingly, although technology enables online learning and has the potential to enhance access to teaching continuity during the COVID-19 pandemic, the migration to online learning cannot be the panacea to all the challenges of the South African higher education system, as it may inadvertently recapitulate the salient inequities of the current educational system (Watts, 2016).

In addition to limited access to broadband connectivity, the importance of a university infrastructure that can support the virtual workload and is compatible with various devices to provide the technological tools and support, including platforms and learning tools, is paramount to facilitating online teaching (World Database of the International Telecommunication Union, 2020). Reliable operating systems and software applications suitable for the magnitude of online learning materials and resources, in addition to internet connectivity, is therefore key to online learning (UNESCO, 2020). University governance and management are thus required to provide institutional structure and a systematic framework that deliver the technology and digital tools to run adequate and effective online learning programmes (IAU Global Survey Report, 2020).

The Draft White Paper on E-Education (2003) moreover identified that the digital divide does not only refer to connectivity and infrastructure disparities, but also includes inter alia the lack of content development, knowledge generation and a lack of technical skills and competencies. Accordingly, there is also a responsibility on institutions to re-evaluate their teaching policies, as well as provide lecturers with the technological skills to affectively use the LMS system to its full potential (Ugwuanyi, Okeke and Mokhele-Makgalwa, 2021).

Online Pedagogy

In addition to challenges surrounding university infrastructures, the use of online learning has also emphasised the need to re-evaluate existing traditional teaching and learning policies and exploit possible new marketing and business management strategies to ensure that universities capitalise on prospective new students, whilst remaining relevant and competitive (Martínez-Garcés and Garcés-Fuenmayor, 2020).

Traditionally, module content was delivered by way of face-to-face lecturers and students were mostly assessed by way of sit-down summative assessments and a

final examination. The curriculum of a degree was meticulously designed, whilst each module content was clearly structured to achieve specific learning outcomes. Learner guides, lecture notes, class activities, and assessments were therefore all aligned to ensure that the module outcomes were reached and that the quality of a module was upheld. Due to the unpredictability of the pandemic, as well as the urgency in moving to online teaching, “emergency online teaching” was adopted by most universities (Whittle *et al.*, 2020).

Emergency remote teaching refers to unexpected, temporary, instructional teaching in reaction to a crisis that is not pre-planned (Whittle *et al.*, 2020). Although emergency online teaching resulted in 60% of universities worldwide increasing their virtual mobility, it is not intended as a permanent solution, nor does it constitute online learning in the true sense of the word (IAU Global Survey Report, 2020). In this regard, emergency remote teaching differs from online learning in that the latter is specifically planned and designed to be delivered virtually (Hodges *et al.*, 2020).

Online learning therefore includes a method whereby course materials are instructed either online or offline and audio recordings or virtual classes are uploaded on a platform to conduct the educational process (Doyumğaç *et al.*, 2021). Online learning is consequently more flexible, adaptive, and less restrictive than face-to-face teaching and has the potential to enhance students learning experience (Blessinger and Bliss, 2016).

Accordingly, there is a need to reconstruct teaching and assessments policies to include e-teaching and protect the integrity of e-assessments (Ngubane-Mokiwa, 2017). In so doing, the implementation of strategies, manuals, and guidelines to provide for organisational, institutional, and technological change, especially in lieu of COVID-19, is a crucial part of the transformation process (Chiparra *et al.*, 2020).

In this regard, LMS platforms, such as Moodle, provides universities with a digital learning environment that is freely accessible, whilst also providing for the increase in institutional capacity (CHE, 2014). Technology can therefore enable students to have access to materials and resources at their own leisure and from anywhere in the world with the click of a button (McKnight *et al.*, 2016). According to World Bank’s Education Global Practice (2020) online platforms enable lecturers the space in which to have virtual classrooms (BigBlue Button on Moodle, Teams meetings or Zoom meetings), include a didactic complement where module contents and resources can be

accessed, as well as a digital communication channel and discussion forum (CHE, 2014).

Despite the aforesaid, access to internet connection and institutional infrastructure remain crucial for the continuation of online learning. It is for this reason that some lecturers, despite having access to Moodle teaching tools, revert to generic applications such as WhatsApp and emails, feel the need to explore the possibility of mobile connectivity packages that provide free data in respect of all educational websites (Aljawarneh, 2020).

In terms of UNESCO's six principles, current regulatory frameworks and policies ought to be reviewed and pedagogical strategies be reformed to include online learning as part of teaching and learning processes (UNESCO, 2020). For that reason, universities must address the deeper concerns that may impede higher education transformation, by ensuring teaching equity, the design of pedagogical measures to record pedagogical changes, and evaluate training and the renewal of teaching and learning models (UNESCO, 2020).

As such, a process of thoughtful, intentional online redesign involves the restructuring of operational and educational models, and therefore constitutes more than just adopting an alternative delivery system (Peters *et al.*, 2020). It includes reconsidering familiar elements of classroom instruction, and new perspectives on communication, whilst being mindful of digital pedagogies, as students adapt to a new culture that is limited to digital engagement (Peters *et al.*, 2020).

Accordingly, the World Bank's Education Global Practice (2020) proposed that the method of delivery, mode of online assessment, strategies and methodology and course content should be designed in line with a relevant curriculum that is reflective of the lecturer's renewed teaching philosophy within the specific discipline (Scherer *et al.*, 2021). In this regard, the importance of curriculum design that supports implementation and programme design is paramount (Glennie and Mays, 2013). Curriculums should, for that reason, set a learning pathway and include consistency between course design and development, the learning environment, assessment and activity design, as well as the resourcing of the curriculum (Ananda, 2013). In addition, curriculum design should be based on developing student competencies that require the use of the appropriate technology, as well as learner skills, that will not only facilitate online learning but engage students to partake (Glennie and Mays, 2013).

At the same time, it is imperative that lecturers reconsider their teaching philosophies and possibly adapt their teaching theories to be better suited for online learning (Ananda, 2013). In this regard, although the behaviourist theory provides for prescriptive instructions and incremental assessments, online learning requires less direct instruction and therefore encourages the construction of knowledge through students' learning activities (Ananda, 2013). Accordingly, applying a constructivist learning theory for online learning not only encourages self-directed construction of knowledge but also instils deeper learning based on a task-orientated pedagogical focus (Ananda, 2013).

Lecturers are, moreover, required to establish educational models that are flexible to adopt to alternative teaching approaches, teaching and assessment methods, and the use of different pedagogies with explicit competencies (Marinoni *et al.*, 2020). The implementation of online processes, the design of quality online teaching materials, and making use of digital methods of teaching and assessment are, therefore, fundamental in teaching continuity and securing the feasibility of the university (Maphalala and Adigun, 2021). As many universities are facilitating online teaching by using LMS, it may be an opportunity to adopt teaching and learning as a platform pedagogy or a social-driven learning pedagogy to enable student engagement (Whittle *et al.*, 2020).

Digital pedagogy has furthermore resulted in lecturers having to re-evaluate the way they teach, what they teach, and for what purpose they teach the specific module content (Peters *et al.*, 2020). Lecturers are therefore required to adopt appropriate pedagogical skills in questioning the epistemological basis on which they teach (Peters *et al.*, 2020). In this regard, lecturers are expected to re-evaluate learning theories, teaching strategies, quality measures, as well as integrate technology into their module content (Ngubane-Mokiwa, 2017). Changing the manner of teaching has the potential to change the students' learning environment for the better by broadening their knowledge base and enabling information sharing (McKnight *et al.*, 2016). LMS, furthermore, enable students to engage with each other and with lecturers by way of discussions and virtual classes (Ngubane-Mokiwa, 2017).

As far as assessments are concerned, LMS make provision for synchronous (the involvement of students on the web in real time), as well as asynchronous (allowing students to complete the course in their own time without live interaction) e-assessments (Petronzi and Petronzi, 2020). At the same time, due to e-assessments

mostly being open book, formative assessment is more suited for online learning than the summative method of assessing students (Arkorful and Abaidoo, 2014). Formative assessment allows that students' understanding of the subject matter be continuously assessed as the students develop their knowledge of the subject matter (O'Connor, 2020). Automated feedback, or feedback provided by way a digital platform, can in turn ignite study groups and social interaction with others by way of digital chat rooms or WhatsApp messaging (McKnight *et al.*, 2016).

The possibility for students to explore new knowledge frontiers by adopting techno-centric models, as opposed to the traditional teaching methods, would furthermore allow students to become more autonomous in their studies (Haverila and Haverila, 2021). In this regard, it is more about what the student does and not what the lecturer does. As online learning enables student creativity, choice and control of the learning process, the student can foster a deeper understanding of the module content, whilst being motivated to improve personal development (Haverila and Haverila, 2021). This approach is typical of a student-centric approach where the lecturer guides a student through the module content and encourage lifelong acquisition and retention of knowledge, as opposed to the transferral of knowledge (Haverila and Haverlila, 2021). The focus is therefore rather on self-discovery that is best evaluated by way of formative assessments (Haverila and Haverlila, 2021). This approach is therefore more in line with a student-centred constructivist approach, where the focus is on constructing students' own knowledge, rather than the traditional instructivist approach that is lecture-centred (O'Connor, 2020).

A student-centric approach also caters for more diverse personality types and different backgrounds students decides how much they wishes to interact or disengage in an online forum (Cloete, 2017). Students can therefore increase their understanding at their own pace.

As online learning requires that students access suited online material and resources to construct their own learning, it also encourages the development of research and critical thinking skills (McKnight *et al.*, 2020). In this regard, the use of virtual reality and automation to simulate real life experiences as adopted in China, where virtual learning is included into their learning programmes, exemplifies the potential success a country can achieve with online learning (Segaren, 2019). The need to encompass technology into the curriculum to prepare students to live in a knowledge society is therefore eminent (Department of Education, 2020).

As a result, it may be argued that COVID-19 has forced academics to re-evaluate the traditional epistemological assumptions of the traditional higher education system and the adoption of technological aids in teaching practices. The effectiveness of online teaching is consequently dependent on adequate technological infrastructure, as well as the redesign of traditional teaching processes and models. Fundamental to the execution of online learning is the ability of students and lecturers to acquire technical skills to fully engage with the digital learning environment.

Technical Skills

In adapting to online teaching, lecturers require technical and pedagogical skills to ensure that the course is delivered in an appropriate manner that is compatible with the institution's digital platform, and that the content is taught effectively (Marinoni *et al.*, 2020). In so doing universities have had to invest in the skills development of academic, non-academic staff and students to ensure continuity of teaching, whilst also providing ongoing technical support (Vermeulen, 2020). Specifically, the importance of considering individual backgrounds, cultural and innovative differences, as well as lecturers' confidence in using the digital teaching space, is imperative in adequately providing for online teaching (Scherer *et al.*, 2021). Consequently, institutional support, as far as technological and pedagogical content knowledge and resources are concerned, is vital as it influences to what extent online teaching is adopted and applied by lecturers (Scherer *et al.*, 2021).

Studies have concluded that most lecturers were generally comfortable in utilising Zoom meetings, emails and WhatsApp to disseminate and interact with students (Mishra *et al.*, 2020). All the same, although lecturers saw the benefit of online teaching tools as useful, in particular after receiving training in using Moodle, many reverted back to the general technological tools as slow internet access made it difficult to upload course material and allow for students to engage adequately with the course content (Mishra *et al.*, 2020). It is for this reason that the World Database of the International Telecommunication Union (2020) proposed that lecturers be taught how to optimise online teaching to accommodate poor and unstable internet connectivity.

Notwithstanding technological infrastructures supporting online learning and teaching and assessment approaches and methods being delivered online, the execution of online teaching is therefore dependent on lecturers and students having the required technical skills to engage with online learning (Sweidan and Areiqat, 2021). Even

though lecturers were inundated with workshops to assist them to convert and upload their materials onto a virtual platform, little attention was given to the redesign of the module content and adoption of alternative teaching approaches, strategies and pedagogies better suited for virtual platforms (IAU Global Survey Report, 2020). Accordingly, most lecturers adopted “Coronateaching” (the transformation of information and content to a virtual mode of delivery without adapting curriculum and methodologies) to accommodate emergency online teaching (Torres, 2020). Thus, the need for a comprehensive national plan to give sufficient consideration to pedagogical strategies and didactics in including online teaching with higher education is paramount.

The Way Forward

Transformation is about change (du Preez *et al.*, 2016). In applying the capability approach, it is apparent that in adequately transforming higher education to include online learning, conversion factors (that may impede students from fully engaging with online learning) need to be addressed. It is therefore proposed that students’ capabilities be supported by not only providing quality online teaching but by also providing a digital platform and learning environment that would support student academic development (Gore, 2021).

In this regard, it is suggested that transformation to institutional structures, such as the higher education policy, be evaluated and possibly reformed (du Preez *et al.*, 2016). Curricula therefore need to be diversified, in particular as far as it relates to teaching and learning dimensions. Accordingly, teaching theories, strategies, quality measures and technological integration form an integral part to curriculum reform that should be flexible to accommodate alternative teaching approaches and to ensure social responsiveness (Ananda, 2013). In view of that, the Department of Higher Education and Training (DHET) should develop guidelines on appropriate transformation goals and strategies within the higher education sector (South African Human Rights Commission, 2014).

In line with the Education White Paper (1997), structural changes, as far as the culture of a university and the leadership and management of the institution is concerned, should also be continuously reviewed. For this reason, the DHET should take a leading role in the transformation of the higher education system and hold universities who fail to transform accountable (South African Human Rights Commission, 2014). The

implementation of an ongoing national curriculum and programme audit, for purposes of accreditation, may monitor and evaluate policy imperatives and the transformation of higher education to include online learning (du Preez *et al.*, 2016).

The transformation of structures in higher education is another factor that requires consideration. In this regard, national trends in education policies, in addition to governmental policies and legislative changes, need to be reviewed, and universities need to realign their policies with national trends in higher education (du Preez *et al.*, 2016).

At the same time, there is need for the transformation of institutional cultures and management styles (du Preez *et al.*, 2016). As change cannot be effectively implemented without the support of stakeholders, universities cultures should be changed by way of implementing transformation policies and constituting institutional transformation committees and by launching a transformation awareness campaign that instils transformative management approaches and cultural awareness (du Preez *et al.*, 2016).

In addition to addressing institutional and individual conversion factors, technical skills development should also form an integral part of lecturer training (Maphalala and Adigun, 2021). To enable lecturers to reconstruct traditional teaching models to online teaching, technical and pedagogical skills development are crucial (Ugwuanyi *et al.*, 2021). By providing an enabling online teaching environment where lecturers can develop their capabilities, as well as by providing continuous training on new innovative teaching and assessments methods, the efficiency of online teaching and the development of personal capabilities can be improved (Gore, 2021).

It should however be noted that, ultimately, the success of online teaching is underpinned by internet access (Maphalala and Adigun, 2021). Although governmental intervention is required to address the lack of stable and fast internet connectivity throughout South Africa, universities should also plan and strategize to safeguard the technical infrastructures of universities and constantly explore alternatives to support fast, uninterrupted internet access at campuses and the use of alternative devices to support online learning (Maphalala and Adigun, 2021). Also, universities should be mindful of contextual and personal forces that may perpetuate inequality as far as access to education is concerned (Cloete, 2017).

Ultimately, in evaluating the transformation of higher education to include online teaching, it is suggested that best practice guidelines be re-evaluated to enable universities to collaborate with each other in designing curriculum, module content, and innovative teaching and assessment methods that are most effective for purposes of online teaching (du Preez *et al.*, 2016).

CONCLUSION

South Africa, as in the case of most developing countries, faces social and economic challenges. The impact of COVID-19 has resulted in a pedagogical shift from what was once regarded as traditional teaching methods being applied by a lecturer in a lecture venue and by way of contact classes to emergency remote teaching, in what is a more student-centric approach where students are guided by the lecturer to engage with information at their own leisure and by way of an online mode of delivery within a digital space (Peters *et al.*, 2020).

Transforming higher education to include online learning, however, requires the active removal of institutional, structural, individual and material factors that may inhibit a more equal, inclusive and socially just higher education system (Department of Education, 2015). Consequently, transformation takes place in different spheres and can be encumbered by various conversion factors.

Considering the nature of an already historically fractured higher education system, the unequal fabric of the South African higher education system demands that universities reform curriculum, provide equal access to all students, provide better institutional infrastructures, as well as be mindful of institutional cultures and socio-economic challenges (Ajani and Gamede, 2021).

Although online learning has provided innumerable benefits, one of the biggest constraints in effectively transforming higher education to include online learning is poor and or unstable internet connectivity (Vermeulen, 2020). This impediment is of particular significance as far as students from previously disadvantaged backgrounds attending rural based institutions are concerned. This barrier cannot be addressed in isolation of the previously mentioned demands as it is interrelated to institutional, systematic and personal factors that may impede the integration of online learning in higher education (Kimmons *et al.*, 2015). As universities are forced to explore alternative teaching and assessment methods, it is also important to implement

technology that will support teaching practices and not just simply convert to Coronateaching and disregard pedagogical strategies of teaching (Englund, Olofsson and Price, 2017).

Ultimately, online learning by way of the LMS has achieved the immediate short-term goal of saving the 2020 academic year. Going forward, however, universities will have to reconstruct the curricula, and design policies and strategies that are best suited for online teaching and assessment. Campuses will have to strategize how to expand their technological infrastructure, whilst lecturers will have to re-evaluate their teaching philosophies and approaches in lieu of a digital pedagogy of teaching (Sweidan and Areiqat, 2021). Ultimately, the effectiveness of online learning rests on the ability of students and lecturers' technical capabilities to effectively engage with online teaching (IAU Global Survey Report, 2020).

At the same time, one should be mindful not to set unrealistic expectations on transforming higher education to include online teaching, especially considering that the impact of COVID-19 in the last twelve months, has made bigger strides in transforming higher education than has been made in the last three decades. Accordingly, the transformation of higher education to include online teaching is complex and will require research, collaboration, resources and time.

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Bureaucratic Public Organisations and Women's Transformational Leadership: A Case Study on Senior Female Managers in Ghana's Civil Service

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ABSTRACT

In recent years, the number of women filling managerial positions within Ghana's civil service has surged. However, given the restrictive bureaucratic nature of the civil service, it is not obvious if these women are facilitating innovations to impact major changes in their respective Ministries, Departments, and Agencies. This study, therefore examines the impact of formalisation, centralisation and hierarchy, as bureaucratic elements on female managers' intellectual stimulation, which underlines transformational leadership.

Using a mixed research design and a sample of 120 participants, the study proved that formalisation and centralisation significantly weaken the ability of female leaders to develop staff creativity. Women leadership in the civil service is therefore not impacting any major, desired changes. The internal administrative structures must be reformed to allow female managers autonomy in decision-making and to effect changes easily in urgent situations.

Key words: Women leadership, transformational leadership, female managers, bureaucracy.

INTRODUCTION

Public organisations in Ghana, such as the civil service, primarily exist to formulate and implement policies for the efficient delivery of public services. As such, they tend to be rigidly structured with laid down procedures, which guide leadership and behaviour towards organisational performance. Regarding the form of leadership which ensures maximum productivity in organisations, a number of studies (Burns, 1978; Conger and Kanungo, 1988; Northouse, 2016) posited that transformational leadership is key to organisational success. Further, women were observed to be the repositories of transformational leadership skills (Appelbaum, Audet and Miller, 2003; Barriteau, 2003; Statham, 1987). Statham (1987) emphasised female leaders as both task-oriented and person-oriented as compared to male leaders, who normally focus on the task at hand. This projected women as having not only the job skills but also the necessary communicative and good interpersonal skills to lead major changes which boost organisational performance.

According to Bass's (1990) model for transformational leadership, four criteria define transformational leadership: idealised influence – show competence and confidence; inspirational motivation – articulate goals and tasks; intellectual stimulation – facilitate individual creativity and innovation; and individualised consideration – being affectionate towards staff (Northouse, 2016, p. 166-71). Thus, for this study, transformational female leaders refer to female leaders/managers in the public/civil service who create changes by virtue of their competence and confidence, ability to articulate goals and tasks to their subordinates, being affectionate towards their staff and most importantly, incite staff creativity for change.

In Ghana, the level of women's participation in the public service is gradually increasing. Women are contributing to public service delivery with their managerial and leadership roles in the civil service and other public institutions. According to Adusah-Karikari and Ohemeng (2014), women constituted the largest proportion of Ghana's population at 51.2%, and constituted 32% of the civil service with a 12% representation at managerial decision-making levels. Also, a percentage analysis of women occupying the highest managerial position (i.e., the chief director) in Ghana's civil service from 2013 and 2017 indicated that women constituted less than 20% of chief directors across the Ministries, Departments and Agencies (National Annual Progress Reports of Ghana, 2013-2017).

Women are therefore woefully under-represented in the decision-making levels in the civil service which signals that they could hardly have their interests addressed. The civil service is rigid in nature since it clearly dictates the rules governing behaviour and conduct of work, with structures of approval. This projected structure of the civil service also indicates a lack of autonomy on the part of both leaders and subordinates in taking self-initiatives that can spearhead crucial changes in emergency situations. According to Gibson *et al.* (2012), the organisational structure in place influences how transformational leaders can be. Given the under-representation of women at decision-making levels and the organisational structure in place, it is difficult to identify their leadership style in the civil service and conclude if they are transformational enough to impact staff development and organisational output.

This paper, therefore, attempts to answer why women's transformational leadership is limited in Ghana's civil service. As such, the goal of the paper is to examine the impact of the bureaucratic organisational structure on female leaders' ability to effect changes in the civil service. The specific objectives are firstly to identify the transformational leadership traits exhibited by women managers in the civil service by asking how women in the civil service are exercising transformational leadership. Secondly, the study is to assess the effect of internal structures on women's transformational leadership in the civil service by asking does the internal structure prevents women from developing staff creativity and creating changes. Lastly, the study seeks to identify measures that could address the observed challenges by asking: what can be done to empower women create the needed changes?

A Google survey questionnaire was developed using the compressed version of Northouse's (2010) Multifactor Leadership Questionnaire (MLQ) form 6. The survey questionnaire, comprising of both open and close-ended questions, was administered to both senior female managers and their subordinates in the Ministries, Department and Agencies (MDAs). A total of five in-depth phone interviews were also conducted with female managers and a subordinate to reveal a deeper understanding on how women were leading and the strategies they adopted to effect changes within their bureaucratic set-up.

The findings revealed that the potential of women to lead transformations in the civil service remains fully untapped. The factors that limited women transformational

leadership were both internal (organisational structure) and external (societal elements) in nature. The findings also emphasised the need for the establishment of a framework that addresses both the internal and external factors that restrains women's transformational leadership.

THEORETICAL CONSIDERATIONS

Gender and Leadership

Leadership is seen to be an interactive process between two factions (an individual and a group), where the group is influenced by an individual in meeting a common goal (Northouse, 2015). Sometimes, the group could be a structured group with an established system of operation, as in the case of formal organisations (Rauch and Behling, 1984). The assertion by Rauch and Behling (1984) suggests that there cannot be one correct approach to leading groups given the peculiar nature of groups. In that sense, a leadership approach in informal groups might vary from that in formal groups.

To serve a managerial purpose in formal institutions, the transactional and transformational leadership theories were developed in the 1980s. Apart from transactional leadership being seen as an effective tool in realising group goals, the transformational leadership style is deemed to be the most efficient form for achieving larger group output. This is because it provides followers with both the needed psychological and physical resources needed for their performance (Bass, 1985, p. 20; Burns, 1978; Northouse, 2016), which invariably results in followers' satisfaction.

According to Bass (1990), transformational leaders, besides providing motivation, develop the mental capabilities of followers through intellectual stimulation. Thus, intellectual stimulation of leaders is the underlining principle of transformational leadership as it is the key factor responsible for the needed change in organisations (Lowe, Kroeck and Sivasubramaniam, 1996). Bass and Avolio (1995) asserted that employees under leaders with intellectual stimulation abilities tend to be very innovative and create changes. Appelbaum *et al.* (2003) posited that transformational leadership is more effective in influencing group performance towards goals.

On the gender dimension of leadership, women are observed to lead differently from men. According to Ayman and Korabik (2010), there is a gender perspective

to leadership that reflects the behaviour of men and women as defined by cultural roles. Therefore, male and female leaders come with expected qualities, biologically or culturally determined, that differentiates their leadership. Women are seen to possess more transformational leadership traits while men exude more transactional leadership qualities (Statham, 1987).

According to Bass (1990), transactional leadership requires leaders to use their power to reward or punish followers, as a means of motivating them in accomplishing a task. The transactional leader by his power, resorts to rewards and punishment to motivate or negotiate with followers in achieving goals (Bass, 1990). Appelbaum *et al.* (2003) further explained that, unlike women, men are more likely to be transactional leaders due to their possession of qualities such as being structured, autocratic, instructive, and business-oriented. Thus, men by their nature, easily orient themselves towards transactional leadership, which is also identified by Northouse (2016) as an effective means of getting jobs done due to the emphasis on strictness, laid down principles and negotiations. In contrast to men, women were identified as being more transformational in leadership (Statham, 1987) due to their predisposition to feminine qualities, such as being considerate, participative, social-expressive, and people-oriented (Saint-Micheal, 2018). However, the cultural socialising of women to be tender, against that of the aggression and competitiveness of males, undervalues the leadership of women, even when they are transformational in their organisations (Eagerly and Karau, 2002).

Aside the inherent traits of a person according to gender, which may naturally align them to transformational leadership, type leadership was also determined by the cultural origin, job experience, and age of both leaders and followers (Fernandes and Awamleh, 2004). In that sense, leaders and followers were bound to be diligent and hardworking towards achieving outstanding goals if the principles of hard work and diligence were endorsed by their cultures or religions. Also, older leaders and followers who had not experienced significant changes within a considerable length of time were usually disillusioned and apathetic to the on-going change processes.

So, in as much as transformational leadership is driven by the natural qualities of a person, other factors such as culture, religious and age also play a role in shaping a person to adapt to the transformational leadership style.

Public Bureaucracy and Impact on Leadership

Gibson *et al.* (2012) demonstrated that the interaction between leaders and followers is largely conditioned by the flexibility of the organisational form, and the extent it permits leaders to associate with the values of followers. As public organisations primarily exist to provide solutions to social problems (Dixit, 1997), they resort to bureaucratic principles of hierarchy, formalisation and centralisation in performing responsibilities to meeting organisational objectives (Krut, 2012). Organisational hierarchy refers to the ranking of positions based on expertise while formalisation is the entrenched codes of conduct (Weber, 1966). Weber also alludes centralisation to the existence of centralised decision-making in an organisation. Despite that the formalised and hierarchical structures in public organisations create the environment for orderly communication, decongests responsibilities at topmost positions, and, above all, promotes discipline among working staff (Weber, 1966), they stifle good leadership, given the delays in responsive feedback due to the excessive chain command and formalised rules (Marume and Chikasha, 2016). Consequently, as managers take too long in effecting changes, the innovation capabilities of subordinates are retarded, leading to underperformance. Similarly, the centralised decision-making system also produces the same effects. Centralisation enforces compliance with the decisions by a few so that leaders and employees outside the decision box cannot implement innovative ideas (Qaisie, 2015).

Centralisation is considered key to organisational efficiency as it provides the grounds for compliance with the rules and the modes by which resources are generated and distributed in organisations (Hage and Aikens, 1967, p. 78; Weber, Henderson and Parsons, 1947). However, centralisation is observed to produce similar effects as formalisation.

Centralisation militates against individual innovation as it enforces compliance with decisions by a few leaders and employees outside the decision box (Rafferty and Griffin, 2004; Wright and Pandey, 2009), and thus stifles the implementation of individual innovative ideas. Transformational leadership through innovative staff is thus almost impossible in public organisations. So, given the laid down procedures for compliance and chain of command that are present in bureaucratic organisations, the efficacy of transformational leadership in the public sector remains questionable (Wright and Pandey, 2009).

Other factors such as salary and remuneration, training, and politics within public organisations were also seen to affect transformational leadership. According to Bumgarner (2016), public servants received the same salaries irrespective of their output levels. Contingent funds to reward higher-performing staff are normally absent in the public sector. Thus, high-grade staff are demotivated from further committing to managerial decisions that can result in transformations and large output.

Besides, the training systems in public sectors were found to be problematic as they were mostly devoid of objectives, had less coordination and had an uneven distribution of resources among ministries; limited access to training; and inadequacies in evaluating training needs (OECD-SIGMA, 1997). As a result, the training undertaken does not deliver the needed creative skills for the efficient performance of tasks and increased output (Goulet, Jefferson and Szwed, 2012).

Moreover, decisions in public organisations are not devoid of political considerations as public entities sometimes derive resources through political interventions (Squeren, 2016). Thus, what actions managers might think to be necessary for changes are also subject to the agenda of politicians as well. Consequently, according to Lawton and Rose (1994), the short-term goals (usually four years) of politicians make it difficult for public sector managers to plan strategically given the inadequacy of resources available. In effect, the role of politics in public administration does not allow managers the room to take decisive actions, which could be needed to effect changes in the mode of service delivery.

Given the discussed factors present in the public sector, Yukl (1998) argued that leadership success in enhancing performance and output is dependent on a series of organisational factors that varies across the structures and management practices in place.

Women Leadership in Ghanaian Public Organisations

Despite the astounding leadership provided by women in public service delivery, women are still denied fair representations in the upper echelons of decision-making within Ghana's public organisations (Adusah-Karikari and Ohemeng, 2015). Women, therefore, are not considerably contributing to policies that affect performance and output as they make up only 12% of the managerial decision-making positions (Adusah-Karikari and Ohemeng, 2014). Similarly, the Department of Economic and Social Affairs Report (2009) described this hierarchical antagonism to women's

meaningful engagement in decision-making as “vertical segregation” against women in formal organisations.

Again, women in Ghana’s public services are intimidated by male dominance and patriarchal norms that largely shape organisational behaviour (Allah-Mensah, 2005). The patriarchal norms prescribe how both men and women are socialised and tend largely to project women as weak and inferior for leadership positions. Consequently, female leaders must deal with the dilemma of behaving like men (being aggressive) to be accepted or face rejection when they exhibit feminine behaviours like intuitiveness, participation, and responsiveness (Rigg and Sparrow, 1994). Gebauer, Paulhus and Neberich (2013) therefore suggested that organisational cultures must embrace feminine traits to encourage women’s exceptional performance. However, the formalised and centralised procedures governing relations and behaviours in public institutions make it difficult for the transformational leadership traits embedded in femininity to be fully brought to light (Rafferty and Griffin, 2004).

This paper therefore investigates how the bureaucratic principles of centralisation and formalisation affect female transformational leadership in the civil service. This paper develops a conceptual framework which is summarised in Figure 1:

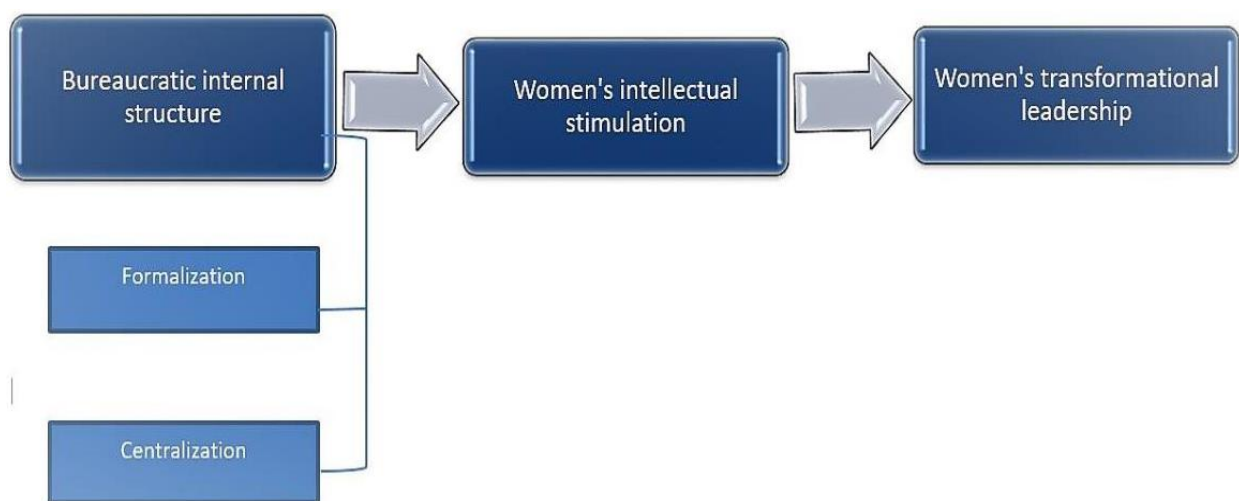


Figure 1: The study’s conceptual framework

Source: Authors

METHODOLOGY

Generally, within the service, individuals are required to serve a position for three years and more to qualify for promotion. It is therefore assumed that female supervisors or managers with at least a year experience are seasoned enough to contribute to the purpose of the study. Given that as the basis, senior female

managers/leaders who have served in that capacity for three or more years, varying across chief directorship position to that of Assistant Director IIB (ADIIB) in the Ministries, Departments and Agencies were identified through purposive sampling. This sampling technique was chosen because it enabled the researcher to concentrate only on experienced women in managerial positions and their subordinate staff as targets of the study. The sample frame of the study comprised of 45 female managers/leaders (four of whom responded through private phone interviews) and 75 subordinates (one of whom responded through a private phone interview). In all, there were 120 respondents (115 respondents to the survey questionnaires and five respondents to phone interviews), who represented 24 MDAs out of a total of 61 MDAs in the civil service.

Both primary and secondary data were used in analysing the impact of the civil service's organisational structure on women's transformational leadership. Primary data were collected anonymously and self-administered through an online survey questionnaire, using the compressed version of Northouse's (2010) Multifactor Leadership Questionnaire (MLQ) form 6-S.

The MLQ, originally developed by Bass and Avolio (1995), enabled the measurement of attitudes of both women managers and subordinates toward transformational leadership, using an ordinal 5-point Likert scale (ranging from 0-not at all, to 4-frequently if not always). Other nine items, three items each, were also developed to measure bureaucracy in terms of formalisation, centralisation, and hierarchy (Weber, Henderson, and Parsons, 1947) by a 5-point Likert scale (ranging from 1-strongly agree to 5-strongly disagree). The survey questionnaires incorporated both open and close-ended questions.

Besides the questionnaire, two female managers at the ministry level and two female heads at the agency level were interviewed to assess which of the two levels was prone to effecting changes easily. A subordinate was also interviewed to share her experience of working under a female manager at the ministry level. Aside the primary data derived from the questionnaires and interviews, secondary data were also extracted from the reports of both local and foreign organisations. The data were analysed using both quantitative and qualitative analytical tools. The correlation model explained the relations between the variables, while the interview responses were categorised under themes for further analysis of the existing relations. This mixed

design approach provided an in-depth understanding of the relationship between the variables under study from multidimensional angles.

Table 1: Measurement and questionnaire items

Measure	Items/variables
Idealised influence	<ul style="list-style-type: none"> • I make others feel good to be around me. • Others have complete faith in me. • Others are proud to be associated with me.
Inspirational motivation	<ul style="list-style-type: none"> • I express with a few simple words what we could and should do. • I provide appealing images about what we can do. • I help others find meaning in their work.
Intellectual stimulation	<ul style="list-style-type: none"> • I enable others to think about old problems in new ways. • I provide others with new ways of looking at puzzling things. • I get others to rethink ideas that they had never questioned before.
Individualised consideration	<ul style="list-style-type: none"> • I help others develop themselves. • I let others know how I think they are doing. • I give personal attention to others who seem rejected
Formalisation	<ul style="list-style-type: none"> • Duties are specified and discharged in accordance with well written roles and procedures. • Rules and regulations regarding conduct are strictly observed and enforced.
Centralisation	<ul style="list-style-type: none"> • Decisions affecting my subordinates' output are taken only within my Directorate. • In my Ministry, decision-making involves everybody, from the Chief Director to the lowest rank. • At my Directorate, my subordinates have a strong say to final decisions that affect their output
Hierarchy	<ul style="list-style-type: none"> • Ranks of officers appear in a ranking order. • My subordinates are most likely to report to the Chief Director without my consent. • Remunerations and other incentives are disbursed on the basis of seniority.

Source: Northouse (2010) Multifactor Leadership Questionnaire

Based on the conceptual framework, the study further predicted possible outcomes given some conditions as indicated in Table 2:

Table 2: Prediction of possible outcomes from variables interplay

Bureaucratic internal structure and degree of presence		Women’s intellectual stimulation	Women’s transformational leadership
Formalisation	High	Low	Low
	Low	High	High
Centralisation	High	Low	Low
	Low	High	High

Source: Authors

FINDINGS

A greater number (71) of the respondents were between the ages of 25-45 years old, representing 61.8% of the total, while 44 (38.3%) participants fell between 45-60 years of age. It was thus obvious that the majority of the civil service population were youthful. All the 120 (100%) participants indicated their levels of education to be higher. Significantly, the Ghanaian civil service has highly educated personnel with at least a tertiary education. Regarding marital status, 45 (39.19%) respondents confirmed being unmarried, while 70 (60.9%) were married.

Transformational Leadership Traits Exhibited by Female Managers

The means and standard deviations of variables were derived from the summation of scores by varying factors. The analysis for the dependent variables demonstrated the mean values for idealised influence as 3.23 (SD = 0.67), inspirational motivation as 3.08 (SD = 0.75), intellectual stimulation as 2.94 (SD = 0.79) and individualised consideration as 3.09 (SD = 0.81). For the independent variables, formalisation indicated a mean of 2.26 (SD = 0.72), centralisation as 3.05 (SD = 0.97) and the mean for hierarchy was 2.69 (SD = 0.62).

The statistics presented in Table 3 indicate that, among all the indicators measuring transformational leadership, intellectual stimulation was the least perceived. This meant female managers within the MDAs are not adequately facilitating staff creativity to realise transformations in their directorates. As a result, female leaders

are hardly implement changes which suggests their transformational leadership is weak in the civil service.

Table 3: Descriptive statistics of variables

Variables	Mean	Std deviation	Minimum	Maximum
<i>Independent Variables</i>				
Formalisation	2.26	0.72	1.00	5.00
Centralisation	3.05	0.97	1.00	5.00
Hierarchy	2.69	0.62	1.00	5.00
<i>Dependent Variables</i>				
Idealised influence	3.23	0.67	0.67	4.00
Inspirational motivation	3.08	0.75	1.00	4.00
Intellectual stimulation	2.94	0.79	0.33	4.00
Individualised consideration	3.09	0.81	0.50	4.00
<i>Demographic</i>				
Gender	2.35	0.87	1.00	4.00
Age education level	3.05	0.22	3.00	4.00
Marital status	1.70	0.59	1.00	4.00

Source: Authors

Impact of Formalisation, Centralisation and Hierarchy on Women’s Intellectual Stimulation

The correlation analysis (indicated in Table 4), drawn from the responses of participants, illustrated that hierarchy had insignificant negative relations on women’s intellectual stimulation, while formalisation and centralisation had very significant negative relations with women’s intellectual stimulation. That suggests that women’s ability to facilitate changes and undertake reforms in the civil service is regressed especially by the presence of formalisation and centralisation in the administrative structure.

In the MDAs, female managers hardly implemented self-innovated ideas, much less encouraging subordinates’ creative ideas due to the enforcement of compliance to the entrenched regulations surrounding the deployment of responsibilities.

The excessive levels of hierarchy and formalisation are emphasised by Gifty, a head of a department, who disclosed that:

“Sometimes, urgent things need to be done like acquiring very basic or critical logistics for work, but the process is so bureaucratic that sometimes it goes through so many levels of hierarchy before getting approval...and slows work to be done” (Gifty, personal communication, October 15, 2020).

However, female managers in the agencies were more free to make decisions as far as those decisions were innovative enough to yield the necessary results. The agencies are charged to deliver specialised public services, so many professionals have less supervision from their mother ministries. Besides this, the agencies are smaller in size and so have less staff with fewer designations. Thus, they have fewer levels of hierarchy, which allows them fluidity in effecting internal changes than their compatriots in the Ministries and Departments. This was evident in the response of Anita, who cited that *“it is not bad internally because then, you are in control and you determine how fast things should move”* (Anita, personal communication, October 3, 2020).

This endorses that the high levels of centralisation and formalisation in the civil service is what accounts for women’s weak transformational leadership due to the lack of discretion in deciding to pursue innovative schemes in emergency situations.

Moreover, it was evident from the survey that women managers had to balance their family roles with official roles, which is often difficult to achieve. According to both managers and subordinates, having to combine those two demanding duties gives male managers an advantage over their female counterparts.

Penelope, a deputy director, disclosed in an interview that *“men have advantage over us because of the cultural roles we play as mothers, wives... those responsibilities tend to weigh us a bit and take out time, and make us weaker in a sense. Men can comfortably stay longer in the office without worrying about what is going on in the home”* (Penelope, personal communication, October 8, 2020).

This situation sometimes denies women some opportunities (e.g. trainings, travels etc.) in the civil service, which affects their progression into the higher decision-making platforms such as the chief directorship positions. Males represent 75.9% of the chief directorship positions (highest managerial position in the civil service)

while women make up just 24.1% (USAID-Ghana Gender Analysis Report 2020). As a result, the senior male managers can champion innovative ideas and lead changes in the civil service by virtue of their dominance within the centralised decision levels. This generally projects the male managers as more transformational than their female counterparts.

Table 4: Correlation analysis

Correlations		1	2	3	4	5	6	7
(1)	Idealised influence	1						
(2)	Inspirational motivation	.688**	1					
(3)	Intellectual stimulation	.593**	.780**	1				
(4)	Individualised consideration	.590**	.661**	.662**	1			
(5)	Centralisation	-.266**	-.274**	-.284**	-.179	1		
(6)	Formalisation	-.233*	-.271**	-.293**	-.232*	.227*	1	
(7)	Hierarchy	-.053	.002	-.139	-.045	.176	.121	1

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

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

Improving Women’s Transformational Leadership in the Civil Service

From the survey and interviews, the participants offered key suggestions that served as measures in improving upon transformational leadership by women in Ghana’s public sectors. The recurring themes encapsulated in the responses were the modification of the bureaucratic internal structure, capacity training in leadership, proper skills-schedule alignment and increased representation of women in decision-making.

Participants were of the view that the centralised decision-making processes, levels of authority and formalised rules governing work do not aid efficient performance and service delivery. According to the USAID-Ghana Gender Analysis Report (2020), the entrenched written procedures, long approval chains, centralised decision-making levels, coupled with the dominance of males in the decision-making levels, prevent women from building their creativity and that of their subordinates as well. The

inflexible internal structures prevent managers from explaining organisational goals in unorthodox ways that could be appealing, comprehensible and exciting for staff to experiment. Thus, the innovative capabilities of staff for better output remains under developed. The bureaucratic internal structures deny female leaders the discretion to make urgent decisions affecting performance. As such, one participant categorically stated in the questionnaire that “there should be flexibility in order for her [supervisor] to use her discretion to get things done quickly”.

Another participant also explained that “institutional bottlenecks and chain of command must be based at department level in order to give her [supervisor] enough power to get things done.” This will grant more autonomy to female supervisors in decision-making that will effect urgent changes in task performance.

Given that there are more male professionals (23%) than female (18.7%) in Ghana’s formal sector (Labour Force Report, 2015), there is a gender gap in respect to expert and technical knowledge in Ghana. Expert knowledge allowed the male leaders, rather than the females, to efficiently mentor their subordinates in being innovative and productive. Males in the civil service are therefore credited with transformational leadership rather than the female managers. This ultimately blurs the transformational leadership role of women in the civil service. Technical training was therefore identified as a crucial need to enhance women’s leadership. This will enable female managers to define and interpret policies in ways that will build the innovative thinking of subordinates. Likewise, staff also need to be trained periodically to sharpen their knowledge base through the acquisition of new skills.

It was also discovered that staff are normally not re-assigned to schedules that demand the use of newly acquired skills attained after training. The trained staff therefore revert to the old schedule and old ways of going about productivity. This is seen to discourage staff from thinking about old problems in new ways. Even when they do, there is no outlet to easily effect the new ways of solving that problem because of the entrenched rules.

Socio-cultural norms that are embedded in patriarchal concepts negatively affect women’s representation in decision-making (Yemenu, 2020), which also prevents the interest of women from being addressed effectively (Lourdes, Berik and Floro, 2016). Since a considerable proportion of women are excluded from the highest decision-making levels in the civil service, most decisions affecting performance lack objective

evaluations by women. The subjection of women to lower levels of managerial functions, while men dominate at the top, only enforces the stereotyping of women's leadership as inferior. Women need to be acknowledged for their leadership abilities and elevated to positions where they can create huge impact and challenge existing cultural misconceptions about their leadership. Several participants therefore suggested a quota system that will fairly distribute women within directorship and chief directorship positions, where there is an acute shortage of women. Others also urged the passage of an affirmation bill which would largely ensure the fair representation of women across the public sector.

CONCLUSION

The study revealed that formalisation and centralisation had very significant negative relations with women's intellectual stimulation and subsequently, their transformational leadership. Thus, the higher the levels of centralisation and formalisation, the more difficult it becomes for women to lead innovations in effecting needed organisational changes. The findings intimated that formalised procedures and the decision-making function by a few, deny female managers the flexibility to incorporate creative ideas during task performance. As a result, the intellectual stimulation of managers is weakened and staff are not challenged to think of working in new ways. Also, excessive approval levels also challenge the urgency with which women can facilitate needed changes to ensure great service delivery, even in emergency situations. Therefore, the restrictive roles of formalisation, centralisation and hierarchy on women's ability to incite creativity among staff, invariably restricts women's transformational leadership as well.

Further, it was obvious that female leaders in the civil service were inadequately resourced with expert knowledge and leadership training, while staff also needed more training to stay updated to tasks. Inadequate leadership and expert training sometimes prevented managers from mentoring staff effectively. It also disabled managers from transmitting knowledge by which staff could identify problems and creatively solve them. This also suggested that women had problems facilitating innovation and thus were not the change actors they were supposed to be in their ministries, departments and directorates.

However, there were also some identified measures that could improve women's leadership if implemented. The observed mitigating measures markedly reside in

reforming the bureaucratic structures, rendering professional training to both managers and their staff, properly aligning newly acquired skills to job schedules and increasing women's participation at decision-making levels.

In general, women's innovative abilities and change leadership in the civil and public services is undermined by the bureaucratic internal organisational structure and some training inadequacies. It is therefore essential that these factors affecting women managerial functions are tackled holistically to enable women become the change agents they are intended to be (Appelbaum and Miller 2003), and help the civil service discharge better output.

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Beyond COVID-19: Organisations Are Transforming Themselves, Their Process and Employees

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ABSTRACT

With lockdown procedures (due to the spread of COVID-19) enforced by government authorities, organisations found it difficult to keep their day-to-day business activities going smoothly. This has affected all kinds of businesses across all industry sectors including manufacturing and services. This lockdown has had an impact on organisations in terms of their way of working in a post-COVID-19 business environment.

This research paper presents the changes the organisations are accepting and implementing to counteract the effects of the COVID-19 pandemic on them, in general. There are different effects of COVID-19 on the organisations in the context of different organisation-specific areas, such as their product, sales, management, strategic plans, and supply chain management, and so on. Some of the effects are that organisations are feeling disruptions in their supply chains and experiencing a slowdown in sales. To overcome these organisations are planning for disaster/calamity, taking stock of their 'management skills and experiences' in risk management and considering product and or service diversification to ensure business continuity.

With continuous lockdowns imposed by government authorities, it is not easy to run a business. The crisis has opened a story with an uncertain ending. It is visible that COVID-19 has introduced new things to the business world. Hence, organisations need to look beyond COVID-19 and try to embrace the 'new normal'. Organisations have started responding with certain changes to cope up with the situation, which are related to the organisation, its employees, and the nature of work. The buzzword of the day is 'organisational transformation'.

Key words: Organisation transformation, embracing new skills and technology, employee well-being, responsive organisations.

OBJECTIVE

This research paper aims to present the changes organisations are making, accepting, and implementing to neutralise the effects of the COVID-19 pandemic.

METHODOLOGY

This paper is based on data collected from secondary sources by the author. News articles related to the changes brought about by organisations to respond to the effects of COVID-19 have been reviewed for this research paper.

INTRODUCTION

The onset of the new coronavirus SARS-CoV-2 pandemic (COVID-19) was global devastating. It is and has been a risk for every nation in the world. It has an impact on society, the economy, and governments. In addition to hampering human well-being, it has damaged trade and economic activity around the world. Most countries are blocked and everything, including normal life, social and economic conditions, seems to have stagnated. India, specifically the Kerala state, was hit by the new disease in 2020. Subsequently, the disease spread as the number of reported cases increased in different parts of the country. As a result, the Indian government took the necessary steps by announcing closures across the nation in March 2020 and beyond.

Large and populous locations suffered the most. They included Delhi, Mumbai, Ahmedabad, Kolkata, and Chennai. As these locations drive the business activities in the country, when they closed, most business were affected. The pandemic has

created social chaos and economic setbacks that have stopped the growth of all economic activity (Rakshit and Paul, 2020).

With the constant prohibitions of the authorities, it is not easy for organisations to do business. Companies are experiencing the following disruptions to their business processes (DB, 2020a):

- The business environment is not supportive and unpredictable.
- Decrease in business income due to a change in consumer behaviour and a change in consumer demand/consumption patterns.
- Social distancing rules have made less workforce available for work, thus reducing productivity. This leads to less production.
- The weak demand in the market has caused a stagnation or even a decrease in sales.
- Disruption in the business ecosystem, including supply chains.

In fact, given the lockdown procedures imposed by government agencies, companies find it difficult to keep their day-to-day business operations running smoothly. This has affected all types of companies, in all industrial sectors, including manufacturing and services.

LITERATURE REVIEW

Considerable reduction in profitability during the lockdown and COVID-19 emergency was distinguished as a significant worry by most organisations in an Ernst & Young Global Limited (EY, 2020) overview. Nearly seven out of ten respondent organisations (that took part in the said survey) shared that the single greatest worry for them is an ongoing fall in productivity due to the lockdown measures, such as working from home. As the lockdown proceeded in India till third May 2020, the worry was increment. While the organisations are accepting the different approaches for working, with no other decision left, there were numerous difficulties with which they had to deal. As well as guaranteeing workers' health, the business developers and HR groups worked to maintain workers' efficiency and examined business profitability - all difficult tasks for them (People Matters, 2020).

According to a report by Korn Ferry (2020), the effect of lockdown due to the COVID-19 pandemic on the organisation is not uniform and will vary from sector to sector. It

is observed that adverse effects of the pandemic will vary from industry to industry. Some industries, such as retail, hospitality, transport, manufacturing, and services, may be significantly affected due to the lockdown. Other industries, such as financial services (banks), medical treatment (healthcare), consumer products, technology-based (digital payments), and public sector establishments, are not that much affected (Korn Ferry, 2020). This fact is also supported by Dun & Bradstreet (DB) India, who stated that the effect of COVID-19 across all sectors will be not uniform (DB, 2020a, 2020b). Hence, the recovery period is expected to be uneven across sectors – it may be likely that some sectors will rebound quickly, while some sectors will take longer than months.

Table 1: Levels of impact

The level of impact	Time to have some recovery (Since Unlock 3.0)		
	Short duration (less than 6 months)	Medium-duration (7 – 12 months)	Long duration (more than 12 months)
Severe	Wholesale and retail stores (non-food items), livestock, utilities	Warehousing, logistics, metals	Hospitality and tourism, electronics, textiles, micro, small, and medium enterprises (MSMES), aviation, automotive, gems, jewellery, construction.
High		Media and entertainment	Financial services such as banking.
Moderate	Drugs and pharma, food and food products, IT - ITeS		

Source: DB (2020a, 2020b)

EMPIRICAL DATA

The present empirical data in the form of results from selected studies shows what measures organisations have taken to respond to the effects of COVID-19 in general. According to various published articles, there are different effects of COVID-19 on business units in the context of different specific areas of the organisation, such as production, sales, management, strategic plans, and supply chain management, etc. It is not possible to address all these aspects.

Some of the impacts that this research work aims to present are:

- The sensation of interruptions in organisations' supply chains.
- A slowdown in sales.

To overcome them, the organisations are:

- Recognising the importance of the disasters and making the required plans to mitigate their effects.
- Learning from their past experiences in managing risks and the expertise/skills needed.
- Considering the change in the business area (diversification) to ensure business continuity.
- Transforming themselves to be ready with skilled employees, new technologies, processes, and a more responsive mindset.

Disturbances in Ecosystem

It should be noted that companies from all industrial sectors are a kind of ecosystem in which, irrespective of their size (large, medium, and small), they work together. This also ensures that the ecosystem (known as the value chain or supply chain) will not be affected during any crisis. With the arrival of the pandemic, this supply chain was disrupted and the industries were in trouble, especially the ones that are more dependable on the others (Singh, 2020; Sarkar, 2020).

There are numerous examples of this context. Consider the common example of weekend entertainment activities in urban areas. As mentioned, the media and entertainment sector has been severely affected by the lockdown (which was made mandatory to prevent the spread of COVID-19). This has restricted the movement of people out of their homes to shopping malls, restaurants and other food sectors, and entertainment venues on weekends. These sectors saw their income decline.

Another example is the hospitality and office/workplace industry, which is a large end-user of bottled drinking water. The demand in this sector decreased significantly due to the closure of offices, facilities, hotels, and restaurants, as well as national travel and tourism activities.

Decrease in Revenue

More than half of the respondent organisations anticipated a moderate-to-serious impact on their annual revenue, according to a report by Korn Ferry (2020). A decrease of business of over 15% was mentioned by the survey participants (due to the COVID-19 pandemic)

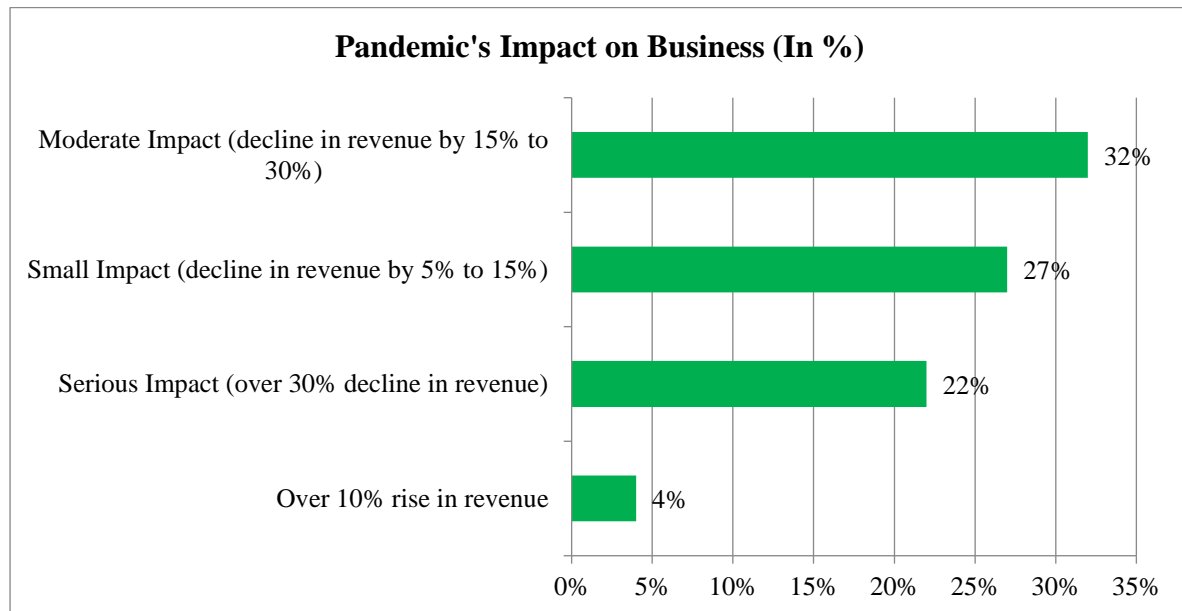


Figure 1: COVID-19 impact on business

Source: Korn Ferry (2020)

Disaster Planning on the Agenda

According to the review by Executive Access India (EA, 2020), “disaster planning” is currently on the agenda of Indian organisations. According to their investigation which has a sample size of about 200 respondents, there are seven CEOs for each of the 20 people. According to 35% of people, ‘getting the organisation ready to handle disaster’ has become one of the main priorities of today for the organisations.

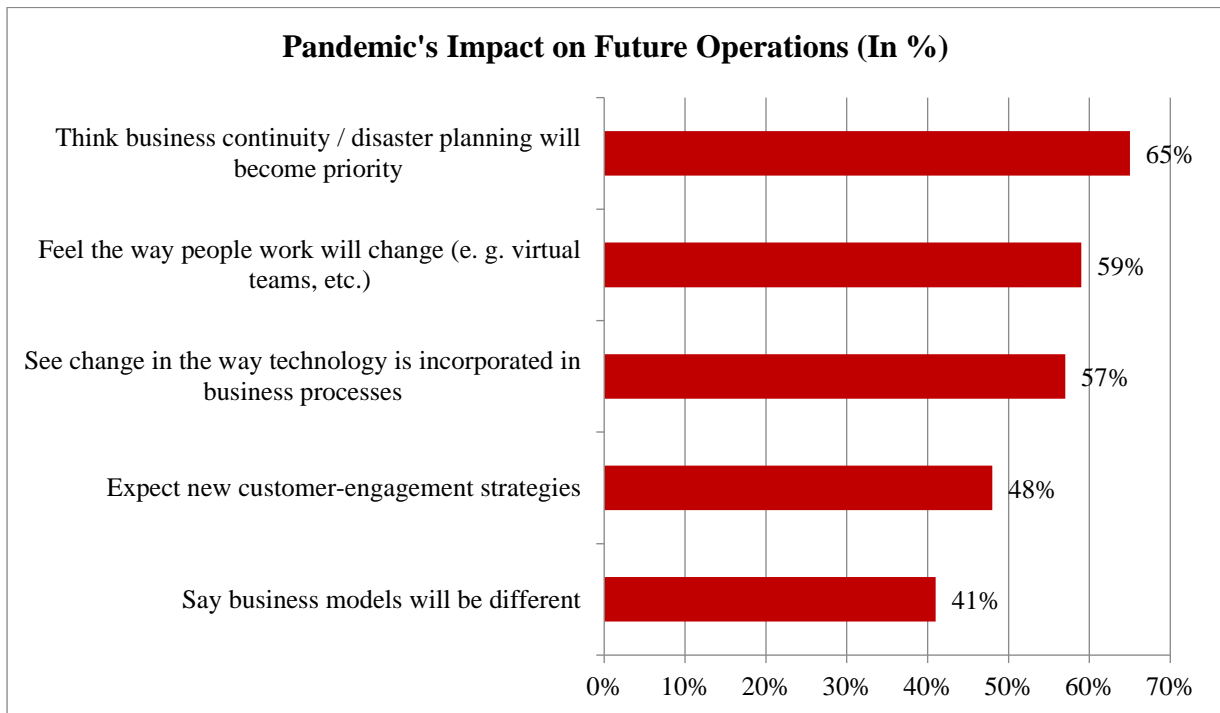


Figure 2: COVID-19 impact on future operations

Source: EA (2020)

Organisations believe that COVID-19 has changed the workplace.

It is observed that the organisations will have to consider the following aspects because of their future business operations:

- COVID-19 will transform the workplace.
- Prioritise business continuity/disaster planning.
- Feeling that there will be changes in people's work.
- See a change in the way technology is integrated into business processes.
- Anticipating the new customer loyalty strategies.
- The appearance and consideration of new business models.
- Changes in the structure of the supply chain and related guidelines.

Most respondents indicated that the crisis will have a long-term impact on their business operations, from the isolation of the supply chain (from the risks) to a renewed focus on the online presence of business activity, e-commerce, and more automated production. There will undoubtedly be a “new normal” in various aspects of business operations in the post-COVID-19 world. The pandemic has bought some

changes in the business operations of the organisations and therefore they are exploring newer ways to navigate through these difficult times.

Board Members with Varying Skills and Abilities

The current pandemic has become the toughest challenge in recent history for all kinds of businesses. COVID-19 has forced companies to reconsider the composition of their board of directors. It has also made them think about how board members can lead the organisation through tough times. Organisations now evaluate the contribution of independent directors to value creation (Singh, 2020).

A workforce is an asset to any organisation. To keep the organisation sustainable and competitive in the market, the role of directors in using this asset (the HR - human resources) is crucial. According to Hunt Partners' India Board of Directors Report, companies are looking for board members with different "skills" (or abilities).

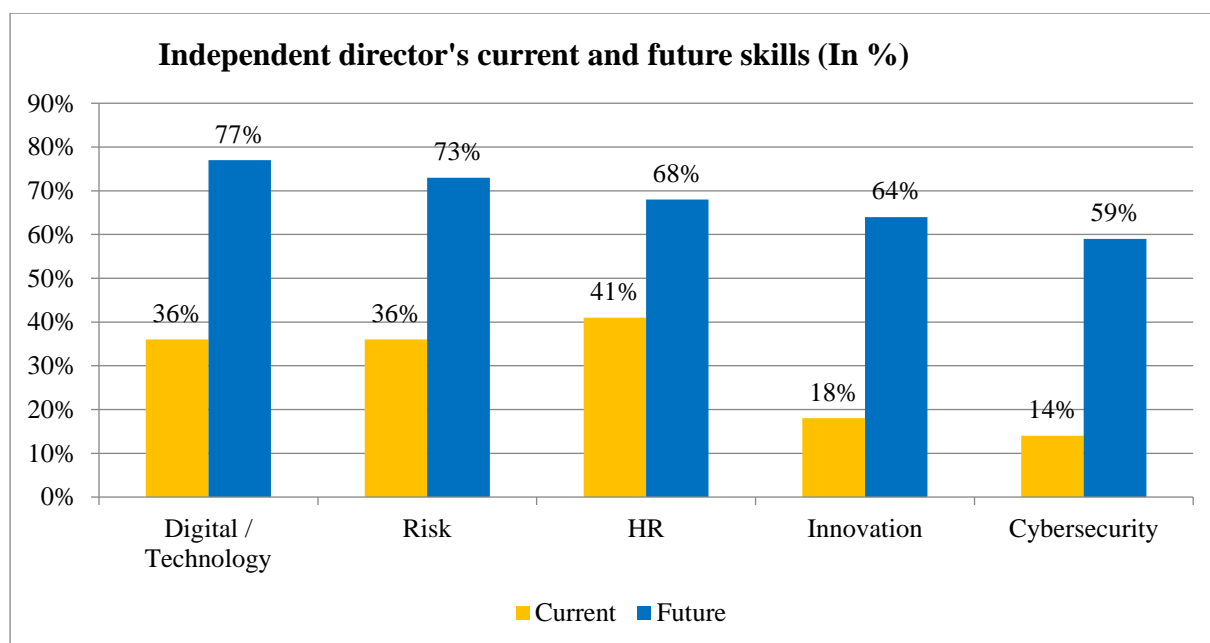


Figure 1: Independent director's current and future skills

Faced with unwanted situations as they currently prevail COVID-19, companies look for people who have skills such as risk-taking ability, understanding of digital domains/technologies, skills to evaluate and monitor the risks, and so on. These are the required additional skills in demand now, in addition to the normal skills needed in the HR domain. Organisations need experienced professionals who can help the organisation maintain growth in turbulent times.

A decade ago, for many organisations, a “board of directors” was a process to meet the required mandatory compliances. Over the years, this perception has changed. Organisations need additional support in difficult situations, which is why they are now looking for a board with different experiences and skills.

Diversification is Being Considered

COVID-19 has compelled organisations to reconsider the manufacturing processes of their products in the context of variations in demand. This is true for certain product categories with no demand from the market. Given this, organisations are exploring options, such as diversification of products and/or services, as an opportunity to have business continuity (DB, 2020a). Some examples are:

- The structure of hotels changed to take care of people as they function as quarantine places.
- Grocery stores and entertainment complexes adjusted by moving their workforce to other areas that required the active participation of people.
- The manufacturing sector is considered making other products that are required on an immediate basis (such as ventilators and face masks).
- The alcohol-processing industries have become the producers of disinfectants and hand sanitizers.

Organisation Transformation

According to the World Economic Forum (WEF, 2020), COVID-19 has caused some changes in organisations in terms of their way of working, worker-employer relationship, and the environment of work (within the organisation itself). This is called organisational transformation. In this context, organisations have started to respond to certain changes to cope with the situation. These relate to the organisation itself, its employees, and the type of work. It is as follows:

- The self-advocacy organisation adopts a people-centred environment so that open interactions can take place. In addition to work-related issues, companies today strive to develop and support their employees. They come with specific activities aimed at people's physical, social, economic, and mental well-being.

- Employees make adjustments in terms of willingness to learn new skills. They use new technologies and approaches in their work to make themselves and their work locations (or the locale) more accountable and responsive.
- The nature of the organisation and its work style has changed. Organisations are getting simpler and moving away from hierarchical structures. This makes them more interactive, accessible, and agile.

CONCLUSION

In summary, this crisis started a story with an uncertain ending. It is very evident that COVID-19 brought new things into the business world. Therefore, organisations must look beyond COVID-19 and try to embrace the “new normal” (WEF, 2020; KPMG, 2020).

Given the current situation, the ways of doing business will change with regards to some aspects, not only in India but all over the world. They are:

- The shift towards localisation.
- Digital is getting a real boost.
- Businesses are giving preference to maintaining good cash-flows.
- Shift from traditional business models towards variable cost models.
- Building detection, monitoring, and control functions.
- Reviewing the supply chains periodically and maintain or restore them as required.
- Making organisations quickly responsive, technology-savvy, and agile.

Organisations are responding to offset the effects of the pandemic by making organisational changes. Some of these are:

- Simplifying organisations and instilling responsible job profiles that strengthen the workforce.
- Making adjustments with new skills and use technology that makes the business agile and responsive.
- Giving due weight to the health concerns of the workforce.
- Improving the organisation by improving interactions between management and staff.

- Giving importance to the safety of workers by protecting them from occupational or health risks.

Utilising these avenues and measures will be both a challenge and an opportunity for organisations.

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Assessing the Effectiveness of 4IR Strategy on South African Township Economy: Smart Township Perspective

By

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ABSTRACT

As the novel coronavirus disease (COVID-19) pandemic changed how people and business interact, its impact severely impacted the global economy. The South African government imposed heavy lockdown regulations and this further damaged an already struggling informal sector economy, as many livelihoods and informal businesses within the townships came to a halt. Though the South African government introduced financial relief through a R500 billion support grant, there are township entrepreneurs who could not access the various government relief grants to sustain their everyday business operations.

Despite the invisibility of the informal sector, it is considered to contribute about 5-30% of the gross domestic product (GDP). Hence, there is a need to develop a smart township strategy for the township economy to prepare the township entrepreneurs better with creative and innovative ways to survive any future pandemics.

This chapter aims to identify the factors and enablers that can catalyse critical and innovative thinking to safeguard the township economy and assess the maturity level of the national fourth industrial revolution (4IR) strategy towards building a smart South African township economy. A digital infrastructure value chain model for building the smart township is proposed. The model identifies digital skills training and upskilling township entrepreneurs to reposition and align them within the smart township ecosystems. Furthermore, the chapter proposed key recommendations on how the

policy makers could leverage on the 4IR strategy in enabling the township entrepreneurs to actively participate in the digital economy. The objective and significance of this chapter is to assist the policy makers (at provincial and local government levels) in understanding both the theoretically and practically technological innovation strategies and the methods to adopt post-pandemic.

INTRODUCTION

There is an acknowledgement on the vital role that the township economy plays in eradicating poverty, reducing unemployment, and contributing towards the country's gross domestic product (GDP) (Charman, 2017). This has led to continued growth and inquiry into the township economy literature stream (Charman and Petersen, 2019). The township economy consists of small, micro, and medium enterprises (SMMEs), both formal and informal, and markets based in the townships (Rogerson, 2019). A township is a dense settlement located on the outskirts of city centres and far from commercial and industrial activities (Rogerson, 2018). The South African apartheid government created townships to segregate people of colour and place them away from economic opportunities. The social, infrastructural, and economic costs of apartheid have disadvantaged township communities and entrepreneurs. Since the democratic government, post-1994, townships have experienced significant growth due to large-scale, low-cost housing projects (Rogerson, 2005). Charman and Peterson (2019) argued that there is a need for further investigations on how the support for the township economies could stimulate employment and income growth.

The fourth industrial revolution (4IR) promises to disrupt traditional ways of stimulating the global economy through digital transformation. Although the 4IR appears to support their economic growth, countries are expected to assess their readiness for the 4IR paradigm and develop relevant and inclusive 4IR strategies for their citizens to benefit instead of being excluded from economic development. The availability and accessibility of information and communication technology (ICT) and digital infrastructure is crucial to support the 4IR (Rashid, 2020). Furthermore, in the 21st century and 4IR era, businesses are expected to transform to remain digitally competitive.

Digital transformation requires businesses to become active participants in the digital economy, introducing a complete paradigm shift from the traditional analogous mode (e.g., cash-based business) to a digital mode of doing business (e.g., using e-

commerce). Accordingly, the township economy could benefit significantly by being active participants in the digital economy ecosystem. Moreover, the advent of the COVID-19 pandemic has fast-tracked the need for SMMEs to pivot and transform their businesses faster than expected.

A call exists for continued investigation into those factors, which can be seen as identifiers and enablers that can accelerate critical and innovative thinking to develop township economy, especially on the African continent where the township economy is still dominated by large informal enterprises (Rankumise, 2017; Rogerson, 2016). The timing of the study becomes critical because of the current challenges imposed by the COVID-19 pandemic. Furthermore, and, to the best of our knowledge, there is a lack of research on how enterprises in the township perceive the adoption of the 4IR. The assessment of the maturity level of the 4IR strategy pillars in successfully building a South African smart township economy is deemed important for this study.

This article is arranged as follows: A literature review is given, the research methodology is described, the next section details the proposed digital infrastructure value chain model to be adopted for the smart township economy, and the chapter is concluded with recommendations.

LITERATURE REVIEW

This section provides the literature review on township economy, developments in the national 4IR strategy, digitisation and digitalisation for digital transformation and the smart township.

The Township Economy

The development of the township economy remains the key focus of the South African government. However, there are inequalities of economic opportunities within metros, with townships often marginalised from the benefits of growth and constrained in their ability to contribute to development. Though the government has set out strategies to channel resources and create opportunities for township enterprises (Charman, 2017), an economic gap between cities and townships remains.

South African townships are the most dynamic political, social, and economic spaces. Due to their urbanisation and continued economic development, they have become more significant over time. A township can be defined as a residential area that is confined to predominantly black African people, formerly officially designated for

black occupation by apartheid legislation, often found on the outskirts of existing towns and cities in the urban area (Siyakhana, 2020; Cant and Rabie, 2018; McGaffin, Rabe and Crankshaw, 2015). Townships are marked by poverty, unemployment, and related social ills, making them the top priority for inclusive growth and development (Drakenstein Municipality, 2018).

The Informal Business Sector

The township economy refers to enterprises and markets based in the townships (McGaffin, Rabe and Crankshaw, 2015), and provides a unique insight into the township informal sector and entrepreneurship (Charman and Petersen, 2020). Research data show that about 2 689 000 South Africans worked in the informal economy, and the informal sector makes up 30% of the township economy (Stats SA, 2017). The National Development Plan (NDP), for example, predicts the informal sector creating between 1.2 and 2 million new jobs by 2030 (Stats SA, 2017).

The informal sector is viewed as one of the primary drivers of a country's economy. It appears to be an alternative form of employment, given challenges across the entire African continent. These challenges include: (a) *high rate of unemployment*, (b) *increasing poverty levels and inequality*, and (c) *lack of jobs and job security* (Hartwell and Malinowska, 2019; Mintah and Darkwah, 2018; Başbay, Elgin and Torul, 2018; Mintah and Darkwah, 2018). There is an observation that most of those who operate in the informal sector are of necessity entrepreneurs, often relegated from the formal sector into the informal sector. Therefore, there is a continued need to pay attention to both the formal and informal sector (Alrawadieh and Alrawadieh, 2018; Bozhikin, Macke, and da Costa, 2019; Rogerson, 2018).

Informal sector businesses employ a high number of undeclared workers with limited skills, and sometimes unpaid family members who labour in precarious conditions, and yet it contributes to the GDP of many African countries (Kabongo, 2019; Madichie *et al.*, 2020). Empirical evidence shows that the informal businesses sustain the formal business in some countries, especially in sub-Saharan Africa (Devine and Kiggundu, 2016). Adesanya (2014) reported that the African informal sector created 1.41 million jobs out of 2.48 million jobs between 2012 and 2014. Therefore, how governments treat the informal sector profoundly impacts employment, growth, equity, and sustainability (Sparks and Barnett, 2010). Considering the informal sector's role in

countries' economic development and job creation, the informal sector should not only continue to exist, but it should be growing (Udimal and Biyase, 2021; Verick, 2006).

The informal sector is heterogeneous in nature, which means there are informal businesses and partially formal businesses operating in the informal sector. Very small businesses, owned and operated by individuals with little or no schooling, women, and the poor, tend to be more informal (Canagarajah and Sethuraman, 2001). Those that are partially formal have access to resources and markets. The partial compliance by the businesses in the informal sector comes whenever non-compliance threatens their very survival as a business. However, the compliance tends to be for those regulations that matter, instead of regulations that improve their income and security (Abiola and Asiwe, 2012). For example, enterprises with significant investment and engaged in non-traditional activities often find it costly to remain informal because they require backwards and forward linkages with the rest of the economy for efficient operation (Devine and Kiggundu, 2016). Therefore, the cost of remaining informal is relatively higher for some businesses in the sector. The task at hand is to legitimise the informal sector to incorporate them into a new low-cost business ecosystem (Simanis and Hart, 2009). Despite all this, there is a growing need for well-designed policies to enable and support the sector rather than suppress it (Fourie, 2018).

Summary of the Township Economy

There is a belief that township enterprises have a vital role in creating a socially inclusive, labour absorbing, and growing economy (Fu, Mohnen and Zanello, 2018; Mintah and Darkwah, 2018). Township enterprises are diverse with a high rate of informality. They are operated by township entrepreneurs within and beyond the borders of the townships (Alrawadieh and Alrawadieh, 2018; Başbay, Elgin and Torul, 2018). An observation is that most township entrepreneurs are relegated from the formal sector in the cities (Alrawadieh and Alrawadieh, 2018; Bozhikin, Macke, and da Costa, 2019). Yet, these enterprises significantly contribute to countries' GDP (Kabongo, 2019; Madichie *et al.*, 2020). This has led to constant need, especially on the African continent, to pay attention to the development of the township economy (Herrington, Kew and Kew, 2010; Mintah and Darkwah, 2018). However, even if the township economy provides insight into the communities, and the informal and formal enterprises, it remains insufficiently researched (Charman, 2019).

The Fourth Industrial Revolution for Digital Economy

The term 4IR was first coined by Professor Klaus Schwab (the founder and executive chairperson of the World Economic Forum) in 2016 (Schwab, 2016). Unlike the other three revolutions, the 4IR presents "a fusion of technologies blurring the lines between the physical, digital, and biological spheres" (Schwab, 2016). The 4IR is driven by the speed of technological breakthroughs, its scope, which affects every industry in every country, and the impact of the system on production, management, and governance. It touches the entire spectrum of human development in the 21st century, "from evolving social norms and national political attitudes to economic development and international relations" (Philbeck and Davis, 2018). The 4IR is built on existing and emerging technologies such as artificial intelligence (AI) and machine learning (ML), the internet of things, robotics, three-dimensional (3D) printing, autonomous vehicles and others that drive digitalisation and industrial automation. These technologies are crucial for the development of the smart townships. It is important to highlight that, while the scope of the 4IR, as defined by Schwab, includes other emerging technologies in different disciplines, such as material sciences, biosciences, manufacturing and other disciplines, this chapter will limit its focus to the digital technologies under the 4IR.

The South African 4IR Strategy

In 2018, the South African government established the 4IR Commission that consisted of prominent leaders from the public and private sector to prepare the country to seize the opportunities presented by the 4IR (Presidential Commission on 4IR, 2020). The commission is formally known as the *Presidential Commission on the Fourth Industrial Revolution* or *PC4IR*.

The PC4IR released their final report with key recommendations to the state in September 2020. Among others, the PC4IR found that the South African economic structure "has changed dramatically over the past two decades with historical anchor sectors such as mining and energy, reducing in terms of their aggregate contribution to GDP as well as their average growth rate over time" (PC4IR, 2020). Such changes call for the reindustrialisation of the country resources-based economy towards a digital economy.

The vision of the PC4IR is for "South Africa to have a globally competitive, inclusive and shared economy with the technological capability and production capacity that

is driven by people harnessing the 4IR to propel the country forward towards its social and economic goals” (DCDT, 2021).

The South African Department of Communications and Digital Technologies (DCDT), which is the custodian of the South African national 4IR strategy, defined seven pillars for implementing the of the national 4IR strategy (DCDT, 2021).

Summary of the 4IR Strategy

Considering the discussions, it seems that South Africa’s 4IR strategy is moving in the right direction. The assessment of South Africa 4IR readiness by Maisiri and van Dyk (2019) found that the adopting and embracing of digital transformation are fundamental in achieving 4IR strategy realisation and readiness. In their assessment, however, they discovered that most companies in South Africa are falling short in the intentional development of a 4IR strategy, while the 4IR strategy is the driver for the 4IR readiness. Hence, if the status quo continues, the overall achievement of the digital transformation in this 4IR will be hampered.

Based on the discussion of the seven 4IR strategic pillars, the provincial government should focus more on the three fundamental pillars of digital infrastructure; human capital and coordination, engagement, and monitoring together with partnership with business and communities. These three pillars seem to be the main enablers in maturing 4IR strategy pillars in building a successful South African smart township economy. This is supported by Maisiri and van Dyk (2019) who stated that government-business partnership, skilling, and infrastructure resources, which are essential for the realisation of the 4IR readiness, are lacking. Hence, there is the need for government to partner with large, small, and medium enterprises in building digital infrastructure; upskilling digital entrepreneurs in the townships becomes vital to achieve the smart township economy that is relevant for the 4IR environment.

Digitisation, Digitalisation and Digital Transformation

For a business to be able to take advantage of the 4IR in the digital economy, digitisation and digitalisation will not be enough. The businesses that strive to reach digital transformation become ideal in the digital economy.

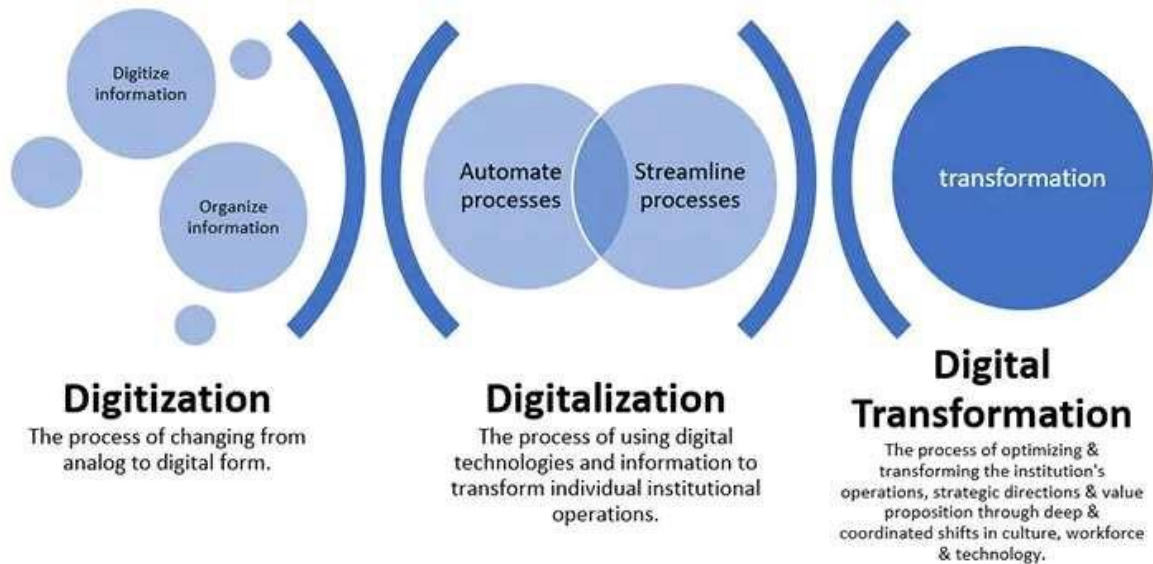


Figure 1: Digitization, Digitalization or Digital Transformation (Walter, 2021)

As presented Figure 1, digitisation is the first stage in the digital transformation as it aims at converting the analogue, and paper-based documents into electronic forms that will be usable in a computer system. The second stage of digital transformation is digitalisation, which a process of transforming non-digital traditional operations and processes by making use of digital technologies such as e-commerce, smartphones, social media and others. The final stage for a digital business is digital transformation, where a business optimises its business processes and operations and stays competitive and constantly adapts new innovative ways to stay relevant to their customers' needs.

Digitisation

Digitisation is mostly interchangeably used with digitalisation and digital transformation. There have not been widely agreed upon definitions of the these terms in literature. This section discusses the definition and importance of digitisation. In the context to this chapter, digitisation is defined as the:

“process of converting pieces of information such as a physical document, adverts, books, journal articles, sound recordings, pictures, audio tapes or videos recordings, etc. into bits. Bits are the fundamental units of information in a computer system. Converting information into these binary digits is called digitisation, which can be achieved through a variety of existing technologies” (Arora, 2010).

Scanners and digital cameras are some of the technologies that can enhance the process of digitisation.

Kayikci (2018) posited that the digitisation process, together with the 4IR, are at the centre for changing the business content, processes (Ritter and Pedersen, 2017) and the interaction between business, society, and technology (Van Veldhoven and Vanthienen, 2021), in this ever- changing technological space. Kayikic (2018) further suggested that digitisation is a vital process in realising the sustainable and reliable supply of goods and services in digital economy driven by 4IR. The COVID-19 pandemic made businesses realise how digitization initiatives in e- commerce, deliveries, supply chain virtualisation, process automation are vital in situations where physical contact with clients and suppliers is no possible. Therefore, if the digitisation process is not targeted on the business model, the business capability becomes an expense that has no return on investment (Ritter and Pedersen, 2017).

Digitalisation

Ritter and Pedersen (2017) suggested that the best way to define digitalisation is to explain the impact of digitisation on business and society. Though discussing digitalisation in manufacturing, Ardolino *et al.* (2016) further suggested that the adoption of the digital technologies is crucial for service-based businesses. Digitalisation can be described as the application of digital technologies to the operations and processes of the business (Ritter and Pedersen, 2017). Digitalisation is the key for businesses to address customer needs, such as time, efficiency, conveniency as digitalisation aims to change the business model.

Digital transformation

The RedHat Enterprise Project (2020) defined digital transformation as the:

“integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It is also a cultural change that requires organisations to continually challenge the status quo, experiment, and get comfortable with failure”.

Averina *et al.* (2021) pointed out that digital transformation is an ongoing process that targets business models. A successful digital transformation business aims to constantly monitor its competitor’s business model and new digital technologies, and leverage from them by creating innovative ways to improve their own customer

service and create new value-added propositions to their services and the products they offer.

Changing a business model through digitalisation will lead to successful digital transformation. As discussed, digitalisation focuses on customer value needs satisfaction, therefore, to achieve that, three strategic directions on the business model must be adopted: (1) operational and technological excellence, where focus is to improve efficiency value and adoption of new technologies; (2) excellence client solutions by focusing on high quality goods and services; and (3) the proximity to customers by presenting value preference to their customers (Averina *et al.*, 2021).

The development of digital technologies has continually changed the way business, society, and technology interact (Van Veldhoven and Vanthienen, 2021). These changes range from communication, marketing, payment, support, customer-relationships, connectivity, and offerings.

Ritter and Pedersen (2017) also suggested that digital technologies have changed what product business sell, how business sell their products, and what competency the business need to be effective in selling their products. Tulinayo *et al.* (2018) described digital technologies as range of technologies, being electronic tools, systems, devices, and resources, that generate, store or process data using various types of hardware and software. In agreement, Gharbi and Kammoun (2021) outlined digital technologies to consists of all electronic devices, automatic systems, and technological resources, that generate, process or store information such as website, smartphones, blockchain technology, cryptocurrency, artificial intelligence, cloud computing, fifth generation mobile network (5G) data, voice interfaces or chat-bots, robotics, drones and missiles, gadgets, e-Books, and video streaming.

The impact of these various digital technologies today has changed business and societies. Hence, this chapter aims to influence the township entrepreneur's mindset to adapt new concepts to their business to stay relevant and survive in the ever-changing digital economy that is characterised by disruptive technologies.

Summary on Digitisation, Digitalisation and Digital Transformation

In context of this chapter, the entrepreneurs in the smart township need to take advantage and capitalise on the use of digital technologies to survive and exploit the opportunities of the 4IR, otherwise they will find themselves without clients and out of

business. Though many businesses were slow in the adoption of the 4IR, the COVID-19 pandemic exposed many to it as they found themselves playing catchup trying to use these digital tools to reach out to their clients. The harshness of the pandemic resulted in many township entrepreneurs closing, as most of their business models relied on physical contact with clients on advertisement with flyers, cash payments and hard copy invoicing, and quotations. Very few entrepreneurs had adapted various digital technologies like online marketing, social media, e-commerce, supply chain systems, online invoicing, electronic payment systems, customer-relationship platforms in their businesses processes to connect and support their clients and suppliers.

Therefore, this chapter has investigated some of the digital technologies in the smart township entrepreneurs can take advantage of and benefit from within the context of 4IR and the digital economy. While, digital technologies are vital in changing the traditional business models for township entrepreneurs, there is a need to understand the three important concepts of digitisation, digitalisation, and digital transformation, and how they can be incorporated into the smart township business model, since the use of digital technologies becomes vital going forward.

The Smart Township

Since there is no widely accepted definition and literature to define smart township, the concept is derived from smart homes, smart cities and smart towns. The concept of smart cities has been discussed in literature for over 30 years (Komninos and Mora, 2018). Hence, to understand the architecture and operations of a smart township, there is a need to understand what a smart home and smart city are and how they operate and function since a smart township or a smart village is the interconnectivity of the smart homes.

Form a geographic perspective, the World Atlas (2021) defines cities as urban centres with larger a geographical area than towns, with respect to function and population and the status they are given by the country's government. Each town or city consists of homes. The same principle applies when it comes to smart homes, smart cities, and smart towns.

A smart city is defined as a city seeking to address public issues via ICT based solutions, based on a multi-stakeholder, municipality-based partnership (Khatoun *et al.*, 2016). The smart home is a residency that is deployed with computing and

information technologies that respond to the occupants' needs while promoting comfort, security, convenience, and entertainment through their wireless connectivity to the world (Aldrich, 2003). These smart homes are the major component that can give rise to smart townships that will be further interconnected to form smart cities.

As initially pointed out that there is no widely accepted definition of smart township, but Nallathiga *et al.* (2021) described the concept of smart township as modern day "urbanisation" that can be achieved through digitalisation of township residential dwelling to smart homes that are connected via various ICTs, such as Wi-Fi or fibre-to-home connectivity, Geographical Positioning System (GPS), closed circuit television (CCTV), internet of things (IoT), and radio frequency identification (RFID). Whether in smart homes or smart cities, or smart township, ICTs are pivotal in developing of the smartness of the infrastructure in addressing the needs for its residents. Within the smart cities, the smart grids, intelligent transport systems, network and communication and connectivity are deployed to better the living conditions of its citizens.

Smart cities have various benefits:

- Safety and security using 24/7 surveillance CCTV cameras.
- Smart education using remote online learning with smart classrooms.
- Smart environment and smart transportation where they intelligence traffic management systems to reduce congestions on roads and smart lighting system to manage public energy usage. Sophisticated air pollution monitoring systems. This entails controlled pollution.
- Smart energy using smart grids that manage both renewable and non-renewable energy.

Within South Africa, the purpose of smart townships or smart villages is to redress the various social ills of the past, such as digital inequality, social and economic inclusion, and better equip residence for any unforeseen pandemic (Ahmed and Gillward, 2020). Smart townships become the basis through which smart cities are going to be built. In principle, the smart township consists of interconnected smart homes, while the smart cities are the interconnectivity of smart townships. Smart

townships demand digital entrepreneurs where their businesses are digitally transformed to supply goods and services.

Summary on Digitisation, Digitalisation and Digital Transformation

The concept of a smart township is derived from smart cities. Based on the arguments, smart township consists of interconnected smart homes that will inherently infer that the interconnectivity of smart townships leads to smart cities. As a result, smart townships should be the starting point for building smart cities.

METHODOLOGY

The research methodology used in this chapter is exploratory in nature, and it follows a qualitative approach. A two-phase approach to investigate the phenomena was conducted. Firstly, a systematic literature review (SLR) of the role of 4IR strategy within the township economy forms the basis for further investigations. Secondly, the findings of the SLR were used to assess the effectiveness of the 4IR strategy in building a smart township. The literature review for the research focused on informal business and township entrepreneurs within Gauteng, South Africa.

The best way to understand the concept of the smart township from the perspective of digitisation and entrepreneurship is to undertake a systematic literature review (Kitchenham *et al.*, 2009; and Xiao *et al.*, 2019). The methodology consists of the three distinct steps: planning the review, conducting the review, and reporting on the review.

This systematic literature review first defined the smart township problem with specific reference to digitisation and entrepreneurship. To identify the problem, the literature review search was undertaken using major journals such as Ebscohost, Science Direct, Emerald, Google Scholar, and Scopus (Xiao *et al.*, 2019). The search limitation on journal articles was based on their extensive peer-review mechanisms in contributing to the body of knowledge.

In conducting the SLR, various combinations of words were used to form search criteria while narrowing the body of work. The search criteria used are as follows: "digitize", "digitization", "digitalization", "digital", and "digitization and/or digitalization" were used to gather literature on the difference between digitization and digitalization. Since the research focused on digitisation and entrepreneurship in the smart township, further search criteria were used to collect information on the correlation between digitisation and entrepreneurship. Therefore, the search criteria included the phrases

such as "digital entrepreneurship", "digitisations and/or entrepreneurship", "impact of digitisation on entrepreneurship". The search also added phrases such as "informal sector", "informal business", "township", "township economy", and/or "informal economy".

The final literature search was on the word concept of the smart township and, therefore, the search criteria employed included: "smart township", "smart township" and/or "entrepreneurs", "smart township" or "digital entrepreneurs", "digital economy", digital entrepreneurs and/or "smart township", "4IR" and digital economy", "digital economy" or "4IR", "smart township" and/or "business".

The search period on the 4IR literature was limited to 2006 to 2021. Since this was the period when the 4IR started and the word was coined in the global space, it was vital to specify in the search. Therefore, any article of research before 2006 and cited in this report focused on the township, entrepreneurs, and the economy. Furthermore, only articles written in the English language were included. Otherwise, these articles were excluded. Only the full-text articles were extracted and what was used was then further synthesised, analysed, and reported in the recommendation for future research opportunities.

CONCLUSION

This research aimed at identifying factors and enablers that could catalyse critical and innovative thinking to safeguard the township economy. South Africa was used as a starting point to create smart townships. The proposed model would be tested in the townships of Gauteng province (the most densely populated South Africa province with many townships), and if successful, could be replicated in other African countries.

This article makes the following main contributions: Firstly, a defined township economy and evaluating the behavioural change of township businesses, especially the informal sector businesses in adopting 4IR. Secondly, the authors applied a systematic literature review to assess the maturity level of the South African 4IR strategy and its role in building a smart township that will effectively contribute to the South African economy. This was done through identifying innovative methods to adopt in building a smart township post-pandemic. Lastly, the authors identified the digital skills required for the informal sector to reposition and align themselves with the smart township ecosystems.

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Impression Management Examination in Chairpersons' Statements in the Top 40 JSE Listed Companies

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ABSTRACT

This study examined whether impression management exists in the Top 40 Johannesburg Stock Exchange (JSE) listed companies, in sSuth Africa, based on the narrative disclosure in a chairperson's statement. The Top 40 JSE listed companies represent more than 80% of total companies listed based on market share and a chairperson's statement is regarded as one of the most read statements, even if it is not required by international financial reporting standards (IFRS).

Content analysis on integrated reports of the Top 40 JSE listed companies was used to analyse the data. Impression management was examined from the length of the chairperson's statement, use of passive sentences, use of personal reference, and the sentiment shown in the disclosure tone.

The study finds that the Top 40 JSE listed companies partake in impression management. Further unprofitable companies used more personal references than profitable companies, whereas profitable companies use more positive sentiment than unprofitable companies. The study provides insight on the selective voluntary disclosure tactics used by management in the Top 40 JSE listed companies in the quest of legitimacy and adds to the discourse on corporate reporting by public companies and the legitimacy theory.

Key words: Impression management, integrated report, chairperson's statement, Top 40 JSE listed companies, legitimacy theory.

Please note: The gender neutral 'chairperson' has been used instead of 'chairman'.

INTRODUCTION

Companies constantly try to impress society by adding value to show legitimacy. An obvious tool that companies use is voluntarily narrative disclosure on their integrated report. Companies use disclosure to manage impression of those who rely on it to make investment decisions and other stakeholders.

Impression management is defined as a strategic process that management uses to persuade stakeholders (Provis, 2010, p. 235; Yasseen *et al.*, 2017), while view impression management is the bias on emphasis reporting of positive outcomes (Brennan and Merkl-Davies, 2013). Impression management may be viewed as an optional line focusing on selective disclosure (Leung *et al.*, 2015). Integrated reports contain narrative disclosures that impact the behaviours of stakeholders of information as there are potentially detrimental results through bad analyst reports, or credit rating (Merkl-Davies and Brennan, 2007, p. 2; Yasseen *et al.*, 2017, p. 1). Thus, information reported in integrated reports must be clear and unambiguous in all respect.

This study is a replication of a study done by Yasseen *et al.* (2017), which determined whether South African companies participate in impression management practices in chairpersons' statements. This study is limited to the Top 40 JSE listed companies because of the weight of those companies on the JSE All Share Index.

The JSE Top 40 listed companies are perceived as the most successful companies in the JSE listing based on market capitalisation (Mamaro and Tjano, 2019). The Top 40 listed companies are diverse, with different companies from all industries, as the best of them all (Barr *et al.*, 2007; Padayachee, 2010). De Villiers and Middelberg (2013) noted that the changes that take place from a standard setters' perspective/legislative perspective affects all the companies listed on the JSE, mostly the top 40 listed companies, and it is for that reason that close attention was given to these companies.

In a recent study conducted in 2021, it was noted that the Top 40 JSE listed companies receive significant attention from stakeholders and are the focus of attention for the analyst (van Zijl and Hewlett, 2021). Furthermore, the Top 40 listed companies are liquid due to a lack of subjectivity to sensitivity (Holman *et al.*, 2010).

Deceiving voluntarily disclosure in a chairperson's statement is problematic as users take decisions based on it (Yasseen *et al.*, 2017, p. 3). This opportunistic behaviour brings ambiguity in narrative disclosure's accuracy.

Notably, Provis (2010, p. 2) stated that impression management is negative. This concern about the accuracy of narrative information brings the question of to what extent does the narrative disclosure in the chairperson's statement contains impression management in profitable and unprofitable Top 40 JSE listed companies?

The study considered four characteristics of impression management, of which three were adopted from the study by Yasseen *et al.* (2017) and one additional characteristic which is disclosure tone. Thus, the study sought to determine whether profitable and unprofitable companies partake in impression management through textual characteristics of the chairperson's statement, based on the characteristics of length; the use of passive choices; the use of personal references; and the use of a positive tone through sentiment in the chairperson's statement for the Top 40 JSE listed companies.

Thus, the study seeks to prove the following hypothesis statements:

- H1.1: The chairperson's statements of profitable and non-profitable companies will be similar in length.
- H1.2: The chairperson's statement of profitable and unprofitable companies will contain the similar percentage of passive voice.
- H1.3: The chairperson's statement of profitable and unprofitable companies will contain similar number of personal references.
- H1.4: The chairperson's statement of profitable and unprofitable companies will contain a similar percentage of positive tone on disclosure based on sentiment.

The next section provides a review of the existing literature on impression management by focusing on the legitimacy theory and impression management discourse.

LITERATURE REVIEW

Legitimacy theory is a well-researched paradigm and different definitions have been expounded over the years. Legitimacy is defined as a general perception that the entity's actions are appropriate within particular norms, values, and beliefs, and is a directive to act (Burlea and Popa, 2013; Zyznarska-Dworczak, 2018). However, Deegan (2019) stated that management response through disclosure can repair the

legitimacy of the organisation which is most likely to be determined about how significant the matter disclosed.

A link with the use of impression management and the quest of legitimacy by the board further suggests that companies in complete fear of pressure and legitimacy use impression management in voluntary disclosure (Wang, 2016). Thus, there is a link with use of impression management and quest of legitimacy by the board.

The chairperson's statement receives more attention than other statement in an integrated report (Clatworthy and Jones, 2006, p. 14; Stainbank and Peebles, 2006; Yasseen *et al.*, 2017, p. 4). The statement has impact on users' decision-making based on share price (Abrahamson and Amir, 1996; Clatworthy and Jones, 2001; Merkl-Davies and Brennan, 2007; Yasseen *et al.*, 2017). The chairperson's statement is not audited, yet it is regarded as crucial as it does not limit the narrative disclosure by the board (Moreno *et al.*, 2019, p. 22; Yasseen *et al.*, 2017, p. 5). Despite a chairperson's statement's prominence, there is evidence that it contains impression management which plays a role in decision making (Clatworthy and Jones, 2006, p. 14). Thus, the board of directors influences the users in the chairperson's statement in a way that users may disregard the actual performance. The statement is not regulated and management disclose discretionary information which is also not audited (Yasseen *et al.*, 2017). The chairperson's statement is ranked number 10, a first non-prescribed by IFRS statement (Stainbank and Peebles, 2006).

It is important to explore and find out whether management partakes in impression management through a chairperson's statement. Merkl-Davies and Koller (2012, p. 15) argued that how chairperson's statement is organised does play a role on the receipt of the message. In a same manner language correlation was noted by Smith *et al.* (2006, p. 13). Complex language, avoidance of negative information and selective in language influence the perceptions of users (Ahmed and Salat, 2019). Is it clear that as much as a chairperson's statement is important, the accuracy of the reported information may contain tactics to sway a reader's perception.

Impression management has its origins in psychology, a study of human behaviour (Goffman, 1949; Wang, 2016; Yasseen *et al.*, 2017) and is a complex paradigm (Merkl-Davies and Brennan, 2011, p. 18). It may be viewed as an effort to manipulate reported information (Bowen *et al.*, 2005), and a tactic to manage positive relationships

between management and shareholders (Cho *et al.*, 2012). Ogden and Clarke (2005) asserted that impression management is a tool to get legitimacy from customers.

In addition, the use of tone, as a strategic manipulation of the views and judgments of the users, is important in the impression management discourse (Merkl-Davies and Brennan, 2007, p. 116; Yuthas *et al.*, 2002, p. 142). Selectivity in reporting creates impressions, which is form of minimal disclosure in annual report (Leung *et al.*, 2015, p. 278; Merkl-Davies and Brennan, 2007, p. 127).

Consequently, studies concluded that management uses disclosures to intentionally mislead users (Bowen *et al.*, 2005; Osma and Guillamón-Saorín, 2011) and corporate reporting is the most convenient way to partake in impression management (Ogden and Clarke, 2005). There is a relationship between use of impression management and positive performance in which successful companies partake more in impression management than poor performing companies (Merkl-Davies and Brennan, 2007). Moreover, Melloni (2015, p. 21) concluded that management uses positive tones to manage the impression of the users. Interestingly, language style influences the reader (Demaline, 2020), a phenomenon that Nyahas *et al.* (2018) alluded to as voluntary disclosure as a tactic. Clatworthy and Jones (2006, p. 14) noted that even though the use of impression management as a tactic in narrative disclosure may or may not be intentional, it still influences the user.

Four characteristics of chairperson's statements are considered as follows:

1. Length of chairperson's statement

The length of the chairperson's statement is examined by the number of words and number of pages as characteristics of impression management (Yasseen *et al.*, 2017).

2. Use of passive voice

The use of passive voices is a selective use of sentences in passive voice than active voices, resulting in possible ambiguity to the reader. This ambiguity appears to be intentional so as to influence the reader. Using this characteristic, a relationship between profitable and unprofitable companies may be ascertained (Yasseen *et al.*, 2017).

3. Use of personal reference

Some literature suggested that there is no difference between profitable and unprofitable companies' studies with regards a chairperson's statement that uses personal reference (Cen and Cai, 2013; Clatworthy and Jones, 2006). In contrast, Yasseen *et al.* (2017) found extremely profitable companies to use fewer personal references than unprofitable companies. Personal references include use of personal pronouns "I", "me", "my", "our", "us", and "we".

4. Use of positive disclosure tone

Use of a positive tone and selective language are tactics used by management on impression management. Language selection is viewed as opportunistic behaviour (Du Toit, 2017, p. 17). Bozzolan *et al.* (2015) examined the use of positive tone on a longitudinal study on a FIAT case study and found it to be another tactic to manage impression.

The surveyed literature provides mixed findings on impression management by publicly listed firms. The use of chairperson's statements is as a tool to manage the users of integrated reports. This study assesses the use of a positive tone in the chairperson's statement for the Top 40 JSE listed companies through the sentiment in a chairperson's statement.

METHODOLOGY

The study uses publicly available data in the form of the JSE Top 40 companies' integrated reports. The study period comprises of the financial year end of 2019 and 2020. Wilson (2014, p. 30) introduced the honeycomb 6 steps to follow when conducting research which are research philosophy, research approach, research strategy, research design, data collocation, and data analysis. These steps were followed with mixed content analysis for data collection.

Purposive sampling of the Top 40 JSE listed companies occurred on 23 July 2021, on which date the integrated reports were extracted. Content analysis is used for assess the four characteristics of chairperson's statements. These four characteristics were examined as follows:

1. *Length of chairperson's statements*: Chairperson's statements were extracted from integrated report and converted to Microsoft Word. The word count

function of Microsoft Word was used and the page numbers was determined as an absolute number.

2. *Use of passive voice:* The Microsoft Word proofing tool was used to determine the percentage of passive voice sentences. This was according to the readability statistics tool from Microsoft Word.
3. *Use of personal preferences:* The Microsoft Word search function was used to find the frequency of personal pronouns such as “I”, “me”, “my”, “our”, “us”, and “we”. Further, the qualitative perspective was considered by creating themes and a word cloud was generated with frequent words using NVivo research tool with sub-themes based on personal reference. Frequent use was analysed from bigger, further words grouped as ‘stemmed words’ to ensure appropriate broad grouping (Nxumalo, 2020, p. 64).
4. *Measurement of disclosure tones:* Positive and negative sentiments were examined using the Azure Machine Learning tool from Microsoft Excel of each chairperson’s statement. Each sentiment (positive or negative) was presented as a percentage of in total. The sentiment for profitable and unprofitable were presented and analysed as suggested by Bozzolan *et al.* (2015, p. 8).

The analysis focused on the chairperson’s statement, with a population of 40 companies identified. These 40 companies were grouped into 20 profitable and 20 unprofitable companies. Within 20 profitable, 10 extremely profitable companies were identified. This process was also followed with extremely unprofitable companies. Profit before tax for 2019 and 2020 was extracted from the statement of comprehensive income for all 40 companies. The change from 2019 to 2020 profit before tax was calculated to determine the difference. The profitable companies were identified by how big the change was from the 2019 to 2020 financial year. In the initial stage, only 16 profitable and 24 unprofitable companies were identified. To ensure that 20 companies were complete, a second round of least unprofitable companies was assessed, considering the extent of their losses, ranging from lower unprofitable and more unprofitable. Four additional companies were added to the list of profitable companies to make 20 profitable and 20 unprofitable companies.

A further analysis was done within the profitable group of companies to identified 10 extremely profitable companies, based on the change in profit before tax, from biggest to slowest change based on percentage. This was also done with unprofitable

companies to determine the 10 extremely unprofitable companies. The Mann-Whitney non-parametric was used to determine whether there were significant differences between profitable and unprofitable companies.

RESULTS AND DISCUSSION

Length of Chairperson's statement

As shown in Table 1, profitable companies have an average of 1 480 words and a length of 2,55 pages, whereas unprofitable companies have an average of 1 773 words and a length of 3,55 pages. Unprofitable companies have 16,52% more words on average than profitable companies. Unprofitable companies have 28,17% more pages on average than profitable companies.

Table 1: Profitable and nonprofitable companies' length in words and number of pages

		N	Mean	Standard deviation	CV	Minimum	Maximum
Length of chairperson's statement in words	Profitable	20	1480	731	0,493737	476	3788
	Unprofitable	20	1773	717	0,436354	733	3158
	Total	40	3253	1 448	0,930091	1 209	6 946
Length of chairperson's statement in pages	Profitable	20	2,55	1,10	0,430997	1	5
	Unprofitable	20	3,55	1,35	0,449496	2	6
	Total	40	6,1	2,45	0,880457	3	11

The Mann-Whitney test in Table 3 shows the mean rank of profitable companies as 18,08, which is less than unprofitable companies, which is 22,93, with the difference of 21,15%. The sum rank of profitable (361,50) is also less than non-profitable (458,50) companies.

U= 151.500, Z= **-1.312** and P= **0.2** of which $p > 0.05$, which shows no significant difference between these two groups of companies.

Hypothesis H1.1: The chairperson's statements of profitable and non-profitable companies will be similar in length.

The hypothesis is accepted. These results are consistent with that of Yasseen *et al.* (2017, p. 11) which found no significant difference in profitable and unprofitable companies.

Table 2 provides an analysis of extremely profitable and extremely unprofitable companies and length in words and number of pages.

Table 2: Extremely profitable and extremely unprofitable companies and length in words and number of pages

		N	Mean	Standard deviation	CV	Minimum	Maximum
Length of chairperson's statement in words	Profitable	10	1651,5	939	0,568619	476	3788
	Unprofitable	10	1294,5	682	0,527019	733	2609
	Total	20	2 946	1 621	1,095638	1 209	6 397
Length of chairperson's statement in pages	Profitable	10	2,5	1,08	0,432049	1	5
	Unprofitable	10	2,5	1,032796	0,413118	2	5
	Total	20	5	2,112796	0,845167	3	10

In contrast, profitable and extremely profitable companies have an average of 1 652 words and average of 2,5 pages in length, whereas extremely unprofitable companies have average of 1 295 and average length of 2,5 pages. Extremely profitable companies reported higher average of 21,62% than extremely unprofitable companies, with 0% difference in the number of pages. The hypothesis is accepted. This is consistent with the findings of Yasseen *et al.* (2017, p. 12) and (Clatworthy and Jones, 2006, p. 9).

The Mann-Whitney test in Table 3 shows mean rank of extremely profitable companies as 21,15, which is more than that of unprofitable companies which is 19,85, with the difference of 6,14%. The sum rank of extremely profitable is 423, which is also more than unprofitable, which is 397. The Mann-Whitney U tests results, $U=187,000$, $Z= -352$ and $P= 0,7$, $p > 0,05$, show no significant difference. These results are inconsistent with that of Yasseen *et al.* (2017, p. 12) and (Clatworthy and Jones, 2006, p. 9) that there is a significant difference in length of the chairperson's statement in pages.

Table 3: Profitable, unprofitable, extremely profitable, and extremely unprofitable Mann-Whitney test

		N	Mean Rank	Sum Rank
Length of chairperson's statements in words	Profitable	20	18.08	361.50
	Nonprofitable	10	9.40	94.00
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)
	151.500	361.500	-1.312	.190
Length of chairperson's statements in number of pages	Extremely profitable	10	21.15	423
	Extremely unprofitable	10	19.85	397
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)
	187.000	397.000	-352	.725

Use of passive voice

Hypothesis H1.2: The chairperson's statement of profitable and unprofitable companies will contain the similar percentage of passive voices.

Table 4: Use of passive voice in percentages for profitable and unprofitable companies

		N	Mean	Standard deviation	CV	Minimum	Maximum
Length of chairperson's statement in words	Profitable	20	14%	10	0,694272	0%	31,2%
	Unprofitable	20	14,1%	6,420319%	0,455342	0%	21,9%
	Total	40	28,1%	16,420319	1,149614	1 209	6 946

On average, 14% of profitable companies use the passive voice slightly more than unprofitable companies, that had 14%,1%. Profitable companies had a maximum of 31,2% passive sentences, higher than the unprofitable which is at 21,9%. There is insignificant difference in use of passive sentences in profitable and unprofitable companies. The hypothesis is accepted.

Table 5: Profitable, unprofitable Mann-Whitney test

		N	Mean Rank	Sum Rank	
Passive word sentences in percentages	Profitable	20	21.15	423.00	
	Unprofitable	20	19.85	397.00	
	Total	40			
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)	
Passive word sentences in percentages		187.000	397.000	-352	.725

The Mann-Whitney test shows the mean rank of profitable companies as 21,15 more than unprofitable, which is 19,85, with a difference of 6,15%. The sum rank of profitable companies is 432 more than unprofitable companies, which is 397. The Mann-Whitney U test results, U=187, Z= -352 and P= 0,725, $p > 0.05$, show no significant difference. The hypothesis that profitable and unprofitable companies contain a similar percentage of passive voice sentences is accepted. This is consistent with the results of Yasseen *et al.* (2017, p. 14) that there is no significant difference in the use of passive voice between profitable and unprofitable companies.

Table 6: Extremely profitable and extremely unprofitable use of passive voice percentage Mann-Whitney U test

		N	Mean Rank	Sum Rank	
Use of passive words in chairperson's statements	Extremely Profitable	10	11.60	116.00	
	Extremely Unprofitable	10	9.40	94.00	
	Total	20			
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)	
Passive word sentences in percentages		39.000	94.000	-833	.405

The Mann-Whitney test found the mean rank of extremely profitable companies is 11.60, which is more than extremely unprofitable companies which is 9,40, with 19% difference. Sum rank of profitable companies is 116, more than unprofitable companies which is 94. The Mann-Whitney test U= 39, Z= -833 and P= 0,4, $p > 0,05$, shows no significant difference. The hypothesis is accepted. The results are

inconsistent with that of Yasseen *et al.* (2017, p. 14), which suggest a significant difference but consistent with that of Clatworthy and Jones (2006, p. 9).

Use of personal reference

Hypothesis H.1.3: The chairperson’s statement of profitable and unprofitable companies will contain similar number of personal references.

Table 7: Profitable and unprofitable companies use of personal reference

		N	Mean	Standard deviation	CV	Minimum	Maximum
Length of chairperson’s statement in words	Profitable	20	20	32	0,54	15	116
	Unprofitable	20	65	33,61	0,52	5	153
	Total	40	85	65,61	1,053	20	269

Unprofitable companies show 65 average use of personal references more than profitable companies which are 20, which is a significant difference of 69%. Minimum number of personal references of unprofitable is 153 more than profitable companies which is 116. These results are inconsistent with that of Yasseen *et al.* (2017, p. 15), which suggested that profitable companies used more personal reference than unprofitable companies.

The Mann-Whitney in Table 8 ranks the mean of profitable and unprofitable companies. The mean of profitable companies is 19,25 less than unprofitable companies, which was 21,27, a difference of 11,3%. The sum rank of unprofitable companies is 438, more than profitable companies, which is 385. The Mann-Whitney in Table 8 shows U= 175, Z=-677, P=5, $p > 0,05$ shows no significant difference. The hypothesis is accepted.

Table 8: Profitable and unprofitable use of personal reference Mann-Whitney U test

		N	Mean Rank	Sum Rank
Passive word sentences in percentages	Profitable	20	19.25	385.00
	Unprofitable	20	21.75	435.00
	Total	40		
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)
Passive word sentences in percentages	175.000	385.000	-.677	.499

Further analysis of extremely profitable and extremely unprofitable companies is shown in Table 9.

Table 9: Extremely profitable and extremely unprofitable use of personal reference

		N	Mean	Standard Deviation	CV	Minimum	Maximum
Length of chairperson's statement in words	Extremely Profitable	10	57	35	0.611	15	116
	Extremely Unprofitable	10	52	33	0.64	5	102
	Total	20	109	70	1.053	20	218

The results show that extremely profitable companies use more personal reference than extremely unprofitable companies. Extremely profitable companies used an average of 57 words, compared to the 52 words used by extremely unprofitable companies. Extremely profitable companies used a minimum of 15 words and a maximum of 116 words, compared to extremely unprofitable companies, which used a minimum of 5 and a maximum of 102 words. Extremely profitable companies used more personal references than extremely unprofitable companies. This is inconsistent with findings of Yasseen *et al.* (2017, p. 15), that found that extremely unprofitable companies used more personal references than extremely profitable companies.

The Mann-Whitney test in Table 10 shows that extremely profitable companies had a mean of 11,1, which is more than extremely unprofitable companies which is 9.90, with a percentage difference of 10,8%. The sum rank was 111 for extremely profitable and 99 for extremely unprofitable, with the same 10.8% difference. Extremely profitable companies used more personal references than extremely unprofitable companies. The Mann-Whitney test results $U=44$, $Z= -454$, and $p=7$, $p> 0.05$ shows no significant difference. The hypothesis is accepted. The results are inconsistent with that of Clatworthy and Jones (2006, p. 9) and Yasseen *et al.* (2017, p. 16) which found that profitable companies use more personal references than unprofitable companies, yet consistent with that of Cen and Cai (2013), which found no significant difference.

Table 10: Extremely profitable and extremely unprofitable use of personal reference Mann-Whitney U test

		N	Mean Rank	Sum Rank
Personal reference words in chairperson’s statement	Profitable	10	11.10	111.00
	Unprofitable	10	9.90	99.00
	Total	20		
	Mann-Whitney	Wilcoxon W	Z	Asymp Sib. (2 tailed)
	44.000	99.000	-.454	.650

Word Cloud

Table 11 shows the extent to which each personal reference was used. It appears that “our” in the chairperson’s statements was used mostly referring to the sub-theme “Board and Business”. The chairperson made personal reference such as 42% use of the personal pronoun “our” and 37% use of “we”. This is characterised by the theme generated by the word cloud which is “Board”. They referred to the personal pronoun “I” 12% which is a significant total.

Table 11: Nodes analysis

CODE/NODES	Files	References	Percentage
I	37	162	12%
ME	1	2	0%
MY	25	58	4%
OUR	40	558	42%
US	22	48	4%
WE	38	486	37%
TOTAL	163	1314	100%

Overall, the chairpersons believed in the “Board”, which showed positive outcomes, followed by the “Company”. The use of personal reference, especially the use of “our” from a perspective of claiming, and “we” showed the confidence they demonstrated in their reporting. This use of personal reference demonstrates the extent of the connection between the writer and the theme (Yasseen *et al.*, 2017). This personal reference could be a tactic for impression management. The frequent use of “we” and

“our” is consistent with the results of the replicated study by Yasseen *et al.* (2017), which found “we” and “our” the most frequently used personal reference over others.

Use of positive disclosure tone

Hypothesis H.1.4: The chairperson’s statement of profitable and unprofitable companies will contain a similar percentage of positive tone on disclosure based on sentiment.

To test positive sentiment, Azure Machine Learning was used to test the total sentiment in the chairperson’s statements, which are shown in Table 12 as the results for profitable and unprofitable companies.

Table 12: Profitable and unprofitable use of positive and negative sentiment in chairperson’s statement

		N	Positive sentiment in %	Negative sentiment in %
Sentiment in chairperson’s statement	Profitable	20	33%	67%
	Unprofitable	20	25%	75%
	Total	40	58%	142%

The Top 40 companies showed negative sentiment in the chairperson’s statement, with both profitable and unprofitable companies showing more than 50% negative sentiment. More scrutiny shows that profitable companies showed more positive sentiment than unprofitable companies, with a difference of 8% (33%-25%= 8%). In contrast, more negative sentiment was showed by unprofitable companies than profitable companies but with same percentage difference (75%-67%= 8%). This shows that profitable companies used a more positive tone than unprofitable companies. The hypothesis is rejected.

Table 13: Extremely profitable companies and extremely unprofitable companies use positive and negative sentiment in the chairperson’s statement

		N	Positive sentiment in %	Negative sentiment in %
Sentiment in chairperson’s statement	Profitable	10	10%	90%
	Unprofitable	10	0%	100%
	Total	20	10%	190%

Most profitable companies showed more positive sentiment than extremely unprofitable companies. Most unprofitable companies showed 100% negative sentiments on the chairperson's statement. Profitable and unprofitable companies expressed negative sentiments with extremely unprofitable companies expressing negative sentiments. The results are consistent with that of Aly *et al.* (2018), which showed evidence of the use of a positive tone in disclosure in developing countries.

Although the hypothesis was accepted for the use of personal reference for extremely profitable and extremely unprofitable companies, these results are contrary to two studies done in UK and SA by Clatworthy and Jones (2006) and Yasseen *et al.* (2017) but consistent with that of a study done in China by Cen and Cai (2013). The results are in line with the conclusion by Yan *et al.* (2019) that the use of personal reference is one mechanism for impression management.

Finally, profitable and unprofitable companies do not use much positive sentiment in their chairperson's statement. However, profitable and extremely profitable companies used more positive tones than unprofitable and extremely unprofitable companies. This is consistent with the conclusion of Bozzolan *et al.* (2015) that positive tone can be used to influence the way which users of information react towards a particular organisation which is in the quest for legitimacy (Beelitz and Merkl-Davies, 2012). The use of positive tone may suggest impression management (Melloni, 2015, p. 21; Shan, 2019). Overall, there is no significant difference between profitable and unprofitable companies based on voluntary disclosure in a chairperson's statement.

CONCLUSION

Profitable and unprofitable companies have similarities in length in chairperson's statement as the Mann-Whitney showed no significant difference and therefore the null hypothesis that there is similarity in length for profitable and unprofitable companies is accepted.

On use of passive voice and personal reference, the Mann-Whitney showed no significant differences, resulting in both sub-hypotheses being accepted. Both profitable and unprofitable companies use passive voice and personal reference in the chairperson's statement. The Top 40 JSE listed companies profitable show optimism based on financial results, in contrast to unprofitable companies that appeared show

pessimism based on financial performance. As suggested by literature, the use of a more positive tone by profitable companies than unprofitable companies suggest the relationship between positive sentiments and positive results.

The study was conducted during the COVID-19 pandemic, when many companies performed poorly due to the lockdown that was implemented all over the world that hindered economic activities. Future research may be done in developing a framework to audit narrative disclosure, to limit the deceiving information disclosed in a chairperson's statement.

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An integrated Safety, Health, Environment and Quality Management System for a Multi-Business Packaging Organisation in South Africa

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ABSTRACT

Organisations operate in challenging and competitive environments that are primarily driven by the markets that the organisations serve, and these organisations rely on management systems to provide strategic direction that aligns with the goals of the organisations. However, organisations typically and progressively implement independently managed safety, health, environment, and quality management systems that are not synergised. These standalone management systems work in isolation but can achieve improved outcomes if integrated into one coherent integrated management system (IMS) that is aligned to the strategic goals of the organisation.

The theoretical framework of this study was based on the systems theory that views an organisation as an open system, that consists of these sub systems that are sequenced and interact to form a holistic system that contributes to an output. This study reviewed the challenges and benefits experienced by organisations globally in implementing an IMS. Mixed, quantitative, and qualitative research methods were used to gain an in-depth understanding of the current independent management systems and the challenges that the researched organisation faces in implementing an IMS. Based on the literature review and the qualitative and quantitative research, recommendations and proposed strategies were articulated, that the organisation may adopt to implement an integrated management system.

Key words: Integrated management system, safety, health, environment, quality, ISO 9001:2015; ISO 14001:2015; ISO 45001:2018.

INTRODUCTION

Safety, health, environment, and quality (SHEQ) management systems have become important to ensure a high level of product quality, a high level of commitment to environment sustainability and the protection of employees' health and safety (de Oliveira, 2013, p.124). However, for organisations to deploy independent business management systems for SHEQ using the same business processes is counterproductive (Mariouryad *et al.*, 2015, p. 18) and quite often, at the same time, these organisations may duplicate costs and fail to harness opportunities for synergy that could accrue from a more integrated management systems approach (Basaran, 2018, p. 2). Whilst organisations benefit from the traditional independent SHEQ business management systems, greater resource utilisation, organisation performance benefits and cooperation can be achieved by integrating these independent systems into one coherent system (Talapatra *et al.*, 2019, p. 1037).

This research is based on a case study of a metal packaging organisation that currently has independently managed SHEQ management systems. The objective of this study was to evaluate the real situation, motivations, advantages, disadvantages, and limitations of stand-alone SHEQ management systems (MS) and to develop a coherent and integrated SHEQ MS.

PROBLEM STATEMENT

Customers are not only concerned about product quality but are also increasingly concerned about the product life, together with environmental sustainability, human rights, and the development of society (Ahidar, Sarsri and Sefiani, 2018, p.183). Thus, in a highly competitive business environment, where the triple bottom line concept is a growing customer requirement, organisations must manage independent SHEQ systems with limited resources. Independent management systems require resources in the form of independent system maintenance costs, documentation costs, human resource allocation, independent management systems auditing and certification fees. Thus, to avoid the duplication of costs, the gravitation towards an IMS seems to be a natural solution. However, although the benefits in implementing an IMS seems to be obvious, consideration must be given to the challenges that organisations face when implementing an IMS. Hence, the aim of this study was to ascertain the challenges in implementing an IMS, at a metal packaging organisation, with the view to formulate strategies to overcome these challenges.

LITERATURE REVIEW

To sustain the long-term interest of an organisation and to remain profitable in global competitive markets, management systems have become a prerequisite and a key contributor to business success (Mariouryad *et al.*, 2015, p.18). Although ISO management systems standards are voluntary, it is considered a strategic tool for organisations that want to be successful; managing ISO standards as holistic integrated business management system could be beneficial to the organisation (Basaran, 2018, p. 1). The combination of multiple business management systems into one coherent business management system to achieve the strategic goals of an organisation is referred to an IMS (Muzaimi, Chew and Hamid, 2017, p.1). The implementation of an IMS is a strategic decision that is driven by the motivation to minimise SHEQ risks, improve health and safety, improve environmental performance, achieve cost efficiency, simplify SHEQ administrative processes, to provide the basis for continual improvement or to implement organisational structural changes (Field, 2019, p.12).

There has been an acceleration in the pace of global change and only organisations that can respond to match or beat this pace of change can succeed (British Standards Institute, 2018). The fourth industrial revolution is epitomised by a disruptive effect on production systems, support service and value chains, and organisations must therefore implement strategies to manage change and develop autonomous and dynamic operations to enable the mass production of highly customized products (Asif, 2020, p.1).

A theoretical framework for a research study acts as a sieve or lens, providing guidance on data to focus on, filtering what critical data requires focus, clearly expressing the meaning or existing theory and revealing the strength and weaknesses of the research study (Given, 2012, p.872). The theoretical framework adopted for this study was based on systems theory using the process approach.

According to Cornell and Jude (2015, p.1), a system is a network of interrelated processes interacting as a link, in synergy to achieve a common goal. Figure 1 illustrates the theoretical framework for the research study.

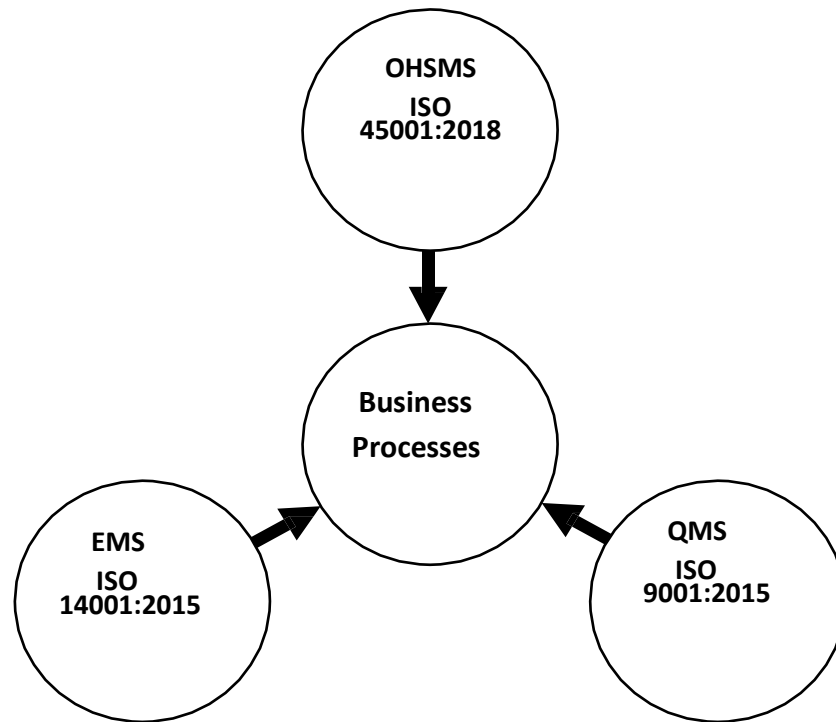


Figure 1: Theoretical Framework

Source: Author's own construct

While there are currently three independent management systems for SHEQ, most noteworthy is that each of these systems support the same business processes. According to Steedman (2015, p.3), there is no need to create silos within an organisation with each management standard working independently, competing for resources and commitment. According to Kopia, Kompalla and Ceaşu (2016, p.52), there are similarities among ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 management systems and the high-level structure (HLS), annex statutory limits (ASL), which can be used as a tool to aid with the integration, given the same ten generic clauses for all three ISO standards. Thus, the justification for integration becomes more obvious when considering the HLS, ASL.

Several studies reiterate the benefits of implementing an integrated management system, as summarised according to four broad benefit categories shown in Table 1.

Table 1: Summary of the benefits of an integrated management system

Benefits	Explanation of benefits	Authors
Enhances organisational effectiveness	Provides a holistic perspective to manage business risk and to strategically align SHEQ to harness the synergy among the requirements of the SHEQ management systems, thus averting clashes between individually managed systems.	Pardo, Francisco, Pino and Garcia (2016, p.217); Ahidar, Sarsri and Sefiani (2018, p.183);
Improves competitiveness	Assures confidence in stakeholders, attracts new customers, enhances customer loyalty, and improves brand image.	Chountalas and Tepaskoualos (2018, p.14);
Reduces costs	Optimises human resource allocation and the assignment of responsibilities, decreases system management costs and certification costs, and minimises the duplication of paperwork and meeting time.	Kopia, Kompalla and Ceauşu (2016, p.52); Nunhes, Motta and de Oliveira (2016, p.1234);
Facilitates continuous improvement	Facilitates a unified management review that allows for more rational decision making by streamlining and the better coordination of processes.	Muzaimi, Chew and Hamid (2017, p.2)

Source: Author's own construct

While the benefits of IMS are noteworthy, organisations that plan to embark on an IMS journey are tempered by implementation challenges, which have been summarised from many previous studies, as depicted in Table 2.

Table 2: The challenges of implementing and IMS

Challenges	Explanation of challenges	Author/s
Complexity of integration	The lack of IMS implementation model and know how approach to integrating the management system requirements into the business processes for diverse product and services, compounded by the lack of internal competencies technical guidance in the form of specialised external consultants, inadequate support by certification agencies and the governance structure of a new integrated system, and the fear of losing focus of a specific system.	Rebelo, Silva, Santos and Mendes (2016, p.907); Rebelo, Santos and Silva (2015, p.46); DNVGL (2016, p.9); Abad, Cabrera, and Medina (2016, p.861); Chountalas and Tepaskoualos (2018, p.15)
Employee commitment	Employee's resistance to change and hostility. lack of employee motivation, low organisational commitment, insufficient training, and counterproductive attitudes and unwillingness to share knowledge.	Abad, Cabrera and Medina (2016, p.861); Dahlin and Isaksson (2017, p.531)
Management commitment	Lack of management commitment, lack of resources availability, cross functional engagement and silo mentality and limited employee engagement.	Chountalas and Tepaskoualos (2018, p.15); Kopia, Kompalla and Ceauşu (2016, p.52); Hassan, Zailani and Hasan (2019, p.2013)

Source: Author's own construct

Although not a detailed implementation model, Majerník *et al.* (2017, p. 136) alluded to the following basic steps to be followed when implementing an IMS:

1. Analysis of the current state of management system/s.
2. Designing a draft IMS.
3. Developing IMS documentation.
4. Implementation of the IMS.
5. Monitoring and assessment of the IMS.
6. Preparing for certification and certification.
7. Maintaining and improving the IMS.

Kopia, Kompalla and Ceaşu (2016, p.52) added that different methods can be adopted for the implementation of an IMS, either at stages starting with two MS and progressively adding, or all MS at once.

METHODOLOGY

This study entailed a case study research design and adopted a mixed method approach that included both quantitative and qualitative methodology. The systems theory formed the theoretical framework of this research study and provided the background on what knowledge exists that relates to the research topic. The research questions that this study sought to answer were:

1. What is the extent of duplication of documentation and meetings across the three independently managed SHEQ systems?
2. Can the check sheets used for the independent SHEQ management systems be combined?
3. Will an IMS be easier to manage, result in better utilisation of resources, and result in cost saving benefits?
4. Will the quality auditors resist the additional workload that will result from an IMS?

Data and information provided by the participants of this research were used for the sole purpose of this research and the identification of participants was not disclosed in the research. Approval from the organisation's human resource department and a gate keepers' letter from one of the senior managers were obtained prior to commencement of this research study. Approval by the DUT Institutional Research Ethics Committee was obtained prior to commencement of this study.

Quantitative research study

According to Dudovskiy (2015, p.37), a quantitative research method involves the collection and the mathematical analysis of data using questionnaires with closed-ended questions. The quantitative questionnaire was designed by the researcher using closed-ended questions with a five-point Likert scale, in context of the research objectives and research questions.

The population for the study was 500 operational, middle and senior management employees of the organisation and the sample comprised of 221 employees, which is

deemed to be appropriate according to Sekaran and Bougie's (2016, p.294) population sample table of calculations. This research study used a non-probability sampling method. According to Mills, Durepos and Wiebe (2012, p.2), non-probability sampling adopts a theoretical strategy based on emerging concepts and selective sampling strategy based on selecting participants of a preconceived set of criteria. A non-probability sampling method requires the researcher to decide as to which participants to include in the research, based on the participants knowledge, capacity, and the willingness of the participants to participate in the research (Oliver, 2011, p.2).

The survey questionnaire was distributed via email to all research participants and the completed email questionnaire was emailed back to the researcher for data analysis. Confidentiality was assured during the administration of the quantitative questionnaires. The data from the questionnaires were captured onto an Excel spreadsheet and then exported to SPSS. The quantitative data were then analysed using the SPSS (version 26) statistical package using descriptive and inferential statistics.

DISCUSSION OF RESULTS AND FINDINGS

Table 3 illustrates, overall, that the ratio of males to females is approximately 4:1 (78.7%: 21.3%) ($p < 0.001$). This is representative of the total males to females population ratio where there are 395 males and 105 females of the total population of 500, which equates to 79% males and 21 % females.

Table 3: Overall gender distribution of respondents by age.

Age (years)		Gender		Total
		Male	Female	
< 30	Count	6	1	7
	% Within Age	85.7%	14.3%	100.0%
	% Within Gender	3.4%	2.1%	3.2%
	% Of Total	2.7%	0.5%	3.2%
30 - 39	Count	73	31	104
	% Within Age	70.2%	29.8%	100.0%
	% Within Gender	42.0%	66.0%	47.1%
	% Of Total	33.0%	14.0%	47.1%
40 - 49	Count	77	13	90
	% Within Age	85.6%	14.4%	100.0%
	% Within Gender	44.3%	27.7%	40.7%
	% Of Total	34.8%	5.9%	40.7%
50 - 59	Count	14	2	16
	% Within Age	87.5%	12.5%	100.0%
	% Within Gender	8.0%	4.3%	7.2%
	% Of Total	6.3%	0.9%	7.2%
60 - 69	Count	4	0	4
	% Within Age	100.0%	0.0%	100.0%
	% Within Gender	2.3%	0.0%	1.8%
	% Of Total	1.8%	0.0%	1.8%
Total	Count	174	47	221
	% Within Age	78.7%	21.3%	100.0%
	% Within Gender	100.0%	100.0%	100.0%
	% Of Total	78.7%	21.3%	100.0%

Source: Author's own construct

Figure 2 illustrates the composition of the respondent's positions. Most of the staff were Operational (81.0%). A little less than 13% were Middle Management, with 6.3% being Senior Management ($p < 0.001$). The staff position sample represents the positions of the research population.

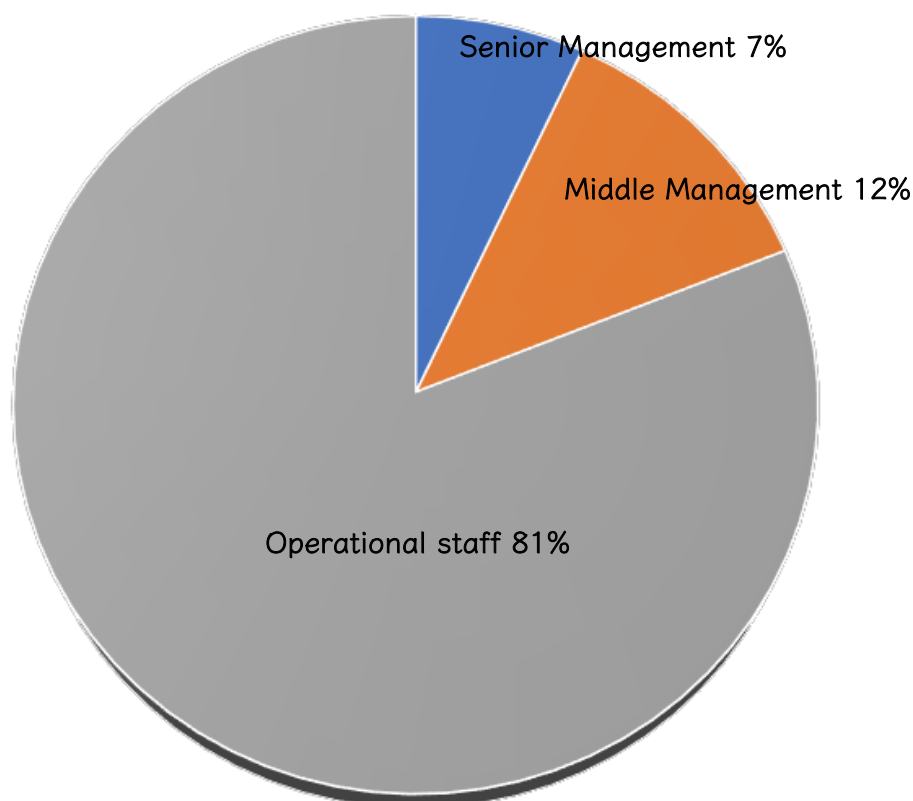


Figure 3: Composition of the respondent's positions

Source: Authors own construct

The biographical data were representative of the research population's race, gender, age, job categories, departments, and province.

The reliability for this research study was computed by taking several measurements on the same subjects using Cronbach's alpha as a test reliability technique. Cronbach's alpha reliability coefficient normally ranges between 0 and 1 and the closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale; a reliability coefficient of 0.60 or higher is considered "acceptable" for a newly developed construct (Gliem and Gliem, 2003, p.87). Table 4 reflects the Cronbach's alpha score for all the items that constituted the questionnaire.

Table 4 Cronbach's alpha score

Section	Number of items	Cronbach's Alpha
Integrated Safety, Health, Environment and Quality Management System	7	0.762

Source: Author's own construct

The reliability score exceeded the recommended Cronbach's alpha value which indicates a degree of acceptable, consistent scoring. Table 5 summarises the scoring pattern for an integrated SHEQ management system.

Table 5 Scoring patterns for an integrated SHEQ management system

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Chi Square p-value
	Count	%	Count	%	Count	%	Count	%	Count	%	
1. I feel that there is too much duplication of documentation across the Safety, Health, Environment and Quality management systems.	0	0,0%	8	3,6%	26	11,8%	160	72,4%	27	12,2%	< 0.001
2. I feel that there is too much duplication of meetings across the Safety, Health, Environment and Quality management systems.	0	0,0%	13	5,9%	24	10,9%	153	69,2%	31	14,0%	< 0.001
3. I feel that the different auditing check sheets used can be combined into a single auditing check sheet across the Safety, Health, Environment and Quality management systems.	1	0,5%	6	2,7%	16	7,2%	165	74,7%	33	14,9%	< 0.001
4. I feel that an integrated SHEQ Management System will be easier to manage.	0	0,0%	8	3,6%	64	29,0%	132	59,7%	17	7,7%	< 0.001
5. I feel that an integrated SHEQ Management System will result in better utilisation of resources.	0	0,0%	1	0,5%	18	8,1%	172	77,8%	30	13,6%	< 0.001
6. I feel that an integrated SHEQ management System will result in cost saving benefits.	0	0,0%	1	0,5%	14	6,3%	162	73,3%	44	19,9%	< 0.001
7. I feel that the Quality Auditors would resist an Integrated Management System due to the additional workload (Safety, Health, Environment and Quality auditing).	2	0,9%	58	26,2%	114	51,6%	40	18,1%	7	3,2%	< 0.001

Source: Authors own construct

There was a high percentage of respondents that agreed compared to those who disagreed to the statements and the significance of the differences was tested and shown in Table 5.

Figure 4 indicates a graphical representation of the scoring patterns for an integrated SHEQ management system.

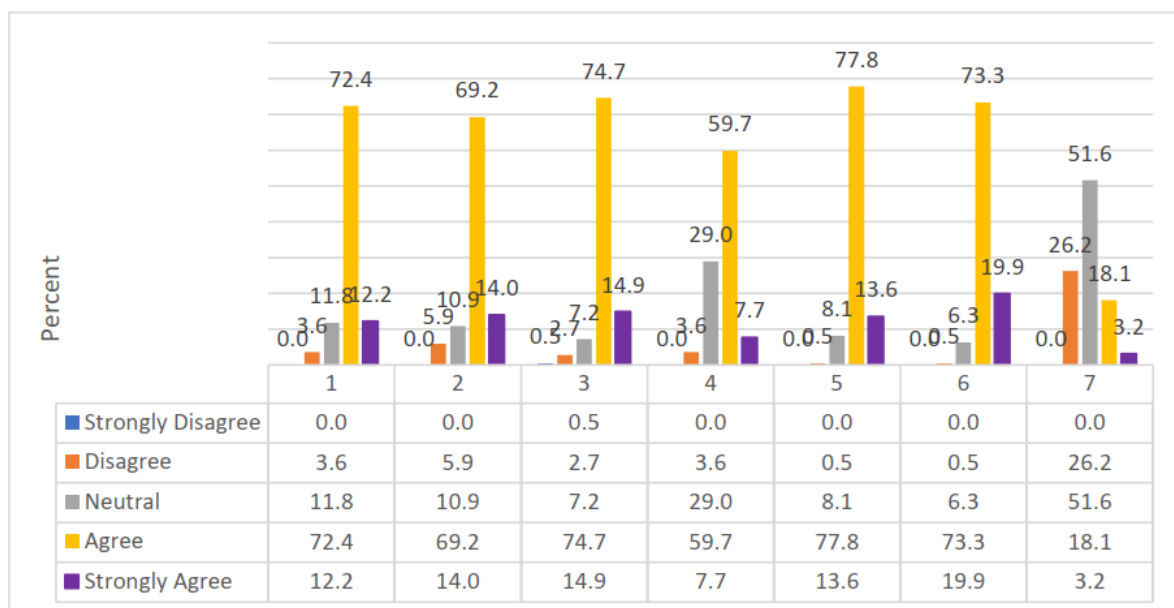


Figure 4: Scoring pattern for an integrated SHEQ management system

Statement 1 focused on the extent of duplication of documentation and statement 2 focused on the duplication of meetings across the safety, health, environmental and quality management systems. For both the statements, there was a high percentage of agreement compared to neutral and disagreement. Thus, it was found that there was too much duplication of document and meetings across the independently managed safety, health, environment, and quality management systems.

Statement 3 focused on the combination of the different management system audit check sheets into an integrated SHEQ management check sheet. There was a high percentage of agreement compared to neutral and disagreement of this statement. Thus, respondents agreed that the different check sheets can be combined in to a single integrated check sheet.

Statements 4, 5 and 6 focused on whether an integrated management system will be easier to manage, result in better utilisation of resources and cost savings. There was a higher percentage of respondents that agreed compared to those that disagreed or who were neutral for all three statements.

The last statement focused on whether the quality auditors would resist an integrated management system due to the additional workload. There were respondents who

strongly agreed or agreed that the quality auditors would resist due to the additional workload.

Qualitative Research

The responses from the quantitative questionnaire questions were used to develop the interview questions for a clearer understanding and confirmation of the quantitative data responses. Qualitative data are collected using unstructured interviews or observation to probe deeply into an issue and, rather than collecting numbers, the data are collected by recording words or phrases (Hair, Page and Brunsveld, 2020, p.161).

Interviews were conducted by the researcher with the senior management (production manager and quality manager) of the organisation to obtain a clearer understanding and an in-depth perspective on the findings from the quantitative analysis. The qualitative interview questions were conducted using a one-to-one Skype interview with participants. Notes were extracted from the interview and confirmed with participants before data analysis, to ensure trustworthiness. Thematic data analysis was conducted.

Interview questions and responses

Table 6 contains the interview questions and respondents' responses.

Table 6: Interview questions and respondents' responses

Interview Question	Question	Responses
1	What is your perspective of an IMS?	<ul style="list-style-type: none"> • An IMS is a good idea but to achieve the intended objective the process must be managed as a project. A dedicated project manager and project team must be allocated to determine the requirements of IMS, and the resources that will required to implement an IMS. • The current organisation structure needs to be reviewed to integrate the safety, health and environment department with the quality department. • An IMS will require the appointment of a SHEQ manager.
2	According to the quantitative survey questionnaire, 84.6% of the respondents agreed or strongly agreed that there was too much duplication across the independently managed SHEQ systems. How can these documentations be reduced?	<ul style="list-style-type: none"> • The IMS model will guide the documentation requirements of an IMS. • Existing documentation can be reviewed, and duplicated documentation can be removed.
3	According to the quantitative survey questionnaire, 21.3% of the respondents agreed or strongly agreed that the quality auditors would resist an IMS due to the additional workload. What is your viewpoint of the resistance of the quality auditors?	<ul style="list-style-type: none"> • It was argued that this was just the perception of the respondents because a discussion was held with the auditors, and they were not opposed to the idea of introducing SHEQ auditors. They felt that auditing an IMS will further enhance their experience and auditing capabilities.

Source: Author's own construct

RECOMMENDATIONS

Based on the quantitative and qualitative research, it is proposed that the organisation considers the following recommendations in implementing an IMS:

1. Review and combine the existing organisation structure for the independent safety, health, environment department and quality department.
2. Appoint the SHEQ manager as a project manager and appoint a project team that will be dedicated to the implementation process.

3. Align the proposed IMS to the organisation's strategic objectives.
4. Create a checklist for the IMS.
5. Review and amend existing documentation that is used for the independently managed systems.
6. Use an online document management system that will be easily accessible.
7. Conduct an internal integrated management systems and process audit.
8. Schedule an IMS audit with an ISO certification body.

CONCLUSION

There is a growing pressure for organisations to practice the triple bottom line, balancing profit, employee health and safety and environmental sustainability, whilst remaining efficient. Management systems play a key role in optimising business outputs, and managing these systems independently leads to inefficiencies. These organisations comprise of multiple business processes that have a common final objective and, according to the systems theory, these processes must therefore form a sequenced value add link and be synchronised to achieve the desired objective. An IMS will achieve the objective of synchronising SHEQ processes into one coherent integrated SHEQ management system. The context and background of the research provided a brief overview of the researched organisation, the environment that the organisation is operating in and the status of the organisation. The justification for conducting the research provided reasons why the study needed to be conducted and formulated the research questions.

The research findings supported the notion of an IMS; however, it is recommended that the implementation process must be managed as a project.

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Reflections on the Value of Professional Academic Development Programmes

By

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and

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ABSTRACT

Academic apathy towards professional academic development programmes is prevalent in literature and this negativity strips them of their efficacy. This study analyses the reflections of two academics who attended such a programme. Despite beginning with reluctance, they experienced personal and academic growth during the study process, coupled with a change in attitude, and they now actively promote participation of colleagues in such programmes. Academic development programmes offer value which is not readily recognised by academics. Consequently, they are not being utilised to unlock the benefits they hold. Whilst literature abounds with negative sentiment towards these programmes, this study offers a positive perspective thereon, suggesting benefits to participants in their personal capacity, to students, and departments and their faculties, ultimately enriching the academic enterprise.

INTRODUCTION

Professional academic development programmes are a relatively recent addition to the South African higher education landscape. Welcomed by neo-liberalist university management and quality assurance practitioners, these programmes have been met with reluctance and scepticism by the academic population. Indeed, positive sentiment by academics towards these programmes is scant in literature. In contrast, much has been written about academics' resistance towards staff development programmes, citing numerous challenges, constraints and obstacles which deter academics and plague the efforts of academic development practitioners.

Amidst this atmosphere of apathy towards professional academic development, the authors enrolled in one such development programme. They report that whilst they experienced low levels of interest and motivation at the outset of the programme, this

changed over time, culminating in both authors acknowledging the value in such programmes and consequently advocating the benefits to be derived therefrom for all academic staff members.

BACKGROUND

Higher Education: A Changing Environment

Higher education (HE) has “undergone rapid changes” (Makunye and Pelsler, 2012, p.529) and it is still in a period of transformation. This international phenomenon is now evident in South African higher educational institutions. Green and Hayward (1997, p.3) maintained that “although higher education is often seen as slow to change or downright resistant, it has undergone rapid transformation throughout the world in the last 25 years and may be in a period of unprecedented change”.

Makunye and Pelsler (2012, p.529) explained that “globalisation, shrinking resources, increased demands for quality assurance and greater accountability, and increased competition among higher education institutions have all contributed towards the changing role of academics”. Academics are now required to update their often-outdated human resource management and development skills, subject content and teaching and learning skills. Ntshoe *et al.* (2008) agreed that new management and neo-liberalism ideologies are also likely to influence higher education well into the 21st century. There is a need for the professional development of staff in higher education because of factors such as an increase in student enrolment (driven by an increasing demand for higher education and the expansion of the sector); increasing entrepreneurship and quasi-marketisation activities; changes in funding and accountability; a greater emphasis on performance-related incentives; and an emphasis on efficiency and cost cutting.

In addition to global changes within higher education institutions, South African universities have “emerged as sites of renewed struggle to overcome the ethos and structures inherited from the apartheid educational agenda of the past” (Hugo, 1998, p. 5). Historically white institutions are now faced with the inflow of black constituencies of students, staff and politicians. The racial and ethnic makeup of South African universities have changed beyond recognition in the past decade (Hugo, 1998).

A rising challenge within higher education institutions in South Africa is highlighted by Subbaye and Dhunpath (2016) that the phenomenal increase in enrolment figures in

universities across South Africa in the past number of years, has not been supported by the equal increase in infrastructure and resourcing. Declining support through monetary allocations from government and the declining ability of institutions to attract and retain qualified academics or to adequately train new recruits is taking its toll.

Today's students are very different to students of the past. Mostert and Quinn (2009) maintained that these students bring their assortment of learner profiles, diversity of knowledge, culture, work experience and age to higher education, and these factors must be taken into account by all stakeholders, most especially academics/lecturers. Makura and Toni (2014) echoed that sentiment, expressing an assumption inherent within the academic development discourse that lecturers' skills regularly need to be enhanced to meet the changing needs of the student population.

An organisation's structure is based on its values, norms and behaviours and is fashioned by the people within that organisation. Fourie (1999, p.277) believed that "it is therefore inevitable that changes in the staff and student population of higher education institutions will bring about changes to the organisational culture". The situation may arise where, within an organisation, there are different types of people, each with their own values, norms and behavioural styles, and this makes the creation of a new organisational culture quite demanding.

Fourie (1999) continued that South African higher education institutions have great difficulties in bringing about the shift from an organisational culture that was acceptable and appropriate for the 'old' South Africa to an organisational culture that is suitable for a nation that is multicultural. This transformation is not only aimed at changing staff and student composition, or changing the governance structures or course content, but it is aimed at transforming the organisational culture, and seeing the development and acceptance of new shared values. This can only be possible if everyone involved (stakeholders and role-players), most especially academic staff, change their mindsets.

Mostert and Quinn (2009, p.1) posited that academics are now operating in a "world of supercomplexity", where the framework on which their professions were based for many years are now in a constant state of change. It is against this background of change within higher education, both internationally and in South Africa, that academics find themselves facing new challenges. Hassan (2011) agreed that educational transformation creates a critical need for ongoing staff development.

The Need for Professional Academic Development

Duvekot (2017) asserted that a qualification no longer guarantees you a job in today's world. Lifelong learning is a priority. Individuals are responsible for keeping themselves relevant in the workplace and to do that, they need to be responsive to change and adaptable through continuous learning. Mahajan (2017, p.152) summarised an academic professional development climate accurately "that learning is a lifelong process of keeping abreast of change".

The traditional academic staff members of South African universities have received little or no training for their roles as teachers or academics. Due to the fact that relevant policies and appropriate teacher development programmes have been absent or lacking, lecturers pull from their own experiences as students, relying on the memories of how they received instruction, and use those same methods in their classrooms (Lortie, 1977; Subbaya and Dhunpath, 2016). Quinn (2003) added that many academics have, in fact, left their practices or industry to join the academic society of a university. With the growing demand for quality assurance in higher education, there is a need for structured programmes to develop academics' professional competence.

Locke and Bennion (2010, p.8) posited that "relevance" is a key issue that will justify the need for professional development of academics in higher education institutions. Academics now must account for outputs and they need to focus on the employability of the graduate, the helpfulness of research and the accessibility of higher education to those who were previously excluded and the processes involved in academic work.

What academics know and how they impart that knowledge through their teaching and learning practices must be pertinent to the current climate in higher education. In addition, Ntshoe *et al.* (2008, p. 398) found that "participants overwhelmingly claimed that their roles as academics and researchers had shifted". Where they were previously seen as "scholars and creators of knowledge", they are now viewed as "administrators and managers". This holds significant challenges for academics, and could possibly be addressed by aspects of an academic development programme.

According to Makura and Toni (2014), the purpose of academic development programmes is to support academic staff to enhance their teaching and learning skills and improve understanding of the higher education context, including developments therein. An important role of academic development programmes is thus to equip academics to achieve a greater throughput of students. The professionalisation of

teaching and learning is achieved when professional academic programmes are accredited, creating an opportunity for academics to elevate their personal level of qualification and status (Makura and Toni, 2014) .

Quinn (2012) in her book titled *Re-imagining academic staff development: Spaces for disruption* maintained that, in the past, professional development came about in answer to attempts to support and assist students. Educational development units started supporting students, but it soon became evident that curriculum and staff development would be more efficient by developing teaching and learning skills. Academic development programmes were then introduced and were aimed at teaching and curriculum development in the areas where lecturers were the neediest.

Quinn (2003, p.62) emphasised that the purpose of these programmes is to:

“encourage the professional development of lecturers by assisting them to enhance their ability to facilitate, manage, and assess their students’ learning, to evaluate their own practice effectively, to develop their knowledge of higher education as a field of study, and to provide professional accreditation”.

Reddy *et al.* (2016) suggested that training for academic staff is a response to the pressure faced by higher education institutions to address issues of quality, accountability and the performance necessary to attract funding to their institutions. The authors reported that, in 2012, the Senate of a particular HE institution approved the implementation of a University Education Induction Programme. The Senate mandated that all new and existing academics must attend the programme, which was specifically designed to prepare new staff and to develop existing staff in their role in academia. The modules were all designed to develop participants to excel in teaching and enhance their supervision of research activities. The developers of the induction programme maintained that the programme would be beneficial for all academics since knowledge and skill in one’s disciplinary field does not translate into the ability to teach. However, Reddy *et al.* (2016) raised concerns that the programme was directed towards meeting the needs of the institution rather than towards the needs of the academics.

Subbaye and Dhunpath (2016) reported that a certain higher institution’s Teaching and Learning Office offered a myriad of formal professional development opportunities, in addition to the induction programme, in the form of optional workshops and seminars. Academics are also supported with academic writing skills

to enhance their ability to publish articles, and teaching excellence awards serve as incentive for academics to enrich their teaching skills.

Academics' Attitudes Towards Professional Academic Development Programmes

Literature is full of findings that report low or non-participation in professional academic development programmes (Makunye and Pelser, 2012). Academics expressed that time constraints; clashes with classes; lack of funding and resources; proper planning; staff development policies and incentives are obstructions to professional development. In addition, a lack of support whilst undergoing professional development prevented them from prioritising these studies, instilled an overarching sense of apathy in their academic communities towards these programmes, and further discouraged participation (Soi Lang, 2004). Academics are certainly unwilling to make a financial contribution towards these studies (Makura and Toni, 2014).

Reddy *et al.* (2016) reported that seasoned academics do not generally welcome the support intervention of an academic development programme. They feel that the compulsory nature of the programme is an infringement of their academic autonomy and shows disregard for their expertise developed over years of experience in academia. Leibowitz *et al.* (2015) reported that established academics were often disinterested in these programmes and they believed they did not need them due to their years of experience in teaching. Makura and Toni (2014) also noted that older academics expressed that academic development is only for young academics who are still developing their teaching skills and have time to see the effects of their efforts unfold in the years to come. In many cases university lecturers themselves do not believe that superior learning will stem from the implementation of enhanced teaching methods (Leibowitz *et al.*, 2015).

Despite this, many lecturers have been persuaded to participate in academic development programmes by the incentives generated through institutional policies which are increasingly incorporating this as a criterion for promotion, as well as through institutional practices of recognition for teaching excellence through reward schemes (Leibowitz *et al.*, 2015). Quinn (2012), however, reported that in institutions' quest to promote good teaching practices, they have heightened the quality-assurance functions in the academic environment. The resulting accountability which rests on the

shoulders of the academics is easily perceived as a threat rather than a support mechanism, generating distrust and resistance to development programmes by many. Leibowitz *et al.* (2015) reported that heavy academic workloads discourage academics from enrolling for academic development even in instances where the individuals would be otherwise interested in participating. The socio-economic condition of an institution also plays a role since workloads are directly affected by the availability of physical and staff resources in each institution. Academic development programmes must be squeezed into the open spaces between teaching and research activities and the ever-expanding volume of administrative duties expected of academics (Ntshoe *et al.*, 2008).

The dichotomy between research and teaching has found many academics choosing to ignore the call to professionalise their teaching skills. The perception that research is more important than teaching drives a rational academic, who already spends a significant portion of available time on teaching-related activities, to reason that participation in a professional academic development programme will reduce time otherwise spent on research, to the detriment of the academic's research profile (Leibowitz *et al.*, 2015; Quinn, 2012; Hassan, 2011; van Lankveld *et al.*, 2017). In addition to this, disciplinary cultures tend to embed the notion that a good researcher translates into a good teacher, further justifying academic time favouring research rather than engagement in improved teaching and assessment strategy (Quinn, 2012).

Behari-Leak (2017) reported that, despite having completed the certificated professional academic development programme offered at the institution, new academics in a particular South African university were insufficiently equipped to navigate their individual contexts. Behari-Leak (2017) suggested that the efficacy of academic development programmes is constrained by the failure of the programmes to address the real social, cultural and political contexts which exist on campus. Enhanced teaching skills instilled by the programmes will be unable to achieve the goals of accelerated student learning and throughput if the academics are unprepared to deal with the range of highly-complex stimuli affecting the higher education environment. Quinn (2012, p.81) contended, however, that some academics have experienced a professional development programme as "a resource to help them cope with both the new cultural milieu and the new structural requirement".

Context of the Study

The Postgraduate Diploma in Higher Education (PGDIPHE) offered by the University of Kwazulu-Natal (UKZN) is a part-time, two-year programme which consists of eight modules (16 credits each) offered at an honour's level, SAQA level 7. The entry requirement is an honour's level or equivalent. There are three core modules: Higher Education Context and Policy; Researching in Higher Education; Practice, Reflection and portfolio Development in Higher Education. Additionally, there are five elective modules chosen from the following list of six options: Diversity and the Student in Higher Education; Designing and Evaluating Curricula in Higher Education; Teaching and Learning in Higher Education; Assessing Learning in Higher Education; Technology for Higher Education Pedagogy; and Supervising Research in Higher Education.

The University of Zululand (UNIZULU) is a rural-based, comprehensive university positioned approximately 160 km north of Durban, in the KwaZulu-Natal Province of South Africa. UNIZULU comprises of two campuses; KwaDlangezwa Campus 9, commonly known as the 'main campus'), and the Richards Bay Campus, located 40 km from the KwaDlangezwa Campus.

The authors of this study are both permanent academic staff members in the Accounting and Auditing Department at UNIZULU, and are based at the Richards Bay Campus. Author 1 is a qualified Chartered Accountant (South Africa) with 6 years' industry experience and 10 years' experience as a lecturer. Author 2 holds a PhD in Management Accounting and has 25 years' experience in academia.

A cohort of 17 academic staff members, including the authors, was registered for the programme at the beginning of 2017. The following faculties were represented in the cohort: Faculty of Commerce, Administration and Law; Faculty of Education; Faculty of Science and Agriculture; and Faculty of Arts. Modules were offered in block sessions lasting one week each. Assessments took the form of assignments and presentations; no summative examinations were undertaken. Learning took place independently and outside the block sessions.

Participants attended a total of four modules per year. With the exception of one module that was presented on the UKZN campus, all the modules were presented in lecture venues on the Kwadlangezwa Campus, UNIZULU. All modules were facilitated by a UKZN staff development practitioner.

The modules completed by this cohort during the two-year programme are shown in Table 1.

Table 1: Two-year programme

Year One (2017)	Year Two (2018)
1. Higher Education: Context and Policy	1. Practice, Reflection and Portfolio Development
2. Teaching and Learning in Higher Education	2. Researching in Higher Education
3. Diversity and the Student in Higher Education	3. Designing Curricula in Higher Education
4. Assessing Learning in Higher Education	4. Supervising in Higher Education

RESEARCH OBJECTIVE

The objective of this study was to investigate the self-reported change in attitude experienced by the authors over the duration of their attendance in a professional development programme.

METHOD

The authors' reflections on their lived experience of participation in the PGDIPHE were analysed for evidence of a change in attitude towards the programme over time. Their reflections consisted of written accounts of their experiences recorded upon enrolment in the PGDIPHE, during the period of study, and upon completion of the programme. Where the authors explicitly recorded their feelings, this has been taken as evidence of their attitude. Where no explicit statement indicating their attitude was recorded, the tone and content of the writing was analysed for evidence that they represented a particular attitude. The authors have extended these records with additional reflections whilst writing this article.

Academic Reflection

Reflection takes place on a continuum of deepening levels (Ryan, 2011). Bain *et al* (1999) proposed a process of reflection which begins with simplistic descriptions of events or issues and through consultation with theory probes deeper to extract meaning and ultimately to generate a new understanding or conception. This process moves through five steps and is known as the 5Rs framework: "Reporting,

Responding, Relating, Reasoning and Reconstructing. Their levels increase in complexity and move from description of, and personal response to, an issue or situation; to the use of theory and experience to explain, interrogate and ultimately transform practice” (Ryan, 2011).

This framework inspired Ryan’s academic reflective writing model (Ryan, 2011), which was used by the authors to enhance the academic rigour in this academic reflection exercise as follows:

- Identified agents of change (events/ episodes/factors) were depicted and the authors’ personal responses (attitudes) were described.
- These responses were explained and interrogated by theory from literature.
- The analysis culminated in the contemplation of a new construct (changed behaviour/new practices/new attitudes) because of this enriched understanding.

FINDINGS AND DISCUSSION

At the Starting Line

Reporting and Responding

The authors enrolled for the PGDIPHE in January 2017. Neither of the authors were highly motivated to enrol for the PGDIPHE at first. Author 2 undertook investigations for a full year before enrolment, and both authors experienced hesitation and feelings of resistance towards committing to a two-year study programme.

Author 2 displays a begrudging attitude:

“I honestly am not looking forward to embarking on this two-year programme, I completed my PhD many years ago and the thought of formal studying just does not appeal to me.”

Author 1 stated plainly that the driving force behind her enrolment was the need to *“eliminate an obstacle to promotion”* in the future, since the PGDIPHE had recently been incorporated into the UNIZULU Promotion Policy as a criterion for promotion for academic staff (University of Zululand, 2010).

Author 2 was not lured by this provision but rather believed that the introduction of a compulsory formal teaching qualification was on the horizon and chose to enrol voluntarily before being drafted into it under circumstances out of her control: *“I will*

rather do it now while there are no pressures from management than wait until it is made mandatory”.

The authors agreed that the accreditation of the programme was an important factor in their decision to enrol. Both authors had attended uncertificated teaching and learning workshops in the past, so if the programme was not certificated, and accredited by SAQA, they would not have enrolled. Author 2 exhibited conditional satisfaction: *“At least upon completion I will have something to show for my attendance and hard work”.*

Author 2 recorded that she was *“curious”* about the programme and Author 1 expressed hope that the investment of time and effort on the part of the participants would be worth it. Her expectation was that the programme content would revolve around teaching and learning practices and assessment practices which she felt would be of benefit to her. She expressed fear that she might not cope with the demands of the study programme.

Relating, Reasoning and Reconstructing

A mixture of emotions is present in the above reflections. Larsen and McGraw (2011) reported that it is possible to experience positive and negative emotions at the same time. The authors displayed hesitation, resistance and fear, all negative sentiments, yet they also exhibited interest in the programme offerings and appeared to be expectant, which are both positive emotions. To use a metaphor to encapsulate this, this mixed emotion may be compared to a child’s first day at school: a mixture of fear and excitement.

Brooks (2014) described both fear and excitement as stimulation. They are, however, contrasted in the effects they have on reasoning, motivation, and the effective and efficient execution of tasks. Fear diminishes, whereas excitement enhances performance. Brooks (2014) reported that individuals who deliberately reappraise their anxiety into excitement can elicit the positive performance associated with excitement. Considering this, the authors posited that staff who foster optimism and enthusiasm can counteract the effects of anxiety when undertaking academic development.

Resistance to change and a negative attitude were demonstrated in the authors’ reluctance to enrol in the professional academic development programme. The resistance to change was two-fold: a disturbance to existing routines (introduction of formal learning and completion of the related assessments) and the intended

consequences of the development programme (improved academic practices). Whilst the disturbance to existing routines may be widely expected to produce resistance, it is somewhat irrational to react negatively to the prospect of improvement in one's academic efficacy. However, Oreg (2003) explained that this phenomenon is known to occur: some individuals resist the very changes that favour them. The reasons for this behaviour include being daunted by the extra work or the inconvenience required to effect the change, an avoidance of the period of transition, and feelings of relinquishing control.

These findings resonated with the authors, who recognise them as threats of self-sabotage to actively guard against henceforth. After all, individuals who embrace change and work to implement new developments are valued in the workplace (Oreg, 2003).

The Hard Slog

Reporting and Responding

Anxiety over lecture timetable constraints and increased workload pressure was recorded by both authors through the duration of the programme.

Author 1 stated:

“The biggest challenge I experienced was time pressure to meet deadlines. I worked late at night in order to complete assignments on time whilst still meeting timelines associated with my normal academic workload.”

The authors' absence from campus impacted on their teaching plans for the modules they teach at UNIZULU and created pressure to catch up missed lessons. Author 2 was appreciative that block sessions were not held on campus so that she was free from distraction whilst she was attending PGDIPHE lectures.

Author 2 explained:

“Being away from lecture venues is definitely beneficial; it creates that sense of isolation - allowing me to focus on the learning that was happening in the programme.”

Author 2 continued that this factor increased the level of anxiety and pressure:

“the flip side to block lectures is that I must catch up on lost contact time”.

Author 1 revealed feeling completely out of her depth during several of the modules due to the discourses with which she was unfamiliar and the specialised vocabulary associated therewith. Examples of such vocabulary included epistemology, constructivism, pedagogy and behaviourism. Making sense of higher education

discourses required diligent effort and perseverance. Both authors reported feelings of inadequacy and a lack of confidence when participating in class discussions with other academics who were familiar with educational discourses, such as those from the Faculty of Education.

Author 2 commented that she would have been more comfortable learning these new concepts with others from her own discipline:

“the colleagues from the Faculty of Education know so much, I feel quite intimidated and amateurish in my knowledge of education theories....”.

Author 1 agreed:

“The educational philosophy discourse was so foreign to me; it really challenged me. Academics in the social sciences were much more comfortable during these discussions, especially those from the Faculty of Education.”

Author 2, having completed her PhD in 2010, also reported feeling challenged by the academic-writing tasks after such a long hiatus and she was concerned that she would not meet the expectations of the programme facilitators. Author 1 entered academia ten years ago from the accounting profession. She reported that she had to quickly develop academic writing skills so as to complete the assignments required for the PGDIPHE. This presented a formidable challenge and was the cause of great frustration for her; not only was she wrestling with the unfamiliar discourse of the education discipline but was simultaneously trying to master the skill of academic writing:

Author 1:

“I was very frustrated at the amount of time I had to spend on the assignments due to my inexperience. I had to learn how to scan large quantities of information quickly, how to select the most important pieces of information from the readings, how to paraphrase and reference, and how to synthesize whilst writing up all the information. I realised how big a gap there was in my academic experience and this left me feeling very inadequate.”

Relating, Reasoning and Reconstructing

Whilst analysing the reflections, the authors became acutely aware of the identity shift they had undergone: from academics, competent in their chosen disciplines, to students, novices in the higher education discipline. It is clear from the narrative that the authors felt confused and frustrated by their lack of mastery over the subject

content in the PGDIPHE. This is understandable, since a sense of competence is embedded in their teacher identity (van Lankveld *et al.*, 2017), however the teacher identity did not apply in this context.

Upon further musing, the authors concluded that they failed to readily assume a student identity upon assuming the role of student. Instead, they subconsciously expected to demonstrate proficiency over the new study material, just as they are accustomed to doing in their own disciplines.

Pajares (2003, p.153) explained that “beliefs of personal competence ultimately become habits of thinking”. Bandura (1986), in Pajares (2003), theorises that individuals’ beliefs about their capabilities underpin their behaviour and motivation. Pajares (2003) elaborated that one’s self-efficacy critically influences one’s academic success or failure. The authors reflected that their belief in their competence fostered resilience in the face of the challenges they were up against, and ultimately steered them towards success in achieving the learning goals of the programme.

Tamdgidi (2009) encouraged academics to roam across multiple disciplines and paradigms; to understand, learn about, and change oneself and the social realities of the world one lives in, one must be capable of moving between contrasting theories, ideas and disciplines. Recognising the intrinsic value in the ability to migrate between disciplines, the authors are now persuaded to approach future learning opportunities, in whichever discipline, perspective or paradigm, with a fervent attitude.

Crossing the Finish Line

Reporting and responding

Triumph over several of the challenges identified marked valuable learning successes for both authors. Mastery over the higher education discourse is an example of this, as well as a sharpened ability to perform critical analyses of academic literature to synthesise information and produce a worthwhile piece of academic writing. Both authors acknowledged the gaps in their knowledge of the higher education environment that existed prior to their studies in the PGDIPHE.

Author 1 reported that she now has a far greater understanding of the higher education landscape:

“The PGDIPHE broadened my understanding of the bigger picture of the HE enterprise. I learnt several new discourses, all relating to different aspects of HE, which goes to show the knowledge gaps I had. I have a better understanding of the role I play in the knowledge society and I have made great

strides in learning the academic writing skills I will need to write up research in the future.”

Author 2 reflected that:

“This programme has reminded me that the local HE playing-field cannot be seen in isolation, trends and developments in HE are actually global. Factors that affect institutions internationally also affect us in South Africa, managerialism being a typical example”.

Whilst the authors shared the expectation that the PGDIPHE would expose them to innovative teaching and assessment practices, they did not both feel that this was adequately achieved.

Author 2 expressed that her classroom practices will benefit from what she has learnt, noting that:

“the module on ‘Assessing in Higher Education’ has shown me alternative ways of assessing my students’ work and I am hopeful that I will apply these methods in future”

However, Author 1 expressed dissatisfaction:

“The brief time spent on this during the PGDIPHE was no more beneficial than unaccredited workshops I had attended previously on teaching and learning practices.”

Author 1 posited that it may have been more fruitful to discuss teaching and assessment methods in discipline-specific groupings of academics for the purpose of relevance.

Conversely, Author 1 reported her great satisfaction that research received so much attention in the PGDIPHE.

Author 1 stated:

“Of great benefit to me were the two modules addressing research in higher education...”

This was unexpected and offset her disappointment in the modules on teaching and learning practices and assessment. Author 1 is a novice researcher and benefited greatly from the guidance provided on the research process during these modules. An assessment output from the research module was a mini-research proposal. Both authors reported having applied for, and successfully obtained, ethical clearance from the UNIZULU Research Office to carry out their research projects. Author 1 placed great emphasis on this as a first step toward developing her research profile and

Author 2 is now working towards resuming her research trajectory in order to successfully publish academic material.

A noteworthy gain derived from participating in a professional academic development programme carried out as a cohort of colleagues is the sense of connectedness that develops among the members of the group.

Author 1 explained:

“The camaraderie between us grew each time we met ... now we feel part of a community...”

Author 2 mentioned that *“being in this together”* gave her a sense of belonging and it helped to know that she was not struggling alone.

This strengthens the bonds between members of the group and provides a cohesiveness amongst staff across faculties of the institution. This has the potential to translate into inter-departmental collaborations in the future. The authors undertook to enrol in this programme together to give support and encouragement to one another throughout the duration of the programme. They agree it worked well and they recommend others to do the same.

Author 2 commented that:

“having a colleague in the same position as myself was definitely a contributing factor to my successful completion of the Diploma. When grappling with unfamiliar concepts and working through the night to complete assignments, it helped to know that there was someone else doing the same.”

Both authors expressed great pleasure at having attained the PGDIPHE. Author 1 reported that the programme covered far more than she anticipated at the outset and consequently she learned much more than expected.

Author 1 said:

“I am so glad to have completed the programme and feel a real sense of satisfaction... I had not expected to be orientated toward research in the PGDIPHE when I embarked on the programme. I thought the content was going to be heavily entrenched in teaching and learning alone.”

Author 2 was pleased to have enhanced her teaching and learning practices, revived her research interests and exercised her academic writing skills.

Relating, Reasoning and Reconstructing

The sentiments reported upon completion of the programme are in stark contrast to those reported previously. Satisfaction and pleasure at the extent of learning that took place was tangible.

Owing to the block structure of the programme, contact time with a facilitator was limited to one week per module. Academics were required to work autonomously beyond this to complete assignments through which learning was assessed. Dickinson (1995, p. 167) described autonomy as “an attitude towards learning in which the learner is prepared to take, or does take, responsibility for own learning”.

In their research on motivation, Deci and Ryan (1985) posited that the most effective learning takes place when learners are intrinsically motivated, self-determined and takes control of their learning (i.e. autonomous). Intrinsic motivation to learn is the desire to learn for the sake of learning, whereas extrinsic motivation to learn is to undertake learning in response to any other stimulus, whether positive (i.e. reward) or negative (i.e. pressure).

The authors recognised that when they embarked on the academic development programme, they were extrinsically motivated to learn. Author 1 acted in response to a promise of possible future reward in the form of a promotion and Author 2 responded to a perceived pressure. Deci and Ryan (1985) reported that sometimes it is necessary to use extrinsic motivation in order to create opportunity for a subject to then develop intrinsic motivation, just as a child is offered a reward for tasting a new food, but then continues to eat of his own will. The authors reflected that at some point they became so invested in their learning that they intrinsically wished to learn and the scale of motivation switched to that of intrinsic motivation, thus creating a fertile ground for effective learning to take place: intrinsically motivated learning in an autonomous state.

Success drives motivation, which in turns fuels further success (Dickinson, 1995). Pajares (2003) elaborated that success is one of the most powerful factors contributing to one’s self-efficacy belief, and expounds that one’s belief in oneself becomes habitual. Hence, the authors confidence grew with each mastery experience.

A factor which appears to have enhanced the authors’ overall experience of participation in the programme is the camaraderie within the cohort of attending academics. The facilitators of the PGDIPHE modules utilised a learner-centred teaching approach during the week-long block lecture sessions. A social learning

environment was created by incorporating much interaction between participants in the form of group work. This led to the development of professional relationships amongst peers that can continue to be nurtured beyond the borders of the formal academic development programme.

Hargreaves (2002) encouraged the social nature of learning and described the professional learning communities that exist among academics in many educational institutions. Brainstorming, inquiry, discussion, idea-sharing, collaboration and networking are all characteristics of such a community. These activities can promote continuous development in a professional context. Osman and Hornsby (2016) agreed, describing a community of practice as a way for peers, within common disciplines, to collaborate and streamline their scholarship of teaching and learning efforts, in order that they work as a team and support each other in so doing. The authors collaboration in writing this paper is an example of such, and is further evidence of their learning.

CONCLUSION

The value embedded in professional academic development programmes is often choked due to the apathy of academic staff toward these programmes. Were such academics to dismantle their resistance, they would unlock immense value for themselves, their students, and their institutions alike.

In summary, the benefits derived by the authors included mastery over several education discourses, enhanced understanding of the higher education enterprise in which their life's work is located, deepened collegiality amongst peers in academia, exposure to sophisticated teaching and assessment practices and enriched critical thinking skills. In addition, they were urged to develop their academic writing skills and nurture their research ambitions, both of which are key ingredients for a rich career trajectory within academia. Moreover, the authors' personal growth is evidenced in this reflective writing.

In a constructivist spirit, but without detracting from the gains described above, the authors have undertaken a critical appraisal of the programme in which they were enrolled with a view to making recommendations for future improvements, as follows:

- Incorporation of a broader range of elective modules to ensure that all participants can complete modules that are most relevant to them.

- The use of scaffolding to ease the steep learning curve for those academics who are unfamiliar with education discourses.
- Improved marketing of the content of the programme to dispel the myth that it is solely focused on teaching and learning.
- Inclusion of a community engagement module in the programme to ensure all four pillars of the university are represented.

In addition, the authors call for the development of a centralised strategy for professional academic development across South African higher education institutions. The incorporation of the centralised professional academic development programme as a condition of employment for new staff in academia would be a mechanism to establish buy-in to the process from early. Furthermore, motivation could be generated through a grant into the academic's research fund upon successful completion of the programme, thus leveraging even greater opportunities for the academic, whilst simultaneously preparing the ground for furtherance of the institution's research objectives.

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Experiential Learning in Analysing the Lessons of 9th Grade English in Haldwani, Uttarakhand: A Reflection and Case Study

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ABSTRACT

The study captures the reflections of students in 9th grade English at a school in India. Indian education is based on the British style of education. The 9th grade curriculum in India is heavily reliant on the old “chalk and talk” method and uses archaic methods of instruction, namely teacher-talk which provides little room to engage with students and improve the texts to improve writing, reading, speaking and listening skills of students. This pedagogy is inadequate to deal with the issues of modern India. It needs new, creative, innovative methods of instruction to engage students. It is suggested that education officials promote a student-centred pedagogy instead of teacher-centred pedagogy in the classroom.

Key words: Archaic, curriculum, chalk-and-talk, creative, innovative, pedagogy.

INTRODUCTION

Education in India is a huge business with varied sectors and classes of people (Kingdom, 2007). India has 22% of the world’s population, 46% of the illiterates of the world, and is home to a high proportion of the world’s out of school children and youth (Kingdom, 2007). While the baseline of India’s education pyramid may be weak, it has emerged as an important player in the worldwide information technology revolution on the back of remarkable numbers of well-educated computing and other graduates.

The key factor in determining the quality of education is the assessment. According to Kapur (2008, p.105):

“Evaluation is the systematic determination of merit, worth and significance of something or someone and assessment is the process of gathering and analysing specific information as part of an evaluation process like the content,

classroom processes, and the growth of individual learners along with the appropriateness of the evaluation procedures”.

Assessment is also a means to provide constant feedback to the learner to make the course effective (Khan, 2003).

It is also noted that education in India is provided by the public sector with control and funding coming from three levels: federal, state, and local (Qasmi, 2005). Education for children is compulsory under the Right to Education Child Act of 2005. The private education market in India is merely 5%. Although in terms of value, it is estimated to be worth 40 billion US\$ and was predicted to increase to 68 billion US\$ by 2012 (Qasmi, 2005). This makes education an important industry like essential services.

Despite various problems in the education industry, India's improved education system is often cited as one of the main contributors to the economic rise of India (Khan, 2003). The investment in the industry is growing, yet India has a large illiterate population: only 15% of Indian students reach high school, and just 7% graduate, and 57% of professors lack either a masters or PhD degree (Khan, 2003).

The major objective of this study is to analyse the lessons of Grade 9 English in Haldwani, Uttarakhand, India, in a selected school, with the help of a case study. More specifically, the objectives are as follows: 1) to analyse and describe the student experiences of English curriculum at schools; 2) to critique the current school English curriculum, and 3) to focus on improving the reading, writing, speaking and listening skills of students.

Education is the wheel that propels the vehicle of change, whereas possessing the requisite skills and knowledge is the grease that lubricates this wheel. Over the years, Indian scholars have been teaching an outdated curriculum to the people. This problem is worsened when teachers adopt a faulty teaching style and the use of obsolete teaching materials, such as text books. These make it difficult for scholars to compete with their foreign counterparts and, hence, unqualified students are turned out every year.

Another challenge facing the educational institution in India is the archaic, dilapidated, and inadequate nature of the learning infrastructures. Apart from the fact that they are not conducive for learning, they are grossly inadequate and most of the time not even accessible to learners. These obviously create a loss of interest among scholars as well as poor results in education. Therefore, a proper understanding of these problems

will not only help in suggesting the way forward, but will also help to re-orientate the world view of education in India.

The discussion here is arranged under 5 sections. Section 2 briefly discusses the theoretical underpinnings of the work and a brief review of literature. This is followed by the discussion on research methodology and data analysis in section 3. The results are discussed in section 4 while conclusions and policy implications are provided in section 5.

THEORETICAL UNDERPINNING AND REVIEW OF LITERATURE

There are two main theories that are used in this study: constructivism and symbolic interactionism. These two theories are relevant for the study, but symbolic interactionism is more relevant to understanding the study, as gender is learnt through communication in cultural contexts, so communication is vital for such messages. Typical examples of symbolic interactionism include messages that girls are supposed to sit like ladies, and boys are supposed to open doors for others. Females and males learn how to be gendered through the words told to them by others.

This theory is relevant for the study because by the time boys and girls reach 9th grade, they are expected to start acting out their gender expectations. This is especially true in the learning area of English. It is considered a feminine subject and girls perform better than boys and boys are unable to catch up. Symbolic interactionism explains the phenomenon well enough. More needs to be done to help boys perform better in English. The underperformance of males in English poses a threat to masculinity and their future in employment. It is also a serious concern which needs to be addressed.

The work is based on the constructivism paradigm which says that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences. Constructivism emanated from the work of Vygotsky's sociocultural theory which asserted that learning is a social function and learners learn through parents, caregivers, peers, and culture. Constructivist teachers help students to constantly assess the learning process through questions, and students become expert learners in the classroom.

Lev Vygotsky viewed interaction with peers as an effective way of developing skills and strategies (Jhingran, 2010). He suggested that teachers use cooperative learning

exercises where less competent children develop with help from more learned peers within the zone of proximal development (Coates, 2005).

An important critique of the Indian education system is that it needs urgent attention and calls for a serious rethinking as the curriculum is not friendly to the job market (Upadhyay, 2003, p.4). The curriculum was revised accordingly by the National Curriculum Framework of 2005 and Kerala Curriculum of 2007, which was subsequently revised. The National Education Policy (1986) carried out the infrastructure development, and teacher training programmes were widely carried out. Charmaz (2006) argued that there were attempts to make curriculum learner-centred, activity-based and process-oriented.

The school in Uttarakhand was not following the policies of Kerala Education Department (Kerala Education Department, 2015) to make education accessible and relevant for Indian pupils to understand and the curriculum less dependent on European content. The White Paper by Kerala Education Department (2015) called for new thoughts in educational psychology to be incorporated into a new curriculum (Kerala Education Department, 2015). This document calls for increased student-centred teaching and students who participate more in classes. In terms of collaboration with students, this document advocates that their participation is important and that they must have a voice.

The school ought to follow Vygotsky's scaffolding model which states that learning should take place in the zone of proximal development which has been defined as "the distance between the actual and the projected learning that takes place" (Vygotsky, 1978). The development levels of the students were determined by problem-solving activities of the students under strict adult guidance and collaboration with peers (Vygotsky, 1978).

Constructivism looks upon learning as an active mental process that provides for construction of knowledge (Gibbs, 2010). Every child is born with the natural ability to learn from the surroundings through sense organs. The constructivist approach follows the curriculum transaction approach. This approach calls for a transaction between the students and the curriculum, so that the text is interpreted. The important features of the curriculum transaction approach are: 1) activity-based curriculum; 2) process-related curriculum; 3) ensuring learning that is relevant and contemporary; 4) sufficient to attain learning outcomes that are reliable and valid; 5) environmentally friendly

learning environment; 6) considers areas of development that lead to greater cognitive development; 7) suitable for the nature of the learner and the classroom; and 8) integrates teaching and evaluation to ensure better learning occurs (Nehal, 2016).

Myers (2009) argued that the premise of interpretive paradigm is that access to reality is only through social constructions, language and shared meanings. The interpretive paradigm is underpinned by observation and interpretation: to observe is to collect information about events, while to interpret is to make meaning of that information by drawing inferences or by judging the match between the information and some abstract pattern (Aikenhead, 1997). It attempts to understand phenomena through the meanings that people assign to them (Deetz, 1996).

Reeves and Hedberg (2003, p.32) noted that the interpretivist paradigm stresses the need to put analysis in context. The interpretive paradigm is concerned with understanding the world from the subjective experiences of individuals. Researchers use meaning (versus measurement) oriented methodologies, such as interviewing or participant observation, that rely on a subjective relationship between the researcher and subjects. Interpretive research does not predefine dependent and independent variables, but focuses on the full complexity of human sense making as the situation emerges (Kaplan and Maxwell, 1994). This is the interpretive approach, which aims to explain the subjective reasons and meanings that lie behind social action.

The population of the study included the students from an English medium secondary school in India. The location of the study was in Haldwani, Uttarakhand; with students aged 14-15 years old, in Grade 9. This sample was useful for the study as the researcher could reach the sample quickly and where sampling for proportionality was not the main concern. Purposive sampling was used and about 100 reflections were written. Purposive sampling is a non-probability sample that is selected on the characteristics of the population and objectives of the study. It is also known as judgemental, selective, or subjective sampling.

METHODOLOGY

This study used the interpretive paradigm in examining the experiences of students with respect to the English curriculum in the 9th Grade (Cohen and Manion, 1989). The interpretive paradigm aims at describing and interpreting the phenomena of the world and sharing this meaning with others (Pollard, 2002, p. 32). In other words, the

researcher tried to understand the meaning that people give to events. This paradigm believes that reality consists of people's subjective experiences of the world and that reality is socially constructed. Willis (1995) believed that interpretivists are anti-foundationalists, which means that there is no single way to correct knowledge. Walsham (1993) argued that there are no correct or incorrect theories. Instead, they should be judged according to how 'interesting' they are to the researcher, as well as the readers. They argued that knowledge and meaning are acts of interpretation independent of thinking and reasoning.

The study used reflections and reflective reports to understand the emotions, behaviour, and reflections towards the English curriculum with respect to teaching and learning issues. The reflection report contained long comments on students' experiences and emotions regarding the English curriculum. These reflections are "a disciplined enquiry into the motives, methods, materials and consequences of educational practice. It enables practitioners to thoughtfully examine conditions and attitudes which impede or enhance student achievement" (Norton, 1994, as cited by Taggart and Wilson, 2005). Therefore, in the professional contexts of training, teaching or school leadership, reflection refers to the act of thinking constructively about professional practice, with a view to improving it wherever possible.

As educators, it is easy to fall into the trap of employing the same techniques and approaches repeatedly. However, because every training, teaching and leadership context is distinct, and all individuals respond differently according to their existing knowledge and experiences, it is important to routinely evaluate the effectiveness of that practice and consider whether it can be improved upon to maximise everyone's opportunities for learning. Reflection may appear to be a time-consuming addition to a teacher's workload but it is time very well spent, not only because it becomes more automatic in time, but also because the impact can be transformative – both in terms of one's professional development, and the effectiveness of one's training, teaching or leadership.

Traditional 'transmission' models of teaching and learning consider knowledge and skills to be directly transferable capacities that 'experts' impart to their students in a one-size-fits-all manner. According to this view, if students fail to acquire these capacities, it is their fault. In contrast, contemporary perceptions of teaching and learning regard the development of knowledge and skills as a process of co-construction between individuals. This process requires teachers to pay attention to

the sense that their students are making of their experiences and their role within this process so that they can respond appropriately to the evolving needs of all their students. This approach to teaching and learning lies at the heart of the National Council of Further and Technical Education Training (NCFTE) (2009), which considers the development of reflective skills to be “the central aim of teacher education” (p. 19). To this end, “programmes need to aim to help teachers develop a repertoire of skills for reflective practice, such as making pedagogical sense of learner understanding and errors” (p. 38), while teacher educators need to give feedback that is “appropriate, of good quality, [and] sufficient for teachers to become reflective practitioners” (NCFTE, 2009, p. 54).

Reflecting is part of a cycle of professional development that involves three elements: 1) reflecting actively on teaching or leadership, and identifying which elements are effective and which could be improved. To do this one needs to pay attention to aspects of teaching and leadership (observing); 2) planning how to modify practice in the light of such reflection; and 3) acting or implementing a change within training, teaching or leadership activities. Acting is then followed by reflecting, and the cycle continues.

Reflection in teaching is primarily concerned with questioning pedagogic practice. Questions may be about professional values, prior experiences, attitudes, or prejudices that may influence teaching, as well as aspects that may need improvement. Reflection may question ideas such as inclusion, language use, ways of questioning students, time management, giving feedback, correcting and assessing, and the training or school curriculum. It can also involve thinking about the environmental, financial, organisational, and ethical factors that impact on existing or new ways of doing things. It is not about being self-critical – it is important to recognise the positive along with an honest assessment of areas that need to be developed. The reflective process will often lead to learning from colleagues and students, by observing and talking to them or by asking for feedback. Reading books and online journals provide a further learning opportunity. Reflection is thus about setting aside time to think and learn about a particular situation or practice and then identifying and planning actions.

Very often, small changes to classroom practice can have a very marked effect on student learning. Note-taking in a learning journal can be very helpful in this process. Writing in a journal can encourage the reflective process and can be a useful tool in

reviewing professional development over time. Some of the advantages of reflection are: 1) it improves student autonomy and improves teaching; 2) improves critical thinking of students; 3) improves creativity of students; and 4) it improves metacognitive processes and motivation for learning. The potential disadvantages are that it is time consuming, and an extremely detailed process. The major purpose of the reflection was to understand the emotions, behaviour and learning issues within the English curriculum. The teacher transcribed the direct quotations of students supplemented by brief critical comments regarding the English curriculum.

A case study is a typical example of qualitative study, and there are typical examples of case study such as exploratory, descriptive, and theoretical. This study is an exploratory case study as it explores the reflections of 9th grade students in English. The advantages of an exploratory study are: 1) increased understanding; 2) concept testing; 3) assistance to researchers; and 4) strategic planning. The disadvantages are that: 1) it involves general samples; 2) it is subject to bias; and 3) these case studies are not useful in decision making at a practical level. In other words, as a research endeavour, case studies have been viewed as a less desirable form of inquiry than either experiments or surveys. Too many times, the case study investigator may be disordered and allowed equivocal evidence or biased views to influence the direction of the findings and conclusions.

RESULTS AND DISCUSSIONS

Experiences

The students' experiences can be classified into seven categories of themes:

1. Schools teach the students an out-dated curriculum, not in line with the current pedagogy.
2. Schools have a faulty teaching method.
3. They follow the grammar translation method, not the application of suitable techniques of teaching.
4. Teacher-centred classes dominate Indian schools with neither student's participating in debate, discussion, or role-play.

5. Textbooks are out-dated: they have some tasks on grammar, vocabulary and some on writing skill at the end of the lesson but there are no activities on speaking and writing skills.
6. Poor infrastructural adequacy challenges the teaching and learning of the language. There are no facilities like computer aided language learning, DVD player etc.
7. They are located in the countryside and do not get healthy exposure to the outside world with teachers and students also coming from backward background.

The seven themes are described in further detail as follows:

1) The Curriculum in Indian Schools is Outdated

Indian schools are following a curriculum that is about 50 years old. It focuses on teacher-centred pedagogy, and promotes colonial thinking and a respect for European ideology. The curriculum often promotes messages of superiority in people with better English skills. Students who are not fluent in English often do not get better employment opportunities.

Student A stated *“I feel that I will not get a good job if I am not fluent in English, and will be unemployed”*.

This is strengthened by Student B: *“As a girl, not being exposed to English will not bring me good marriage prospects, a better economic life”*.

This is a sad reality of the current education system in India, where English medium schooling is a necessity for life and the belief is that the quality of education is unimportant, as long as the medium of instruction is in English.

2) Faulty Teaching Methods

Schools have faulty teaching methods which do not promote creativity and student-centred learning. Indian schools promote an old-fashioned curriculum which does not promote creativity, student-centredness, and critical thinking skills so that the students lag behind conceptual development skills and are unable to enter the world of work. Students are unable to write well and focus on lucid expression. They cannot critically analyse and get their points across. Poor expression and writing style impede their academic performance at schools and universities. They learn how to read at school, and navigate their world of meaning.

Globally, the old teacher chalk-and-talk method is fast disappearing, and the students should try to be engaged in the classrooms. They should be kept interested, and motivated. Their views, opinions and ideas should be respected and developed. They need to be responsible for their own learning, and develop their own learning schemas. They should try to come up with their own learning techniques such as mnemonics, examples, and association. One student explained: *"We are not happy with the teaching method that the teachers use. Teachers should allow us to speak in class and express our opinions"*.

3) The Grammar Translation Method

The grammar translation method is old fashioned and unable to meet the expectations of students in the modern world. Students are not supposed to be remembering rules about language, but should rather be applying language in usage. It is essential to develop fluency in a language and write well. A communicative teaching approach calls for fluency to be developed in speaking through constant practice, such as fun activities.

This approach must call for renewed change in education pedagogy. The CLT paradigm is about promoting new ideas and improving the students' speaking fluency. It aims to develop self-confidence and esteem in the students. This paradigm calls for renewed vigour and interest in the education sector. The paradigm should increase the speaking and listening activities of students so as to improve their fluency in English.

The communicative paradigm calls for the improvement of students' speaking, writing, listening, and reading skills. If students are able to improve communication skills in a language, then they are able to do better at school. They can write succinctly and express themselves concisely. Developing higher order thinking skills are important to succeed academically and at the workplace. They can become better readers, writers, and professors if analysis and synthesis skills are developed.

Student E stated *"I want to improve my speaking skills and communicate effective in English, as well as enhance my writing skills"*.

Student F explained *"It is disheartening to see our books have not changed since the past fifty years, and promotes thinking which is out-dated, it needs to be changed"*.

4) Teacher-Centred Classes Dominate

Teachers are not the sources of knowledge but the students themselves. Teacher-centred classrooms dominate Indian education at the moment. This needs to change to promote a new classroom order. Few schools follow student-centred teaching methods to engage their clients. Students need to develop creative methods to improve the academic performance of students. Students need to develop fluency in listening, speaking, writing, and reading. They need to be conversant with the realities of the modern world and its economic realities.

Students that use code switching are not fluent in English or Hindi and are paralysed by their poor language skills. In teacher-centred classrooms, an autocratic style of leadership and management is followed. In an autocratic environment, teachers are given powers and privileges to control the class. The leadership should try to be more accommodating, and tolerant of students. They should try to follow a more liberal approach to classroom management, and allow for student participation.

In a student-centred teacher classroom, the role of the teacher is subordinate. Teachers are the facilitators of knowledge, building up on the students' knowledge. The curriculum should reflect topics of interest to the students. In a student-centred classroom, the teacher is a friend to the students and must be friendly to all. The barrier between students' and teachers must be reduced. Teachers and students must be seen as equal. The power relations must be reduced and a more friendly management style must be followed.

It was highly evident from the students' responses that they do not have the desire to be taught by teacher-centred educators. Student G expressed *"I like it when my teacher employs student centred teaching methods which improves our understanding of the subject"*.

This is supported by other students who remarked that they should be engaged in the classroom and their views should be heard. They want to be active participants in their learning and feel empowered. In India, this needs to be strengthened and encouraged according to National Education Standards.

5) Old and Outdated Textbooks

Old and outdated textbooks contribute to the poor academic performance in schools. The textbooks contain little or no writing and speaking activities which improve the language abilities of students. Secondly, the textbooks contain didactic exercises that

emphasise old grammar rules. Similarly, the quotes from the students show the frustration felt by the students. One student said “*I am bored and uninterested by the old British curriculum*”.

Old books often promote old fashioned ideas and class ideas which favour the elite and promote a world view inimical to working class people. The old textbooks promote old facts, ideas and assumptions which are no longer true. The curriculum needs to be reflective of the new ideals of liberty, economic reality and promote new critical thinking skills that make the youth more employable.

Outdated textbooks contribute to a loss of interest in the subject. In languages, this is especially true and it leads to lack of interest in the subject, and promotes poor academic performance in the subject. The old syllabus makes lessons dull, uninteresting and avoidable for students. It also contributes to social problems such as developing class consciousness and hatred for poor people. It develops an inferiority complex which results in poor work performance and lack of promotion and upgrading of skills.

Student H stated “*I feel inferior because I studied in a rural school, and the teachers were not fluent in English*”.

Student J said “*The textbooks are torn and dirty so I don't feel motivated to learn*”.

6) Poor Infrastructure

Poor infrastructure in schools causes academic problems at institutions. Broken chairs and roofs and slippery floors all contribute to unhappy students and poor academic performance in school and in English.

Student D remarked “*I hate learning English in wet, damp, sticky classrooms*”.

These factors cause high student dropout and attrition rates in schools. Immense psychosocial and sociological problems are faced by students who come from poor backgrounds and battle to overcome all obstacles in life. Schools need to improve their infrastructure to promote the wellbeing and health of the students. They need to follow the rules of safety and occupational health and safety. Students must be able to protect themselves from injury and be safe at schools. Poor infrastructure leads to bad habits such as destroying the furniture and tables and truancy and absenteeism from schools.

Student K stated “*The chairs are broken, the roof is leaking, how can one learn?*”

Student M said “*I feel depressed entering the school and feel like dropping out of school*”.

These quotes exemplify the depression of the students.

7) Located in the Countryside

The school is located in the countryside and it does not promote a global worldview, so students are not aware of global issues. They have a limited worldview and are very conservative. A lack of exposure to the modern, outside world leaves them a bit scared of taking challenges. Student X said “*I am backward culturally, and am not confident of dealing with the world*”. Student Y explained “*I am not confident of moving to Delhi or Mumbai, as those big cities scare me*”.

CONCLUSIONS

Education is seen as a tool for social change. Investigating the experiences and challenges of grade 9 students in an Uttarakhand secondary school is crucial for developing an appropriate framework that improves their academic performance. Major challenges include language barriers, lack of facilities, old fashioned curriculum, and the poor background of students and teachers. The quality of education in Haldwani is of very poor quality and promotes colonialism. The school should try to promote learner-centred education.

Constructivism addresses the lack of good pedagogy and teaching practices in the school, whereas symbolic interactionism critiques the teaching at school. It argues that teachers are unable to progress beyond a certain level of thinking and change their teaching practice. Reflections were used to capture the students’ experiences and themes were derived from these reflections. Some of the themes such as outdated textbooks, faulty teaching methods, teacher-and centred classes were highlighted as contributing to the poor academic performance of students.

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