SELF-INFLICTED EDUCATIONAL LEPROSY, CONVENTIONAL WISDOM, OR OUTRIGHT LACK OF FORESIGHT?

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Abstract

Teachers are very important and critical players in the quality of education debate. Their importance perhaps arises from the key roles they play in the success of any educational endeavour. Botswana's past political and economic stability resulted in massive educational physical infrastructural expansion from the 1980s into the 1990s and beyond, leading to incidental challenges. Recently, performance across the educational levels has dwindled despite many interventions put in place. This paper uses a critical theory lens to investigate the educational sores affecting education in Botswana against the backdrop of the massive physical and human resource developments made in the teaching sector. The argument advanced is that the investments made, both physically and human resource-wise, should be commensurate with the returns by the measure of the educational quality of the country. Factors that negatively affect quality education are enumerated and discussed considering the uniqueness presented by Botswana. The discussions lead to key areas that can be addressed to improve the situation.

Keywords: Education quality, educational development, tertiary funding, interdisciplinarity, teacher education

1.0 Introduction

The teacher is seen as the most important resource in the entire educational enterprise (Biesta, 2015). This view does not in any way downplay the importance of the physical infrastructural development of any school system. There are two main forms of provisions in educational offering in Botswana at all the educational levels, from pre-primary to tertiary. It is not surprising that Ball (2004, p.3) discusses the "need to bring a critical gaze to bear equally upon the two forms of provision", being the private versus the public schooling systems. The importance of education for the economic sustainability of any country brings to the fore the commodification of schooling (Ball, 2004), and indirectly, the politicisation of an otherwise seemingly neutral enterprise.

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The multi-faceted nature of markets is comparable to the multidimensional purpose of education as seen by Biesta (2015). Biesta sees the purpose of schooling or education as three-fold, which she refers to as the domains of education: qualification, socialisation, and subjectification. The latter, subjectification, has been a subject of contention lately, with Tabulawa (2017, p. 13), discussing the "growing interest in and influence of interdisciplinarity as a form of knowledge organisation". This view will be expounded upon and critiqued later.

The three-fold purposes of education refer to issues that plaque education and the teaching profession in general. Whilst schooling is thought of as a means to earn a qualification, inherent in the qualification are issues of power imbalance that for the most part students do not have a say on. This argument has found footing in the western versus traditional education debates, with views that the western education carries with it the salient ethos and embedded prejudices in its cultures and can never therefore be neutral.

The school socialisation fold also has been a subject of contention. Looked at from a globalisation perspective, it is seen as pushing and supporting agendas that are skewed to one group of individuals than the rest of humanity (Bencze & Carter, 2011). The statements come portrayed as neutral, yet inherent in them are the power imbalances aimed at creating hurdles for others and steppingstones for the rest of the groups. The group that benefits is predetermined and not just left to chance. It does not come as strange therefore to find positions as proposed by Carter (2010) to the effect that it:

is increasingly clear that contemporary education needs to be considered in tandem with globalization as the dominant logic at work, rethinking and reconfiguring the social landscape in which education is embedded. Education and globalization become mutually implicative categories where globalization acts as the macrolevel sets of forces shaping the conditions for and being expressed within education, and education circulates globalization (p. 224).

This position assumes that all things being equal, the two shall serve humanity fairly. This however as already alluded to, is never the case. The constructs are used as gates to serve the interests of certain groups at the preclusion of others. Koosimile and Suping (2015) crystallised this as it relates to science education as follows:

In this milieu, science and science education are seen as cultural enterprises that form part of the wider cultural matrix of society ... the key aim of teaching science is viewed in globalized contexts as enculturation into behaving according to some dominant cultural norms and conventions, especially the way in which the wider society makes sense of the world ... conceptualizes these complex patterns of intertwining of knowledge (science/reason), governance, and disciplinary control as biopower (p. 2360).

The key words that spring to life here are words like cultural matrix and biopower. The question then that begs to be answered is whether such power dynamics, cultural and or socioeconomic or other societal imbalances could possibly play out at national level enough to play a pivotal role in the outcomes of an otherwise well intended educational system? The Botswana experience is used to address these and other pertinent questions.

The Botswana experience is unique and exemplifies the fore-mentioned in several ways. It has a population of just over two million, almost the same as it was in 2011 (Republic of Botswana, Central Statistics, 2021); it is a middle-income country status; it is a shining example of democracy in Africa as it is commonly referred to; it is one of few countries is Africa that has had bloodless and voluntary transfer of state power; these are some of the accolades that the country can pride itself in. In 2018 the country experienced a voluntary transfer of state power as is custom, when there was still a full year left in the sitting president's term. This was the third such transfer since independence in 1966. The political climate therefore in the country could be described as stable and favourable for prosperity, including educational success.

The political and economic stability have resulted in a massive expansion of educational physical infrastructure from the 1980s into the 1990s. For example, junior secondary schools were constructed to achieve a near 100% transition from primary to junior secondary education, making it possible to achieve free 10-year basic education (Vlaardingerbroek, 2001), with expansion at the senior schools making it possible to achieve 50% transition from about 30% (Suping, 2014). One of the aims of these expansions, apart from increasing enrolments, was to, according to Vlaadingerbroek (2001), reform the curricular to bring a pre-vocational element to it to address the issue of youth unemployment. In other words, social development was one of the intended outcomes.

Despite this positive outlook about the country's political climate and consequently the booming physical educational infrastructure, the country has not been without academic performance problems. For example, there has been a consistent and sustained decline in performance on national examinations at the senior secondary school level with students obtaining overall grade C or better in the percentages as shown per year: 2009 (34.8%), 2010 (32.76%), 2011 (30.86%), 2012 (32.3%) 2013 (27.91%), 2014 (25.75%), 2015 (27.27%), 2016 (28.53%), 2017 (28.47%), 2018 (28.06%), 2019 (29.02%), 2020 (30.20%), 2021 (30.32%) and lastly 2022 (31.17%) (www.bec.co.bw). The picture at lower levels is not any better. The junior certificate (JC) for education overall results per year for mathematics and science for students obtaining grade C or better were as shown in percentages in Table 1.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Mathematics	28.70	24.5	24.40	24.84	26.20	28.60	25.57	21.94	21.91	20.66
Integrated	19.80	20.50	12.70	15.06	16.80	18.97	17.17	18.04	16.61	18.25
Science										

 Table 1: Mathematics and Science junior certificate for education results

(Source: www.bec.co.bw)

Other measures of performance, especially against other nations both regionally and internationally paint the same dark and gloomy picture. Boikhutso and Molosiwa (2019) used Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading and Literacy (PIRLS), to mention a few, as measures of performance against which the country does not fare well compared to counterparts both regionally and internationally.

Other studies on Botswana students' educational performance in general also abound. Jotia and Pansiri (2013) blamed the failure on lack of recognition of the multicultural disposition of the country assumed homogeneous due to the *Education for Kagisano* (social harmony) philosophy. Pansiri (2011) looked at failure from a management perspective where he argues that the adoption of management styles from Western cultures led to students' failure as they are not effective in the Botswana context. Further afield, Tadese, Yesheneh and Mulu (2022) found age, field of study, and cigarette smoking as determinants of general academic performance for college going students in Ethiopia. Dubey, Pradhan and Sahu (2023) found usefulness of materials, hedonic motivation, and attitude factors as key indicators of positive student engagements with online learning materials. Gilbert (2019) found student performance in the United States connected to student-teachers likeness. Students did well when they were taught by teachers who taught the way they preferred to be taught.

Attempts at reforming the curricular have not particularly been successful according to Tabulawa (2009). He quips that the Revised National Policy on Education of 1994 (RNPE) was a poorly framed policy document to produce the kind of learner it was intended to produce, a self-programmable worker, perhaps consistent with the infrastructural developments that the country had invested on. This poor policy formulation led to the poor results, mismatch between the products of the school system and the demands of the work environments leading to the national outcry on the poor national results across educational levels.

It must however be noted that Tabulawa uses hindsight to make the observations and that at the time the nation needed the changes made to benefit it. This was at the time especially true for the mathematics and science areas that were dominated by foreign professionals including teachers; it somewhat made sense therefore to concentrate on quantity at the detriment of quality in the mass training of such professionals at the time. This is not in any way to suggest that it was the right thing to do, perhaps it was prudent to do so though. It only therefore makes sense to assume that

plans should have been put in place to address the shortfall in the reform efforts of the country so that gaps are identified and dealt with continually.

Being aware of the intricacies of the enterprise called education, cognizant of attempts made by the country over the past 50 years to reform it, and conscious of the difficult fiscal environments that the country, any country really, now operates in, this article seeks to critically unravel low performance by students despite the resources expended on the sector. This will be done by asking key questions, namely, what are the key factors that led to the bad state that the Botswana education system is in? Even more importantly, what can be done to save the situation? These questions are key reflective points, as the country seeks to take advantage of the available technologies to turn on its wheels of fortune.

2.0 Methodology

Data for the current study was obtained through observations that occurred over a period spanning at least four (4) years of engagements at different levels and with different committees and personnel. The work is, therefore, not method-centered per se (See Koosimile & Suping, 2011) but an accumulation of experiences and observations over a period of time. These were not random and haphazard but carefully woven together purposeful observations to get an appreciation of the depth of the education system in the country.

This stance is given impetus by the fact that the authors are not Ministry of Basic Education (MOBE) employees despite their involvements with MOBE activities as experts in the various areas of study, consequently, the *looking in from outside* allowed for the authors to reflect on the processes as they happened.

Also, the non-method-centred stance does not mean that anything was permissible (Smith & Deemer, 2000), but perhaps gives impetus to the fluid, temporal and value laden nature of the human enterprise called knowledge generation. Smith and Deemer stated that "...but this does not mean that our only option is to descent into a relativism of all-accounts-are-equal or anything goes" (p. 880), but points to the realization that there can be order in a seemingly chaotic arrangement of things.

Official documents were also consulted to get data especially that related to statistics. The method could be conceptualized as immersion in the system, without being a typical participant observer, enough to be able to report on it (Tedlock, 2000). This inherently suggests and immediately points to the authors biases as researchers and subject of the researched phenomenon in some cases (Mestre, 2000; Vidich & Lyman, 2000).

Collected data were sieved through using critical theory lenses to attempt to understand the mishaps in an otherwise well-resources educational enterprise in the country. Critical social theory

"is concerned in particular with issues of power and justice and ways that the economy, matters of race, class, and gender, ideologies, discourses, education, religion and other social institutions, and cultural dynamics interact to construct a social system" (Kincheloe & McLaren, 2000, p. 281). Data were critically juxtaposed on the expected returns on investments made by government on both the infrastructural developments and human resource of the education system, with the expectation that the investments should yield better academic results. The account therefore is as conceptualized by the authors and the meaning derived by them from their interactions with the data and the themes identified.

3.0 Results and analysis

3.1 Organization of results

The results section is arranged in the following way. First the Botswana educational context is historically set with a view to giving the results discussion a background. In doing so, parts of the problems tormenting the country are also elucidated. Then, each of the contributory factors is discussed culminating in a discussion of areas the country can capitalize on based on its peculiarities and strengths.

3.2 Situating educational context in Botswana – Policy developments

At independence Botswana inherited an education system that was under-developed to say the least (Republic of Botswana, 1977). Due to the state of education at the time, access to education was initially the key aim of education, but with the passage of time it became apparent that there was need to investigate other aspects of education such as quality of training. Tabulawa (2009) hinted of the second National Commission on Education (NCE) of 1993 that the reform efforts intended to produce what he called a new kind of learner, worker or citizen brought about by the compelling "global attempt to attune education to the demands of the 'new' economy" (p. 87). Tabulawa (2009, p.103) concluded about the 1994 reform document that "a critical evaluation of the policy and its intended learning programs (curricula) points in the opposite direction: in practice it is more likely to produce conformists fit only for outdated Fordist production processes", suggesting that the reform efforts were a failure.

Following the 1993 NCE, massive changes occurred leading to unprecedented changes in the Botswana educational landscape. For lack of space these changes will be truncated here for appreciation by the reader. The colossal physical school infrastructural development alluded to earlier was also accompanied by several policies aimed at complementing the infrastructural developments.

The Curriculum Development and Evaluation (CD&E) followed by the Examinations, Research and Testing Division (ERTD) of the then Ministry of Education were established following the first NCE of 1976. Under this setup, the teaching, setting of national examinations and grading (except for the Cambridge Overseas School Certificate (COSC) examinations which

were set and graded abroad) were done by the Ministry through the teachers. In 2002 however, the Botswana Examination Council (BEC) was established with the sole purpose of running all national examinations through to the Botswana General Certificate of Secondary Education (BGCSE) level (Republic of Botswana, 2012) as was proposed by the NCE of 1993.

The establishment of BEC changed the perceptions of the stakeholders as regards the conduct of the local examinations, leading to an impasse in 2010 when examinations were to be conducted. The interested parties being BEC, Teachers through their trade unions and the then Ministry of Education and Skills Development (MoE&SD) did not agree on how the examinations had to be conducted, and especially whose responsibility it was to supervise and grade the examination scripts (Republic of Botswana, 2012). It took a court decision to settle the matter, with the teacher trade unions emerging victorious with their view that it was BEC's sole responsibility to run national examinations. Prior to the impasse in 2008, a new Public Service Act was put in place that allowed for unionisation and recognition of the teachers by employers.

The almost simultaneous establishment of the Botswana Qualifications Authority (BQA) and the Human Resource Development Council (HRDC) in 2013 completed the policy infrastructure for the education of the country. On the one hand, the BQA provides for and maintains the national credit and qualification framework in addition to the coordination of the educational training and skills development quality assurance of the country (www.bqa.org.bw). On the other hand, the HRDC is tasked with planning and funding of education and training as well as advising government on matters of human capital development (www.hrdc.org.bw).

The depiction of both the physical and policy educational infrastructure of Botswana should, on the surface, produce the best education graduates in the region, especially due to the accolades the country has received and continues to receive on good governance and tranquillity. This however as already alluded to, has not been the case. Key areas that have been identified and needing to be addressed as a matter of urgency are highlighted and discussed below in response to the first question that asked for factors that led to where the education system finds itself.

3.3 Teacher training and development

The training of teachers, teacher development in general, science teacher training particularly, is a very delicate albeit intricate undertaking requiring proper measures to address the pitfalls in the education enterprise. The Botswana education system has gone through what could be referred to as juvenile stages. The teacher mass production stage was perhaps justified at the time it was done. With the country targeting the knowledge-based economy, it can no longer be business as usual. Quality over quantity should be the business of the day and efforts should be put in place for educational institutions to implement these and for the existing teaching workforce to be in-serviced to improve on the results. Deliberate efforts should be made to this end.

3.4 Interdisciplinarity as just a travelling policy

Favero (2006, p. 283) hints that "[w]hile some disciplines, e.g., the natural sciences, enjoy high consensus around certain aspects of their work such as methods and knowledge definitions, others, e.g., social sciences, are more open to a variety of approaches to work in that there is low consensus around preferred methods." These differences in disciplines somewhat inherently place importance on them. All disciplines are important but some perhaps more so than others to borrow from *Animal farm*. This has nothing directly to do with the intellect of the people in the said disciplines. There are many factors that determine choice of career than academic ability, these include but are not limited to childhood interest and fantasies, culture, etc.

Differences in academic disciplines as alluded to for example, between the natural sciences and the social science, can be found also among disciplines within the social sciences. For the sake of discussion in this article, we shall refer to the former as extra-interdisciplinary differences and the later as intra-interdisciplinary differences. Tabulawa, Polelo and Silas (2013) had this to say about inter-disciplinarity:

Inter-disciplinarity occupies a central place in government's policy documents pertaining to tertiary education ... Certainly, it is a cornerstone of UB's research, teaching, and engagement activities. For example, in terms of UB's Strategic Priority Area 2, '*Providing Relevant and High-Quality Programmes'* the University intends providing coherent academic structures that promote inter-disciplinarity as well as offering relevant programmes that are responsive to the student requirements and economic and social development (p. 25).

The value laden nature of the proposition for interdisciplinarity and or intra-interdisciplinarity must be noted. Tabulawa (2017) drives this point home by arguing that it is a reform initiative that has assumed a *travelling policy* status and is designed to measure a university's responsiveness to the demands of its clients. He further argues that it is not just a neutral, a political rearrangement of knowledge but a political technology implicated to break academic monopoly on the process and products of higher education. This is an interesting take on the issue as it suggests power issues at play with those with the ability and resources wanting to dictate what and how knowledge will be created, possibly to their advantage.

There is another perspective that especially intra-interdisciplinarity takes advantage of. With the stringent competition for resources in higher education in the Botswana setting, and perhaps elsewhere, certain programmes find themselves with very low student enrolment, bringing to question their relevance in the face of dwindling resources. To survive the axe, so to say, interdisciplinarity within the same faculty becomes the only vehicle of hope for the departments offering such programmes. Such departments may start pushing for interdisciplinary approaches

with other departments without any theoretical justifications for such arrangements. The University of Botswana (UB) and especially the Faculty of Education is a case in point.

Botswana, a very young country both at and post-independence, needed skilled labour in all sectors of the economy. The need was responded to by a mass expansion and production of careers and consequently personnel required in the different fields. This mass production could not in itself have been bad, except for the incidental challenges as outlined by Jotia and Boikhutso (2015). They noted that:

the Revised National Policy on Education observed the quantitative progress made in terms of increasing access. However, it lamented ... a major access problem that required urgent attention ... The secondary education ... was also characterized by widespread history of failure ... For example, problems besieging the junior secondary education were seen as reflecting flaws in policies and weaknesses of implementation; ... At senior secondary school level problems included among others, unsatisfactory standards of attainment particularly in Mathematics and Science, high staff turnover ... (p. 257).

Fast forward to 2015 when the results of the mass production of personnel started to haunt the country with excess production of trades and professionals including in the field of teaching. There were teachers even in the areas of Mathematics and Science who could not be absorbed in the teaching profession immediately after graduation. In some fields like Biology, graduated and qualified teachers waited up to four years to be absorbed. Government being the main sponsor of students in the tertiary space had to reconsider and reconceptualize sponsorships.

This also coincided with the establishment of such bodies as BQA and HRDC that questioned the training of students in fields that were already saturated. This effectively meant that certain departments at UB which previously enjoyed large enrolments found themselves with fewer students and staff complements that could not be justified. To keep the staff and justify their relevance, interdisciplinary course offerings and research were justifiable escape-goats. The research papers produced were for the most part interdisciplinary in as far as the authors came from different departments or faculties with no benefits to the methods or results of the work.

3.4 Politics and education/Education for sale

Biesta (2015, p. 80) discusses what he calls the purposes of education and in the process brings in a concept that he refers to as 'good education'. The argument being that in the "design, enactment and justification of education...it is of crucial importance that we engage with the question of *good* education..." in relation to judgments made by teachers in the justification for the purposes of education. In other words, it is not enough that students attend school, especially college or university education that directly feeds into the workforce of a country. The Botswana Government has done exceptionally well in the provision of free education to tertiary level.

Alongside the discussion of the purposes of education, Biesta (2013, p. 9) discusses the value laden nature of learning and the "political work being done through learning" by denaturalizing it. That is to say, the enterprise called education/schooling or learning, cannot be divorced from the political milieu within which it is enacted. This plays out in subtle albeit poignantly significant ways. The Botswana example typifies this politicizing of an otherwise human right commodity, commodity because no matter how value and power laden it is, it is still a must-have.

Botswana's spending on education is unparalleled by any standards. The country boasts free primary through to secondary education with guaranteed government scholarships for tertiary education in both private and public institutions. This arrangement is theoretically the best that any country, especially a developing country, could ever wish for. In the case of Botswana though, the problem, as already alluded to, is that the massive spending does not come with the expected value on return on investment on one hand and in fact acts as double edge sword on the other as shall be elucidated.

Performances across the educational levels have been dismal. Biesta (2013)'s 'political work' is at play here, albeit in a subtle and cunning way. On the surface it is just tertiary student grants and scholarships that the government is disbursing through the Department of Tertiary Education Funding (DTEF) to local institutions for the good education of the nationals. Since these scholarships are from Government, the expectation would be that DTEF should give priority for placement of such students to public tertiary institutions with spillovers going to the private ones. On the contrary though, there does not seem to be any placement preferences leading to a proliferation of private tertiary institutions in the country, perhaps as an opportunity seized by businesspeople. Ironically and perhaps surprisingly, these institutions enjoy the same level of access by students as the public tertiary institutions, albeit at higher fees and substandard facilities compared to those of Government.

The reason some of the programs at UB had very low enrolments was due to duplicate programs running in private institutions preferred by students over the UB programs. The reason for the preference of programs at private institutions over those offered by public ones is a subject of contention. The question that then remains is whether the programs at the private institution are of a better quality than those at the public institution like UB for them to be preferred by students. Could there be other factors that lead to this preference?

It must be hinted here that part of the investment on education by the Botswana Government included investment on human capital development leading to most academic local staff members at UB having their highest qualifications being Doctor of Philosophy (PhD) obtained literally from universities across the globe, making a highly qualified and competent staff compliment. Elsewhere in the private institutions, it would be questionable if the staff compliment has comparable

qualifications. Perhaps an audit and comparison of staff complements and student satisfaction study on tertiary institutions in the country could help unravel the student's preference of study sites.

Casting doubt though, the local media have been awash with claims that some of the private institutions have high ranking politicians as owners, shareholders, or members of the boards of trustees. For example, Selatlhwa (2019, December 02) reported a case in which the Minister for the Ministry of Education and Skills Development (MoESD) who was at the time heading a different Ministry had been cleared by the Directorate on Corruption and Economic Crime (DCEC) from charges to the effect that whilst at the MoESD, she had made it possible for the International Aviation Solution (IAS) academy students to receive sponsorship through the Department of Tertiary Education and Financing (DTEF), an arm of Government responsible for tertiary students financing. In return, the publication continued, the Minister's law firm was to provide legal services for the school. In the same publication, it was reported that the same law firm also provided services to Limkokwing University, another private tertiary institution with students sponsored by the government through a Ministry she headed.

There have also been other issues raised over time that raised eyebrows on dealings in the education sector. A local newspaper, (*The Patriot on Sunday*, Monday, 15/01/2018) carried an opinion letter in which the then Minister of Education was called upon to resign for what the letter called "inaction" when the education sector was going to the dogs. In the same year another local paper (*Botswana Guardian*, Tuesday, 10/7/2018) carried a piece in which a local private university, ABM University, was being accused of cheating by awarding students a certificate qualification (lower-level qualification) when they were sponsored by government to pursue a diploma qualification in electrical and electronics engineering.

This perhaps in part speaks to the preference for higher enrolments at private than public institutions. Space does not allow for a look into the qualifications of some of the staff in such institution despite the existence of an oversight body in the Botswana Qualifications Authority. Perhaps this is one area that may need further scrutiny in future.

3.5 When educational reform becomes problematic

To improve service delivery to the nation, the current Ministry of Basic Education (MoBE) has gone through several metamorphotic stages to be where it is now. Despite just the basic name changes from Ministry of Education to Ministry of Education and Skills Development, to the split of the ministry into Ministry of Basic Education and the sister Ministry of Tertiary Education, Research, Science and Technology, there have also been structural changes. During the Ministry of Education era, the ministry was highly centralized with most of the decision making done from headquarters in Gaborone. The metamorphosis has gone full circle with the ministries merged into one ministry again lately.

Regional offices were introduced in the ten districts of the country with different functions over time (Republic of Botswana, 2016). The current arrangement has the regional office headed by a regional director at the same level as the education director at the MoBE headquarters. The different sub-regions within each region are then headed by chief education officers who report to the regional director. This arrangement has been in existence for some time now.

Whilst this arrangement was a welcome development and in fact supported and encouraged by the United Nations through the United Nations Educational, Scientific and Cultural Organization (UNESCO) (Republic of Botswana, 2016), it has however not been without challenges that hamper the very reform and service delivery it was meant to bring and improve. The Director at the Ministry Headquarters (HQ) is at the same level as directors at regional operations, making it technically difficult for regional directors to take orders and sometimes even follow-up on initiatives sanctioned by the ministry headquarters director.

A case in point was one initiative to improve the performance in mathematics and science subjects in the country across the board from primary to senior secondary schools through inservicing of teachers. Letters were written from Headquarters by the Director to regional directors informing them of the exercise and requesting facilitation of meetings with schools in the regions of interest. Upon arrival at all the three regional offices at different times, despite letters having arrived well more than three weeks prior, the team from MOBE noted that no action had been taken. As a result, the regions were all not ready for the team's visits on arrival and meetings either failed or were not as successful since necessary preparations had not been made. That it happened in all the regions of interest could not have been coincidental.

It emerged that such occurrences are common, and that one plausible explanation could be that the regional directors somewhat feel that such communications as contained in the letter from the director at HQ amounted to an instruction to the regional directors and since they are at the same operational level, the latter felt the former could not give them instructions. It is a well-known experience among ministry officials but just never talked about. More than anything else, this situation hampers educational progress in the country as initiatives from HQ are given priority based on who originated them. Part of the dire performance by the education sector can be explained based on these kinds of challenges.

Perhaps also related to the structural adjustments at the then MoESD was the merging of the Tertiary Education Council (TEC) and the Botswana Training Authority (BOTA), (Morewagae, 2010) the consequence of which was to see staff members teaching at the colleges of education in the country crisscrossing between institutions. Whilst this may have had well intended plans, the outcome was catastrophic, contributing immensely to the poor performance of students in the sciences in the country. The Primary Colleges' lecturers are not at par with their secondary counterparts due to the different levels and types of training received. Requiring that a secondary

college teacher trainer moves to the primary teacher training institution to teach, or vice versa, was a tall order for most trainers. This was more so in the mathematics and science content areas. In the same vein, a secondary methods specialist does not necessarily have the competencies to train a primary school methods student teacher.

One other negative consequence of the massive human capital development was in what could be thought of as the generosity of government in issuing out sponsorships to its citizens. Strange as this might be construed, undeserving citizens were given expensive external sponsorships for qualifications of no consequence to the economic activities of the country. This led to most of them returning home only to be frustrated when they did not find job markets for the qualifications they had. A popular local social media blogger is credited with having written that:

The economy is structured... Education should be structured in such a manner that it has exit points that feed into different levels of the economy. They exited to various things such as *bo maid* (domestic workers) and *badisa* (herdboys) and accepted it as fate. Because they know they did not perform up to expectation. Same thing happens *ka* (with) Std 7 and Form 3 as well as Form 5. ...because Batswana who were supposed to fill those jobs, all have degrees and want to be lawyers, yet we only have 3 courts and a low crime rate. So, there is a disconnect between what the economy is providing and what the education system is producing. That is what should guide us instead of sponsoring students to bogus institutions...[translations ours].

Whereas the above was meant for social media consumption where there are no rules of engagement, the sentiment perfectly outlines the challenges the country finds itself in because of what should have been a good educational undertaking. Review of this practice is not likely because educational scholarships are complicated undertakings even when they don't serve the true intension of education. The students are not necessarily sent to bogus institutions but there is a tendency in private institutions to 'pass' students to keep a certain reputation and attract students who may be interested in just a qualification with little regard for knowledge. The practice has also meant that there are people who ended up with qualifications for which they really have no use. The import of this has been graduate roaming the streets in an economy that should really be able to accommodate all because of its compactness.

The second of the questions asked in this paper probes possible interventions to address the predicament the country finds itself in. The Conclusion addresses these possible interventions and summarizes the findings and discussions in this article.

4.0 Conclusion

This work looked at the peculiarities of the education system in Botswana with the potential to become one of the best in the sub-region if not in the region. The challenges elucidated in the paper can easily be turned into opportunities. This is made possible since the policies were all well intended but not efficiently and or effectively implemented. Changes can be made that can make the quickest turnaround of the entire system for the better.

The funding model in education in Botswana has virtually not changed since independence as Government is solemnly responsible for funding, with donor and private enterprises accounting for an insignificant amount at higher education levels. The only slight difference has been the move from full scholarships to grants at tertiary levels, with little commitment to cost recovery exacerbated by high unemployment rates. In Kenya for example, Odhiambo (2016, p. 204) reports that higher education financing "has passed through various funding policy arrangements ranging from government full support to cost sharing and private participation as a response to challenges of access".

The factors contributing to the poor performance of students in mathematics and the sciences especially are complex and intertwined. They are presented in the discussions above for presentation purposes. It will become immediately logical to think that the immense expenditure in education if done efficiently and with education and nothing else in mind would go a long way in bringing the much-needed human resource development to the nation. The small population with the endowment of natural resources and good governance makes this potentially possible. Serious reforms however are needed in the higher education financing sector. This now more than ever due to the limited resources and the less urgent need for mass production. Quality products should be called to be in the graduate as the economy gears towards knowledge based enterprising.

It boggles the mind to think that public institutions could be starved of enrolment in favour of private entities, at any cost really. Whilst the private should also benefit from state resources, it makes sense that this should only be after all state institutions have been fully enrolled. State institutions should also respond positively to human resources needs and job market demands to keep relevance. Once this is addressed, other issues like the interdisciplinary rhetoric will fall away and when done or used, would be for the betterment of education and not to justify existence. This is especially critical because the country will soon have to invest in other funding models for education. The current model cannot be sustained for long.

The MOBE also needs to be restructured for optimal use of the resources at the country's disposal. Not only is it cost ineffective to have such high-ranking officers in positions that are used to sabotaging the very system they are supervising, but it is also sending the country into a deep academic trench. This won't be easy to implement, but if reform efforts are to make an impact, changes must be made holistically to be impactful.

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