

TEACHER PROFESSIONAL DEVELOPMENT: A CRUCIAL REQUIREMENT FOR KNOWLEDGE-BASED ECONOMY IN BOTSWANA

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Abstract

Botswana's national development goal commits to shift the country from a resource driven economy to a highly diversified knowledge one. This shift is motivated by the rising demand of the global knowledge economy. Thus, economic growth and development are knowledge driven and human capital dependent. This article, which is part of a larger study on teacher professional development and knowledge economy, is influenced by the Capital Theory of School Effectiveness and Improvement. The purpose of this article is to critically analyse the Botswana's Revised National Policy on Education (RNPE) of 1994 in view of the emerging demands and dictates of the knowledge economy. The discussion addresses how this policy places education and teacher professional development to produce the knowledge-based economy that this country aspires for. The critical question in this discussion centres on teacher professional development as a necessary strategy to drive knowledge-based education. It examines the manner in which the country tries to achieve the knowledge-based economy through teacher professional development. It compares Botswana's approach with other approaches in the international spaces where stories of success are identified as commendable. Two key issues emerged from the study. The RNPE does not present a knowledge-based approach of teacher professional development, nor a clear road map for preparing school leadership as knowledge-based teacher professional developers. The discussion concludes that the education policy and its deliberate focus on school leadership professional development need more attention if its purpose is to serve as a key blueprint to transform Botswana into a knowledge-based economy.

Keyword: teacher professional development, human capital, economic growth, education policy, knowledge-based economy, school managers

Introduction

The study interrogates the Revised National Policy on Education (RNPE) of 1994 from the perspective of teacher professional development. The study intends to find out whether what

the policy stipulates on teacher professional development has the ability to achieve the knowledge-based economy that the country aspires for. It first discusses the global context of knowledge-based economy and the Botswana context. This is followed by the international, regional, and Botswana contexts on using teachers as the human capital in the achievement of knowledge-based economy. The article then discusses the RNPE as Botswana's response to the discourse of a knowledge-based economy. Lastly, the study discusses the capital theory on school effectiveness and improvement by Hargreaves (2001) and applies this theory to interrogate the manner in which professional development of teachers could enable the creation of the knowledge-based economy. This theoretical perspective has been chosen because it calls for a knowledge-based economy as an output of education. Ending with a discussion of the theoretical framework is expected to help the reader to understand and appreciate the expectations of education in a knowledge-based economy. Finally, the findings from the discussions are presented.

Background

With the emergence of knowledge-based economy, organisations are now investing more on human capital development via education and training (Fong, 2006). This is partly because human beings are now considered as assets that contribute to economic growth (Wuttaphan, 2017). Consequently, the neo-classical economic components such as resources, labour, and capital which created wealth assets in the past are no longer considered critical (Houghton & Sheekah, 2000). These components have become less popular because information and knowledge are replacing them (Pohjola, 2000; Oliever, 2008). The quality of information and knowledge that the education system provides account for and raise the value of education in producing human capital (Oliever, 2008). Fong (2006) argues that countries were now liberalising their trade regimes and opening themselves to information and knowledge. However, Houghton and Sheeka (2000) maintain that these two factors (information and knowledge) enable education systems to assist countries and emerging economies to generate more wealth than ever before. For example, the Economic Research Services Department (2000) reveals that education has proved to generate more wealth in countries such as Taiwan, Japan, and Malaysia. It was projected that through information and knowledge-based economy, the level of these countries' Gross Domestic Product (GDP) increased 4 fold (Economic Research Services department, 2000). Fong (2006) reveals that in these countries, education has become a commodity. These are countries that have excelled in knowledge-based economy because they have considered human capital as the most valuable asset (Fong, 2006).

The Economic Research Services Department (2000) reports that countries such as Taiwan, Japan and Malaysia, have succeeded because they managed to bring a shift in policy towards a knowledge-based economy. These economies have greatly focused on their school curriculum. That is, they have ensured that the curriculum reflected the changing realities by making education and human capital the centre of economic planning and management (Drucker, 1988). They have also treated education as a critical force that generates technological progress in an

economy and have made education and the creation of human capital responsible for labour productivity (Blinde, 2000).

Botswana views Vision 2036 as an aspiration for a knowledge based-economy. According to the Vision 2036 taskforce, Botswana aspires to have an economy that is efficient, vibrant, innovative, and knowledge-based. This country hopes to achieve this by developing a skilled and internationally- competitive workforce, leading knowledge, technology, and infrastructure. In addition, it is the intention of the country to use science, technology, and innovation to propel economies to high levels of efficiency (Vision 2036 Task team, 2016). It sees this as the key to support socio-economic development. The country also intends to work on its policies, institutions, regulations, and legal framework to support its knowledge-based economy by protecting its intellectual property and promoting research and innovation, as well as commercialisation.

According to the Vision (2036) task team, human capital plays a critical role in the development of Botswana's economy, therefore, Botswana aspires to invest in human capital to produce human resources that can drive economic growth. It needs the domestic human capital that can be integrated into the global labour market which can promote higher productivity, competitiveness, and skills transfer (Vision 2036 Task Team, 2016). The Vision 2036 task team further reports that the country intends to develop an internationally- competitive workforce that is productive, creative, and has international exposure. In addition, Botswana hopes to develop human capital through the use of quality education that is outcome-based, with an emphasis on technical and vocational skills as well as academic competencies (education with production) (Vision 2036 task team, 2016). Botswana advocates for Life-long teaching and training opportunities that put equal emphasis on academic, technical, and vocational skills. As a result, Botswana intends to align its education curriculum to the needs of the economy and business, science, Mathematics, and Technology to be taught from primary to the tertiary level. To achieve this, Botswana is providing access to quality education (Vision 2036 task team, 2036).

The government has made efforts through the Education and Training Sector Strategic Plan (ETSSP, 2015-2020) in 2015 as a drive for knowledge-based economy. This was informed by several background research studies that addressed the key challenges in education from the lowest to the highest levels (ETSSP, 2015). It emphasises on laying a strong foundation at pre-primary level, teacher education, enhanced participation of parents, availability of good data for strategic planning, as well as the transformation of the management system for education, promising improved management and implementation of the educational policies. ETSSP identified several critical issues at different levels of education (ETSSP, 2015). The World Bank (2019) reports that some of the ETSSP recommendations had not been implemented due to lack of funding. The report further states that lack of funding necessitated the prioritisation of the following issues: improve data collection and process for planning and decision making, prioritise basic education spending to improve efficiency and quality of basic education, ensure that the budget process works in a way that allows prioritization among all education spending.

Improving teacher education and improved management and implementation of the educational policies are part of the initiatives that were not carried out because of insufficient funds (World Bank, 2019). Hence, this can hinder the aspiration of becoming a knowledge-based economy through the education sector using teacher professional development.

Purpose of the study

The purpose of this study is to interrogate Botswana's ability to achieve a knowledge-based economy under the RNPE from the perspective of teacher professional development.

Research Objectives

The following research objectives guided the study:

1. To establish if the RNPE presents a paradigm shift from Command and Control to a Knowledge-based approach of teacher professional development.
2. To find out if the RNPE provides a clear road map for preparing school leadership as knowledge-based teacher professional developers.

Literature review

Literature is explored in terms of an overview of the global context on education for knowledge-based economy. It also explores global context on professional development for the knowledge-based teacher. It then discusses critical literature at international, regional and Botswana levels in order to position the study more adequately.

An overview of global context on education for knowledge-based economy

The term "knowledge-based economy" was coined by the Organisation for Economic Co-operation and Development (OECD) in 1996 and defined as "an economy which is directly based on the production, distribution, and use of knowledge and information" (OECD, 2019b). Kefela (2010) argues that a knowledge-based economy requires an economic, institutional, and regulatory environment that fosters the acquisition, development, and use of knowledge. This means that the government which aspires to have a knowledge-based economy must invest in research and innovation to sustain economic growth. Fong (2006) posits that in this economy, people are the ultimate resource. They must be given the possible development towards the highest standards of skills, knowledge upgrading, competencies, work attitudes, and motivation (Pohjola, 2000; Ramirez, 2001; Olivier, 2008).

Kefela (2010) states that a knowledge-based economy requires an education system that supplies citizens with the ability to create and use information, provide a dynamic information structure, innovation systems, and networks. The author further states that the system must begin with basic education that provides the foundation for learning. It should then continue to secondary and tertiary education that develop core skills (including technical skills) and

encourage creative and critical thinking for problem-solving and innovation (Pohjola, 2000; Ramirez, 2001; Olivier, 2008). Furthermore, it should progress into lifelong learning that commences from early childhood to retirement. Blinde (2000) opines that any country that aspires for a knowledge-based economy must invest in human capital.

According to Drucker (1988), the global market has shifted its focus to a knowledge economy. This new global market calls for visionary leaders (Arrow, 1962; Fong, 2006) who can adapt and apply new management and organisational principles (Drucker, 1988; Houghton & Sheekah, 2000). Consequently, Olivier (2008) stresses that the global market no longer considers the old command-and-control management systems. Olivier further argues that the old command-and-control management system that many organisations employ cannot work in a new competitive environment. Pohjola (2000) points out that if the country aspires to a knowledge-based economy, its education, training, and employment policies have to change. In addition, the recruitment process also needs to change as employers need to recruit “knowledge” workers for higher skills jobs. This therefore, requires the education system of countries to produce graduates with relevant knowledge, critical and higher-order skills, and proper attitudes (Oliver, 2008).

Global context on professional development for knowledge-based teacher

Professional development, according to Kennedy (2016), refers to improving teachers' skills and competencies to increase learners' learning outcomes. Additionally, Flores (2005) also argues that it can be in informal contexts such as collegial dialogues, peer observations, or personal readings as well as a formal program utilizing workshops and in-service teacher training. Furthermore, Houghton and Sheekah (2000) observe that it has been speculated that the creation of quality human resources is important in a knowledge-based economy. They further note that these individuals are the backbone of the knowledge-based economy. Drucker (1988) affirms that in a Knowledge-based economy, knowledge workers are versatile, autonomous, and highly skilled. These are workers who can leverage and build knowledge to produce useful action with very strong and analytic skills. These workers should be flexible and have high tolerance and ambition (Blinde, 2000, Hargreaves, 2001; Fong, 2006). According to Houghton and Sheekah (2000), for countries to produce a pool of knowledge-based leaders and knowledge-based workers, the education system must be revamped and restructured. The focus should be geared towards making the existing curriculum more innovative to help students to invent and develop a critical and analytic mode of thinking (Arrow, 1962; Blinde, 2000; Hargreaves, 2001; Ramirez, 2001). The critical and analytic model should ultimately create a sufficient pool of well-educated, highly-skilled, and strongly motivated workers (Economic Research Services Department, 2000).

Fong (2006) argues that the knowledge managers should have the above attributes of good followers, team players, leaders, and technologists because the process of influencing the performance of knowledge workers is mainly developmental. As a result, the manager needs to

have professional development proficiencies in appraising, coaching, mentoring, and providing feedback. One measure of their effectiveness in professional development proficiencies is the quality of the internal and external relationships that they create (Fong, 2006 & Olivier, 2008). Therefore, it is inevitable that the school leaders should present proficiencies for teacher professional development.

International context on professional development for knowledge- based teacher

Internationally, it can be proven that teacher professional development can lead to a knowledge-based economy. This study examines six cases namely, Taiwan, Japan Malaysia Singapore, Finland and Malta. These countries have focused more on revising their educational policies. For example, Taiwan is one of the countries that have made tremendous progress in achieving knowledge-based economy through teacher development system (Chen, 2013). Feng et. al (2013) argue that the country achieved knowledge-based economy through the educational policy of 1994. Fwu and Wang (2013) highlights that Taiwan's educational policy enabled the country to construct a teacher in-service training and evaluation systems. The authors further reveal that the educational policy helped to promote the professional competency of school heads and teachers. Professional competency was achieved through providing financial subsidy to experiential teachers who mentor new teachers (Taiwan Ministry of Education, 2009). Fwu and Wang (2013) state that this was also made possible as teachers are obliged by the law to engage in teaching related research. Huang (2016) argues that the educational policy oblige the Ministry of Education's National Academy for Educational Research (NAER) to offer professional development courses and programs for serving school heads. The author acknowledges that NAER offers courses in instructional leadership, technology leadership, curriculum development, computer programming, class observation, and positive discipline. This career ladder and consortium-based system of teacher professional development creates a shift on new professional and marketization (Chen, 2013).

Furthermore, Gouedard and Pont (2018) note that Japan is also one of the countries that have excelled in knowledge-based economy through teacher professional development. The authors note that Japan achieved a knowledge-based economy by adopting a teacher professional development system that is knowledge-based compliant. Ahn et.al (2018) posit that Japan's educational policy dealt more with up-skilling or re-skilling the teachers and school managers. Gouedard and Pont (2018) state that the teacher professional development adopted by Japan ensures that there is affordable, innovative, delivery approaches and flexible scheduling for both the teachers and the managers. Ahn et.al (2018) further point out that since late 1980, the teacher professional development national policy target teachers at different stages in their career: beginning, middle and veteran. The authors reveal that "Japan's onsite training include content teaching skills, contemporary educational issues, lesson study, and conferences with the principal and assistant principal. Offside training includes lecturers on content teaching, student discipline and other areas of interest as well as experiencing with technology and environment education" (P.51).

According to Ming et.al (2010), Malaysia has been able to stay at the top in terms of knowledge-based economy because of the school-based professional development activities which are driven by education policy on teacher professional development; education policy which aims at positioning Malaysia as a global competitive knowledge-based economy with full access to knowledge and information through ICT. The main thrust of the Malaysian Ministry of Education Policy is to optimise the utilisation of ICT in schools nationwide (Ministry of Education Malaysia, 1997). The country realized that to achieve the goal it is plainly necessary to ensure that teachers are professionally equipped for this challenge (Ming, et.al, 2010).

In addition, according to the Educational Policy in Singapore (2015), the country is striving at empowering their teachers with new skills and deepening skills set through teacher professional development. The Ministry of Education in Singapore has used several policies which enabled in-service teachers to continually develop and upgrade themselves professionally. In support of the above, Chewa (2014) argues that this has helped the teacher training and continuing professional development to be a possible mode of teacher education and preparation in Singapore. The author further argues that the teacher training and continuing professional development has succeeded in equipping the teachers with knowledge and skills for a globalised economy and workforce that can stand the challenges of the 21st century. Chewa (2014) asserts that “workshops or short courses are used for deepening knowledge of subjects taught and for enhancing pedagogical skills, and conferences or seminar attendance for sharing teaching practices and broadening experiences.” (p. 315). These modes have worked wonders in Singapore.

The Finland Education Outlook (2020) reports that the Finland educational policy focuses on admissions, initial education as well as development of professional competency and learning during the career. Particular attention is paid to mentoring and peer support as systematic parts of teacher education. The working methods used in teacher education emphasises on a learner-oriented, research-based and whole school approach. The key issues are the new and diverse learning environments, team teaching, cross disciplinary approaches and teacher management skills. Niemi (2015) confirms that because of this kind of teacher professional development, Finish teachers can work with high professional autonomy and agency.

From the perspective of Malta, the Ministry of Education and Employment (2012) reports that the educational policy ensures that their teachers are given the right support to maximise their teaching skills. Calleja (2018) reveals that continuous professional development usually occurs at the school level where the teachers take 30 hours which is equivalent to 7.3 days. The author further states that there are initiatives that provide a more active practice-based, collaborative and on-going approach to continuous professional development such as “let me learn programme”, Pestalozzi Action Research project and core competency learning programme. In addition, Calleja (2018) suggests that teachers opt for professional development courses for different reasons, due to intrinsic motivation because they want to develop knowledge about

teaching and -they believe in the benefits of pedagogical practice as well as their desire to change classroom practice. The key aspects that teachers cited as effective throughout their continuous professional development experience were learning by being part of a community, active learning, and immersion in practice-based understandings. These cases (Singapore, Finland and Malta) underline the necessity for proficiencies for teacher professional development.

Regional context on professional development for knowledge-based teacher

Regional context draws from experiences of South Africa and Namibia because these countries got actively involved in teacher professional development immediately after their independence. According to Department of Education (2006), the Educational policy of South Africa is designed to meet the needs of a Democratic South African in the 21st century. It brings clarity and coherence to the complex but critical matrix of teacher education activities, from initial recruitment as student teachers, throughout the professional career of a teacher. The overriding aim of the policy is to properly equip teachers to undertake their essential and demanding tasks, to enable them to continually enhance their professional competence and performance and to raise the esteem in which they are held by the people of South Africa, Ono and Ferreira (2010) argue that many teachers in South Africa express dissatisfaction because the professional development programmes do not help them to become better practitioners. After independence, the country focused more on teacher professional development. Sayed and Eva (2020) reveal that South Africa is working on the teacher professional development because it was seen as patchy and uneven. This is because teachers' voices are not strident, louder and clearer in the creation of professional development policy. They advocate that policy processes should be unpacked, it should be "policy processes for teachers, by teachers and not without teachers," (p.3).

From the Namibian context, the Ministry of Education (2014) policy provides for professionalism of educators and enhancement of the status of educators since independence in 1990. The policy makes provision for the education and training of the educators through various pathways, from initial pre-service training to continuing professional development. These activities ensure that educators engage in the creation of learning communities. Burns (2006) argues that the ministry created a career path (vertical and horizontal) model which allows an alternative promotion route to higher salary grades and management positions while allowing competent teachers to remain in the classroom. The Continuous Professional Development focuses on three critical area of professional development; content knowledge (deep understanding of their discipline /subjects); pedagogical knowledge (particularly subject specific instructional strategy); and pedagogical technology /content knowledge for integrating ICT in teaching.

Botswana context on professional development for knowledge-based teacher

In Botswana, most of the studies on the professional development of teachers were conducted in secondary schools. Monyatsi (2006) argues that the school-based workshops in secondary schools as a component of staff development in the schools were the most effective due to several reasons, among them, the contextualizing of the approach, its needs-driven nature, and the collaboration and teamwork that are its hallmark. Apart from the above, the study highlights some advantages such as being cost-effective and time-saving and not being disruptive to the teaching and learning processes. Mphale (2014) asserts that school-based teachers' professional development initiatives were not based on teachers' needs assessment. He recommends that the identification of teachers' professional development needs is vital for the effectiveness of Botswana secondary schools' professional development initiatives. With regard to continuing professional development of teachers for inclusive education and improving the quality of educational service delivery of all learners, Mangope and Mukhopadhyay (2016) argue that "one-time workshop" alone was not effective to change classroom practices." They highlighted the importance of "change processes" and therefore, recommend "in-house mentorship" (p.69).

Ramatlapana (2009) in his study on professional development points out that teachers were not satisfied with teacher professional development in Botswana. The author posits that the teachers concerns were, the lack of impact of current in-service training programmes on the education system, no regular follow up activities to support the once-off workshops and insufficient skills acquired to sustain the implementation of the strategies solicited by the workshops. It is therefore, imperative for one to appreciate how Botswana policy perspective directs teacher professional development as well as the proficiencies and role played by school managers in the desire for achieving a knowledge-based economy.

RNPE as a driver for knowledge-based economy for Botswana

The RNPE is the main policy framework for the provision of education in Botswana. The main aim of the current policy is to improve access, ensure equity and inclusiveness for all, improve and maintain quality and effective management in the education system. This policy is concerned with raising the standard and morale of teachers so that they can perform their duties, as stated in recommendation 12.3. The policy states that the teachers should be motivated through improved pre-service and in-service training. The policy also recommends that there should be quality of instructions that can bring forth a great level of achievement. It emphasises more on the development of teachers and states that "training should be a continuing means of strengthening and renewing the education system through the development of teachers" (p.158). With regard to the eligibility for professional development, the Revised National Policy recommendation 107 (b) states that, "in-service training courses should be made accessible to all teachers at various levels to ensure continued professional and academic development" (p.47).

The RNPE recommendation 105 (a) also suggests the personnel to address professional development and on how it should be done by positing that "the Head as instructional leaders, together with Deputy and Senior Teachers should take major responsibility for in-service training of teachers within their schools, through regular observation of teachers and organisation of workshops, to foster communication between teachers on professional matters and to address weaknesses" (p.45). Recommendation 107 (c) states that "Schools should develop avenues not necessarily paid assignments to enhance the personal development of teachers" (p.47).

Theory of School Effectiveness and Improvement

This study uses the Hargreaves (2001) theory of School Effectiveness and Improvement to interrogate Botswana's ability to have a knowledge-based economy under the RNPE. This theory guided the study on the expectations of the education system of the country towards the achievement of a knowledge-based economy. Hargreaves (2001) argues that schools, like businesses, must find new ways in which to manage and exploit their intellectual assets, especially of the teachers. The theory argues that teachers have a strong knowledge base on how to develop the new knowledge and skills required by learners. Hargreaves (2001) also posits that the teacher leaders must learn how to create this professional working knowledge and then transfer it rapidly and effectively through to the teaching force (Hargreaves, 1998). Hargreaves and Hopkins (1991) assert that this requires new ways of engaging in research and development work for teachers as well as new forms of collaboration with professional researchers.

Hargreaves (2001) further argues that for education to produce a knowledge-based economy, it needs teachers and managers to have concepts of knowledge creation, innovation, and transfer. This therefore, calls for teachers and school managers to generate new forms of high leverage for better teaching (Ramirez, 2001; Flores, 2005). Furthermore, the author notes that this can promote the creation and transfer of knowledge as new forms of intellectual excellence. These will help prepare learners for the innovativeness they need for successful lives in a knowledge-based economy (Abdula, 2000; Olivier, 2008). Hargreaves (2001) also posits that school managers must create models that are related to issues arising from the nation's entry into a knowledge-based economy and the role of education for future generations.

How, then, is teacher effectiveness improved in this theory? According to Stigler and Hiebert (1990), participation in school-based professional development groups is part of a teacher's job in Japan. These groups provide a context in which teachers are mentored by their leaders; they also provide a laboratory for the development and testing of new teaching techniques. The teachers devise research lessons that they take time to design, test out, and improve and share and implement collectively (Kang & Choi, 2019). They observe one another at work and develop a language in which to talk about what they do. Because the outcome is owned collectively, the teachers can constructively criticise one another without offending (Hunzicker, 2016). In terms of the theory, teachers form a community with high social capital, in which mentoring is part of teachers' social learning and collaboration to solve shared

professional problems in common (Vincent, 2019). This provides not only the basis for knowledge transfer of what works but also the potential for knowledge creation and innovation. All this contributes to high-leverage strategies of teaching that shape classroom teaching and ensure high cognitive outcomes (Hargreaves, 2001). A school's capacity for improvement depends not on the general provision of continuing professional development or spirit of inquiry, but on specific versions as built into the present theory (Trust & Horrocks, 2017).

Findings and Discussions

The study drew its findings and discussions from the literature review. It then related the school effectiveness and improvement theory to the RNPE shortcomings. The study also related the requirements of the knowledge-based economy with the limitations of the RNPE regarding its achievement.

The RNPE calls for ineffective command and control teacher professional development

A country's most important resource is its human capital. For the country to move forward and be strong, it must invest in its citizens (Hargreaves, 2001; Tabulawa, 2009; Botswana ETSSP, 2015; Botswana Vision 2036 Task team, 2016). The RNPE stipulates that the school managers should develop teachers professionally. In recommendation 105 (a), the policy suggests the personnel to address professional development and how it should be done by positing that "the Head as instructional leaders, together with Deputy and Senior Teachers should take major responsibility for in-service training of teachers within their schools, through regular observation of teachers and organisation of workshops, to foster communication between teachers on professional matters and to address weaknesses" (p.45). This approach according to Economic Research Services Department (2000) is a top down approach of knowledge transfer to participants who, in turn end up having to listen for most of the time with little or no input from them. This model has been found to be ineffective in driving the nation to a knowledge-based economy.

Evidently, the policy stipulates the use of a command and control system that is against the knowledge-based system. Certainly, according to Olivier (2008), knowledge workers require knowledge managers, not bosses. These new era managers need to set and enforce on themselves exacting standards for their performance (Pohjola, 2000; Ramirez, 2000; Flores, 2005). These standards provide the functions that determine the ability to perform (Blinde, 2000; Hargreaves, 2001). According to Economic Research Services Department (2000), it has been discovered that traditional managers cannot create a knowledge-based economy because they exercise no leadership at all but only positions of power. Yet managing knowledge workers requires that a manager be a good follower, team player, leader, and technologist (Abdula, 2000; Blinde, 2000; Fong, 2006). This is also not recommended by the Capital theory of school effectiveness and improvement by Hargreaves (2001) as the theory states that the school managers must come up

with models that relate to issues arising from the nation's entry into a knowledge-based economy and the role of education for future generations.

RNPE Unclear roadmap for preparing school leadership as knowledge-based teacher developers

Regarding the eligibility for professional development, the Revised National Policy on Education recommendation 107 (b) states that, "in-service training courses should be made accessible to all teachers at various levels to ensure continued professional and academic development" (p.47). As a result, major reforms and reorganization need to be undertaken by the Botswana Ministry of Education to develop school managers to be teacher developers as stated in recommendation 105 (a) (Republic of Botswana, 2002; 2015; 2018). There should be clarity on how the school managers should be trained and how they should in turn train the teachers. Admittedly, this should be so because the goals of RNPE (1994) and the ideals for Vision 2036 envisage school products that can contribute to economic growth and employment creation through quality education. This human capital includes the teaching cadre and administrators of education. It therefore, calls for massive investment in educating and training the workforce (Botswana ETSSP, 2015; Vision 2036 Task team, 2016). Consequently, there should be immediate and swift attention on the present policy as regards equipping the school leaders to develop the teachers for the paradigm shift as stated in recommendation 105 (a) (RNPE, 1994). In building a strong education system for knowledge-based economy, Botswana needs to address the present challenge of using the education sector as an engine for economic growth (Kydnt et.al. 2016) in the enhancement of the participation of school managers in the transitional era. The government has put in place the ETSSP (2015-2020) as a strategy to help drive the agenda of achieving a knowledge-based economy. However, the strategy faces challenges of insufficient funds.

Similarly, the RNPE is concerned with raising the standard and morale of teachers so that they can perform their duties, as stated in recommendation 12.3. The policy states that the teachers should be motivated through improved pre-service and in-service training. The policy also recommends that there should be quality of instructions that can bring forth a great level of achievement. It emphasises more on the development of teachers and states that "training should be a continuing means of strengthening and renewing the education system through the development of teachers" (p.158). The policy does not show how it builds a more effective synergy between teacher professional development and economic growth. It does not show a clear lifelong learning approach which requires opportunities for professional development throughout the career to enable the teaching staff to refresh, develop and broaden their skills and practices for the knowledge-based economy (Blinde, 2000).

Furthermore, the RNPE is silent on the innovations, knowledge creation and transfer by teacher developers which are recommended by the Capital theory of school effectiveness and improvement. The education policy on teacher professional development in Botswana does not

clearly indicate how the professional development processes should be carried out. This should be clear because globalisation and new technologies have orchestrated profound changes in the workplace. These factors have set more demands, as well as changing and rising expectations on employees (ETSSP, 2015; Kennedy, 2016; Hunzicker, 2016). The education knowledge-based leader according to Hargreaves (2001) is the competent one, who can design a strategy, make sense of an unpredictable environment, provide a vision for how to deal with the change to improve the quality of education, and influence others to commit to this vision. Botswana education policy on teacher professional development does not clearly stipulate how the managers should be equipped in terms of innovations and knowledge creation and transfer. This therefore, slows down the achievement of the knowledge-based economy the country is aspiring for.

It is generally accepted that teachers need to be encouraged and supported to develop professionally for schools to be effective (Kennedy, 2016). It is assumed that effective schools are institutions where there is a delivery of high-quality education (Mullis, et.al, 2016). Teachers' professional development is amongst the crucial aspects needed for the provision of high-quality education in the international arena for a knowledge-based economy (Mustafa & Abdullah, 2000).

Conclusion

From this discussion, it can safely be concluded that the RNPE is deficient in driving the Botswana knowledge economy because it does not make provisions for equipping teachers with knowledge and skills needed for the knowledge-based economy. In terms of professional development initiatives, the RNPE has not identified the needs of teachers' knowledge-based economy requirements. Instead, the school leaders are required to identify the needs of the teachers by observing their weaknesses and then organize training workshops to develop them. The policy does not provide a clear roadmap for teachers to be involved in the professional development planning and even in its execution. In the whole, the policy does not cater for teacher professional career progression and development.

Furthermore, the RNPE is neither clear nor consistent on what the school managers are supposed to do as professional developers. It does not also give them an exploratory chance of coming up with initiatives which can improve the teachers' day to day activities. This therefore, does not enhance the creation and transfer of knowledge as advocated by the knowledge-based economy. Consequently, the policy needs to be revised and reconstructed to meet the needs of the knowledge-based economy. There is also no link between what the RNPE stipulates and the expectations of a knowledge-based economy. This gap requires a shift in policy thrust so that the policy can address the requirements of the knowledge-based economy. This paper, therefore, stands on the premise that teacher professional development for teaching and learning for school managers in Botswana is a crucial requirement for the knowledge-based economy. The discussion concludes that the school-based professional development which is critical for the

production of a knowledge-based teacher is deficient in the RNPE and therefore that this policy should be revised and restructured.

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