MANAGEMENT OF EVIDENCE-BASED POLICYMAKING AS A PILLAR OF THE BOTSWANA NATIONAL HUMAN RESOURCE DEVELOPMENT STRATEGY 2009-2022

By

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DECLARATION

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I, **OABONA ENOCK NTHEBOLANG**, hereby declare that this thesis: **Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022** is a true reflection of my own work, and it has not been submitted for a degree in any other institution of higher learning. I have also duly acknowledged all references to the best of my knowledge and in accordance with honest and acceptable academic standards.

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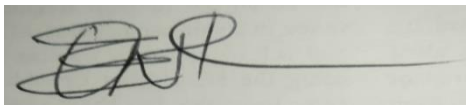

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OABONA ENOCK NTHEBOLANG

Nthebolang, O. E. July 2020

Author

DEDICATION

In loving memory of my parents, my father **Ketshotsethebe "June July" Nthebolang** and my mother **Kenole "Mmakgorong" Nthebolang**, may their soul rest in eternal peace.

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It is with a profound sense of gratitude that I express my heartfelt appreciation to my supervisor **Prof. V. P. Mahlangu** who played the most significant role during the entire development of this thesis. In particular, his contributions and efforts in guiding me and making this study a success.

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ABSTRACT

Introduction

The main aim of the study was to explore the technical capacity of members of the 12 Sector Human Resource Development committees of the Human Resource Development Council in the management of evidence-based policymaking in the course of implementing the national and sector-specific Human Resource Development plans for all matters of national human resource development. The study set out to contribute to the urgency and growing importance of research evidence as the basis for making informed policy and practical decisions across the world. There is a significant research gap in understanding how members of the Human Resource Development committees, as policymakers in the context of this study, use research-based evidence in the course of developing Human Resource Development plans. There is limited understanding of the factors that may induce or constrain members of the committees to use research-based evidence in implementing the national and sector-specific Human Resource Development plans.

Methodology

The study adopted an exploratory, sequential, inductive mixed methods approach in addition to the deductive use of the Canadian Institutes of Health Research (CIHR) knowledge-to-action framework. The target participants for the study were the members of the 12 Sector Human Resource Development committees of the Human Resource Development Council who were asked to complete a questionnaire. The questionnaire elicited respondents' perceptions about their capacity to adapt knowledge generated; identify inhibiting/ facilitating factors; assess and approve research evidence and sustainable use of research evidence. Qualitative data was collected through conducting interviews with the chairpersons of the committees. The scope of the in-depth interview questions covered respondents' perceptions on the same key areas as in the questionnaire. This was to allow respondents to express their feelings during the in-depth discussions without any limitations.

Findings

The insights based on the perceptions of chairpersons and members of the committees in this current study have revealed the areas for possible improvement in managing evidence-based policies in the context of Botswana. Issues that emerged with respect to the perceptions of respondents to adaptation of research evidence included packaging and presenting research evidence; lengthy reports and use of complex language; lack of understanding of the policymaking context by researchers, and inversely, policymakers not understanding the research process; lack of collaboration and engagement between researchers and policymakers; and lack of implementation plans. Issues that related to the perceptions of respondents on factors that may inhibit or facilitate the use of research evidence entailed positive attitude towards evidence-based policies; development of policy briefs; difficulty in accessing research articles, databases and journals; building policymakers' ability to search for relevant research evidence; insufficient time to read and evaluate research articles; lack of organisational support; and authority and decision-making power. Concerning respondents' perceptions on assessing and approving research evidence, issues raised covered skills in interpreting the research evidence; policymakers being generalists; lack of appraisal criteria and guidelines; and training on appraising research evidence being more theoretical than practical. As for the strategic interventions suggested to sustain evidence-based policies, respondents highlighted the need for skills development for both researchers and policymakers; participation of policymakers in the research process; and provision of incentive schemes.

Conclusions

In conclusion, the findings of the current study show that all the sub-constructs of adaptation of research evidence, factors inhibiting or facilitating the use of research evidence, and assessing and approving the quality of research evidence are significantly and positively related to research evidence informing policy and practice. Overall, the insights emerging from this current study provide conceptual tools to use research evidence to inform policy and practice. The study sought to complement and advance the literature on the field of evidence-based policy management, essentially contributing to the research-policy interface in Botswana context. Botswana, as an emerging economy, is still grappling with understanding the dynamics of evidence-

based policy management. There is still a need to initiate, develop and sustain evidence-based policy management through strategic interventions. The insights gained from the current study can be used as a basis for future research.

Key Words: Management, evidence-based policymaking, policymaking, research evidence, policy, practice, human resource development

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Assisted Reproductive Technology
AVE	Average Variance Estimate
BOTA	Botswana Training Authority
CEDIL	Centre for Excellence for Development Impact and Learning
CEO	Chief Executive Officer
CIHR	Canadian Institutes of Health Research
CLAHRCs	Collaborations for Leadership in Applied Health Research and Care
COVID-19	Corona Virus
CSC	Chairperson of Sector Committee
DAP	Dynamic Adaptation Process
EBM	Evidence-Based Medicine
EBP	Evidence-Based Policymaking
ETPs	Education and Training Providers
ETSSP	Education and Training Sector Strategic Plan
FM	Factor Metrics
GDP	Gross Domestic Product
HEIs	Higher Education Institutions
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
HRDC	Human Resource Development Council
HRDP	Human Resource Development Plan
IDRC	International Development Research Centre
IMF	International Monetary Fund
KMO	Kaiser Meyer-Olkin
KT	Knowledge Translation
KTA	Knowledge-to-Action
MoESD	Ministry of Education and Skills Development
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
NDP	National Development Plan
NHRDS	National Human Resource Development Strategy

NIHR	National Institute for Health Research
OECD	Organisation for Economic Cooperation and Development
OMRU	Ottawa Model of Research Use
PARIHS	Promoting Action on Research Implementation in Health Services
PDL	Poverty Datum Line
PSO	Provincial Sport Organisation
R&I	Research and Innovation
SADC	Southern African Development Community
SPIRIT	Supporting Policy in Health with Research
SPSS	Statistical Package for Social Sciences
TEC	Tertiary Education Council
TEIs	Tertiary Education Institutions
TEP	Tertiary Education Policy
UNDP	United Nations Development Programme
UNISA	University of South Africa
US	United States of America
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor
VUSSC	Virtual University for the Small States of the Commonwealth
WHO	World Health Organisation

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CHAPTER 1: ORIENTATION OF THE STUDY
1.1 INTRODUCTION

This thesis deals with the management and use of research evidence to inform policy and practice. The overall aim of this study is to provide knowledge to the Botswana Human Resource Development Council (HRDC) Human Resource Development (HRD) Sector Committee members[1] by investigating the management of evidence-based policymaking (EBP) while developing national and sector-specific HRD plans on all matters of national human resource development. This is because of increased interest worldwide to use research evidence to inform policy and practice. This is driven by the need to account to funders of research and growing calls for research that makes a difference (Crowley, Scott & Fishbein 2018:1). The demand to demonstrate the use of research evidence led to the emergence of EBP. The field developed frameworks and methodologies aimed at facilitating research with social impact. This resulted in a policy climate referred to as the golden age of EBP during the Roundtable of 2015 Fall Conference for the Association for Public Policy and Management in Miami (2015).

The thesis has been undertaken to better appreciate EBP and the factors that influence the management of EBP from the viewpoint of members of the committees. The process of policymaking requires relevant, timely, and high-quality evidence to tackle critical socio-economic challenges. Despite the need for reliable research evidence, the process of adopting and increasing the use of research evidence in policy and practice is generally slow (Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström & Gilson 2016:2). Our understanding of managing EBP, facilitating and inhibiting factors, and interventions that promote the use of research evidence are still limited in the Botswana context. Adedoyin (2015:2) asserted that, in Botswana, there is a paucity of using research evidence to inform policy and practice. Policies, programmes and practices are rarely guided and informed by research evidence.

[1] It should be noted that from this point on in the thesis, the phrase 'Botswana Human Resource Development Council (HRDC) Human Resource Development (HRD) Sector Committee members' has been shortened to 'committee members' or 'members of committees' to avoid the overuse and duplication of the acronym throughout.

1.2 BACKGROUND TO THE STUDY

Makkar, Haynes, Williamson and Redman (2018:2) were of the view that in most developing countries, including Botswana, policymakers experience capacity constraints to access, synthesise, adapt and utilise available research evidence. The management of EBP is, therefore, a concept worth exploring to enhance the use of research evidence to inform policy and practice. For instance, effective education and training systems to be achieved and national economies are more likely to grow through well-informed policies and actions. In contrast, the sad reality is that education and training policies are, in most cases, not informed by research evidence (Jovane, Seliger & Stock 2017:2).

With the world having become a global village, the importance of education and training in developing competitive human resources cannot be overemphasised. Jovane et al (2017:2) asserted that global competitiveness can be achieved by improving economic productivity and growth through the development of a skilled labour force. There are closer interactions between the needs and purposes of education and training systems and national economies. This has resulted in raising critical questions about national education systems in terms of curriculum content, teaching, learning processes, skills acquisition and expertise of educational professionals (Shatunova, Merzon, Shaimardanova & Shabalin 2018:2344).

Most countries continue to experience the challenge of skills mismatch between supply and demand of the labour market. For example, a study conducted by Odia and Imasuen (2018:54) affirmed that university graduates in Nigeria are poorly prepared for work. The study examined the problem of skills mismatch and its prevalence in the Nigeria labour market. Skills mismatch is the disparity between the skills acquired by students in the universities and the actual skills needed in the labour market. In the case of South Africa, Nonyana and Njuho (2018:6) highlighted the emergence of a worrying trend that shows an increased rate in graduate unemployment. Rumbley, van't Land and Becker (2018:5) attributed this to off-target education and training indicators and apparent lack of research evidence informing policy and practice.

The return on investment in the education and training system can only be achieved through well-informed decision-making processes. The researcher maintains that

sustainable provision of universal and equitable access to education and training can be achieved by policymakers using robust evidence. The study seeks to contribute to the body of literature in Botswana in relation to the use of research evidence to inform policy and practice. The study focused on exploring the technical capacity of members of the committees in the management of EBP in the course of developing HRD plans.

The idea for this study was borne out of my experience when coordinating the HRDC Research and Innovation Grant Project 2013/14. Notwithstanding the significant amount of resources invested in undertaking the Grant Project, the outputs had little or no impact. The Grant Project serves to increase the tertiary education sector's capacity and capability to undertake world-class innovative research. Additionally, the Grant Project serves to mobilise Tertiary Education Institutions' (TEIs) research talent to develop the economy and improve the quality of life for Batswana. There was a lack of a proper mechanism to use research evidence emanating from the Grant Projects to inform policy and practice. To this end, the research findings were only passively disseminated through a seminar and a few were published in journals, with little concern about the use and impact of the research outputs. This study explores the possible reasons for this discrepancy in the use of research evidence in informing policy and practice. Another motivational factor was that the best available evidence from research is at the heart of policymaking and implementation at HRDC.

The positive effect the research outcomes of the HRDC Grant Projects could have in informing policy and practice was not explored. Considering this concern and growing interest in the management of EBP, this study was set in motion to investigate the management of EBP from a Botswana perspective. It is crucial that policymakers make policy decisions based on the best available evidence, as the decisions taken can have far-reaching impacts on key stakeholders. Committees are tasked with identifying priority skills needs of the labour market through HRD plans. Consequently, the plans guide and inform Education and Training Providers (ETPs) on their programme offerings. The assumption is that prudent management of EBP is a catalyst for effective use of research evidence to inform policy and practice.

There is a significant research gap in understanding how members of the HRD committees, as the policymakers in the context of this study, manage research evidence in the course of developing HRD plans. The transfer of research findings into

daily practice is often slow and not systematic, which in turn translates into poorly developed policies (Holt, Pankow, Camiré, Côté, Fraser-Thomas, MacDonald, Strachan & Tamminen 2018:1111). Cassell, Denyer and Tranfield (2006:213) argued that policymakers often rely on their experience, intuition or political considerations rather than research evidence when making policy decisions.

Erceg, Hebden, Kiley, López-Salido and Tetlow (2018:3) drew attention to the possibility that policies are formulated based on wrong assumptions. As such, policies ultimately address the wrong problems through the application of ill-fated approaches implemented at the wrong level. This can result in more problems that usually take a long time to remedy. In all of these settings, what stands out is lack of a systematic or holistic management approach to the use of research evidence. It is, therefore, imperative that policymakers devise and embrace strategies that systematically apply research evidence in policy and practice. This study thus seeks to argue that effective management of EBP can provide a structured and scientific approach to applying research evidence to policy and practice.

While it is intended for HRDC, the findings of this study can be applied in a variety of contexts. It is addressed to a broader audience of managers, decision-makers, stakeholders and public policymakers. The study can also inform professionals acting as liaison officers, knowledge translation officers, researchers or knowledge brokers in their respective sectors. This, in turn, could shed more light on opportunities for further research in solving the quest for optimum use of research findings to inform policy and practice. Concisely, the study is primarily directed at researchers who are interested in learning more about the management of EBP. It provides a foundation for researchers who may be interested in doing further investigation into the use of research evidence in Botswana.

The following section explores the issue of skills mismatch and various programmes and policy responses to graduate unemployment in Botswana, such as Vison 2036, National Development Plan (NDP) and the National Human Resource Development Strategy (NHRDS) 2009-2022. These are policy alternatives considered and adopted by the government of Botswana in the quest to aligning skills development with the demands of the ever-evolving labour market and economy. The process of developing National and Sector HRD Plans is outlined in this section. The management of EBP is

considered critical in supporting the use of research evidence in informing these policy instruments.

1.3 SKILLS MISMATCH IN BOTSWANA

Bicakova, Cortes and Mazza (2018:10) claimed that initially university and college graduates were immediately absorbed into employment mostly by the public sector. According to them, graduate unemployment was rare and the waiting time between graduation and employment was short. The reality is, in today's competitive job market, it takes significantly more time and energy to find employment than it did a decade ago. Among the reasons given for this unfolding scenario, were the economic recession and non-relevance of the degrees to labour market situation. A report by Rickard and Caraway (2019:39) on international demands for austerity: examining the impact of the International Monetary Fund (IMF) on the public sector raised a red flag to indicate that Botswana's Public Service is among the largest in Africa. As a result, this was weighing down the economy and restricting the development of the private sector. The IMF report further indicated that, in Botswana, government workers constituted a 40% of total formal workforce. The report noted that the public sector outbid the private sector for available labour. That meant exerting upward pressure on economy-wide labour costs and contributed to high unit labour costs and unemployment. The report also called on the Government of Botswana to slash the size of its public service, saying the expense undermined the competitiveness of the economy.

With regard to skills mismatch, Lekorwe, Moseki and Mokaloba (2018:2) tied the potential problems of Botswana's skills gap and weak private sector to the rapidity with which the country transformed from a low-income to a middle-income economy. The argument assumed that there has been insufficient time to develop capacity on relevant skills ideal for a dynamic private sector to take off. The focus has been mainly on developing skills needed for the public sector and less concern on developing business skills, work ethic and entrepreneurial skills. In Botswana, employers' dissatisfaction with the job quality and performance of graduates point to graduates lacking experience, communication skills, and creative, analytical and critical thinking skills. Graduates are compelled to accept lower positions in jobs not related to their

qualifications due to economic recession and limited employment opportunities. Obtaining an award in a given discipline does not make a graduate employable.

In the development phase and consultative process of the Tertiary Education Policy (TEP), Tertiary Education Council (TEC, 2005:6) identified key concerns about Botswana's current tertiary education system. There are concerns about the issue of graduates experiencing difficulties in obtaining employment. Employers cry foul on the immediate utility of the graduates and the need to provide further on the job training to make them 'work ready'. The NHRDS (2009–2022) confirmed these concerns. The NHRDS (Ministry of Education and Skills Development [MoESD], 2009:22) indicated a significant misalignment between the supply of graduates and the demand for skills from the labour market. Entering the labour market poses a major challenge for graduates in Botswana as new graduates attempting to secure their first job experience unfavourable labour market prospects. In fact, most graduates in Botswana who are currently searching for a new job have been looking for up to two years or more. The emerging consensus is lack of requisite skills to meet job requirements of employers. This has been identified as one of the major reasons attributed to graduate unemployment.

The TEC (2005:6) suggested that the tertiary education system in Botswana has a key responsibility for meeting the needs of an increasingly market-driven, diversified, and globalised knowledge-based economy. The relevance of the education system to the needs of the labour market in Botswana is questionable. MoESD (2009:22) indicates that the NDP 10 also identified the education system as weak in addressing the issue of the skills mismatch. Consequently, Botswana is experiencing growing levels of graduate unemployment. This is compounded by the fact that graduates are inappropriately qualified for the jobs on offer (MoESD, 2009:15).

Table 1.1 below presents the unemployed population aged 15 years and above by training. Most of the unemployed population was highest for persons with Junior Certificate, at 58,769 (39.4%), followed by those with Senior Secondary School and Primary Education with 33,978 (22.8%) and 22,057 (14.8%) persons respectively. In most instances, women were better off than men. The unemployed with university/ college education were estimated at 16,956 (11.4%).

Table 1.1: The unemployed population by education/training and sex

Education/Training	Male	Female	Total	Percentage
Never attended	3 582	3 797	7 379	4.9
Primary	9 394	12 663	22 057	14.8
Junior Secondary	28 905	29 865	58 769	39.4
Senior Secondary	14 955	19 023	33 978	22.8
Post-secondary education	60	592	651	0.4
Secondary not stated	154	50	204	0.1
Vocational	4 108	3 507	7 615	5.1
University/College	6 674	10 283	16 956	11.4
Postgraduate	112	185	298	0.2
Non-formal	163	591	754	0.5
Not stated	427	210	638	0.4
Total	**68 535**	**80 765**	**149 300**	**100**

Source: Statistics Botswana (2016)

The main feature of Botswana's labour market is the skills mismatch between the type and quality of graduates produced by the education and training system and the needs of the labour market. The workforce mainly constitutes mid- to low-skilled occupations despite education and training skewed towards training at the higher-skilled, white-collar level. In order to avoid skills mismatch, education and training programmes should focus on elementary skills and other low to mid-level, blue-collar skills (Statistics Botswana, 2016). At the heart of these powerful sentiments, is the question of employability among graduates. There is an urgent need for training high-quality graduates with skills relevant to the country's economic and social development and ability to compete in global labour markets. The implication is that the transition from school to work is largely influenced by institutional settings and public policies. In this regard, it is critical to promote successful transition from school to work to enhance individual professional careers, economic productivity and social cohesion. In an increasingly integrated global economy, graduates need to be flexible and adapt to changes and demands of the evolving economy. The quality and relevance of graduates influence their acceptance into the labour market.

1.4 VISION 2036: ACHIEVING PROSPERITY FOR ALL

Botswana's Vision 2036 (Vision 2036 Presidential Task Team 2016), which called for a fundamental transformation across the broad spectrum of the lives of Batswana to ensure "prosperity for all" influenced the adoption of a National and Sector HRD

Planning approach. Vision 2036 serves as a basis for planning the country's future up to 2036 and directs the nation to the ultimate goal of building a globally competitive nation that would place Botswana among the knowledge economies of the world. Vision 2036 is supported by the United Nations Development Programme (UNDP) and aligns Botswana with the Global Agenda for sustainable development and the principles of Africa Agenda 2063.

Vision 2036 is based on four pillars namely, Sustainable Economic Development, Human and Social Development, a Sustainable Environment and Good Governance, Peace and Security. Vision 2036 calls for a more innovative, flexible and productive world of work with the goal of transforming Botswana into a knowledge-based high-income country, where sustainable growth would be generated in a more inclusive, diversified and export-led economy. Vision 2036 hinges upon the development of Botswana's human resource capacity to leverage its natural resource endowment and make a successful transition to the next stage of development. There is need to create a conducive environment to invest in human capital in order to transform from the resource-based economy to the efficiency-driven stage of economic development. NDP 11 national priorities are aligned with Vision 2036 as shown in the Table 1.2:

Table 1.2: Vision 2036 Pillars and NDP 11 National Priorities

Pillar	Vision	NDP 11 Priorities	
1. Sustainable Economy Development	By 2036 Botswana will be a high-income country, with an export-led economy underpinned by diversified, exclusive and sustainable growth driven by high levels of productivity.	Developing diversified sources of economic growth. Human capital development.	Implementation of an effective monitoring and evaluation system.
2. Human Social Development	By 2036 Botswana will be a moral, tolerant and inclusive society that provides opportunities for all.	Social development.	
3. Sustainable Environment	By 2036 sustainable and optimal use of natural resources will have transformed the economy and uplifted people's livelihoods.	Sustainable use of national resources.	
4. Governance, Peace and Security	By 2036 Botswana will be a land of peace, freedom and progressive governance.	Consolidation of good governance and strengthening of national security.	

Source: Vision 2036

The Vision 2036 (Government of Botswana, 2016:8) affirmed that Botswana is a middle-income country and that the economy grew by an impressive per capita gross national income that nearly doubled to USD7.058 in 2014 in constant 2005 prices, though average GDP growth rate fell from 8.2% prior to 1996 to 5.3% thereafter. These increases in real per capita gross national income propelled the country to achieve lower middle-income status in 1987 and upper middle-income status in 1991. The Vision further reveals that poverty rates dropped significantly as the proportion of people living below the Poverty Datum Line (PDL) declined from 47% in 1993/94 to 19% in 2009/10, while extreme poverty reduced substantially from 23.4% in 2002/03 to 6.5% in 2009/10, with the World Bank (2015) predicting poverty rates as low as 6% by 2030.

According to Government of Botswana (2016:8), Botswana has maintained strong investment in social protection (4.4% of GDP), health (5.4% of GDP), and education (9.5% of GDP), resulting in extended service reach and accessibility. Most critical to note is that as country, Botswana maintained high overall rankings in Africa on most development indices. The country ranked 3rd in Sub-Saharan Africa on the UNDP Human Development Report in 2015 (UNDP 2015); 3rd in the Mo Ibrahim Index of African Governance (Mo Ibrahim Foundation 2014); 28th out of 168 countries globally on the Transparency International Corruption Perceptions Index (Transparency International 2015); and 41st out of the 180 on Freedom of the Media Index (Reporters without Borders 2014). However, there are concerns of visible trends of stagnation and regression in some cases, such as high unemployment rates. Botswana like most developing countries is gradually experiencing the problem of graduate unemployment. There is a growing need to close the gap between curricula and the demands of society, business and industry and for a more flexible workforce with high skills.

1.5 NATIONAL DEVELOPMENT PLANS

The Government prepares NDPs every six years. The NDPs outline development policies, strategies, programmes and projects to be implemented within a particular plan period. The Government consults various stakeholders such as ministries, local authorities, civil society, the private sector and development partners to produce NDPs which are needed to identify which services and programmes to offer, the financial

support needed and the corporate governance strategies to follow during service delivery. Large-scale research consultancy projects are commissioned to inform policy formulation. However, the pace of implementation as raised often in the annual national budget speeches has not matched the rapid growth in the formulation of policies.

The full impact of poor policy implementation in Botswana has not been adequately assessed. This is despite the significant amount of resources used in developing NDPs. The expensive process of developing NDPs should show a return on investment since there are limited resources and competing demands to address societal socio-economic challenges. This can only be achieved through enhanced management of EBP. The performance review of the NDP 10 (Ministry of Finance and Development Planning, 2013:6) indicated that the rate of employment growth from the beginning of NDP 10 in 2009 up to 2015 was sluggish. The report shows that the total formal employment figures (excluding Ipelegeng) increased from 317 827 in 2009 to 341 115 in 2015, proportionate to a growth rate of 1.2 percent per annum. Due to limited job opportunities, the unemployment rate is estimated at 20%. According to Statistics Botswana (2016:27), the 2011 Population and Housing Census is indicative that the employment rates for the youth of both sexes were 15–19 years (10.36%); 20–24 years (29.93%); and 25–29 years (24.76%).

Between the periods NDP 9 and NDP 10 (2003 and 2016), Botswana's strategic change imperative and intent to integrate human resources and economic development resulted in the formulation and implementation of various policy interventions. The aim was to accelerate economic development, diversification and the development of human resources capacities essentially to fully transition from a Factor-Driven Economy (Stage 1) to an Efficiency-Driven Economy (Stage 2) and Innovation-Driven Economy (Stage 3) (Ministry of Finance and Development Planning, 2013:12). In the context of transitioning to Stages 2 and 3 of economic development, Botswana gave due consideration to human resources capacity to leverage its natural resource endowment. The National HRD Plan (2008-2028) (HRDC, 2018:4) established that the NDP 11 was the first medium term plan dedicated to the implementation of Vision 2036. Running from 1 April 2017 to 31 March 2023, NDP 11 aims to achieve "Inclusive Growth for the Realisation of Sustainable Employment Creation and Poverty Eradication". NDP 11 focuses on developing a

diversified economy through the active pursuit of export-led growth based upon a cluster development model.

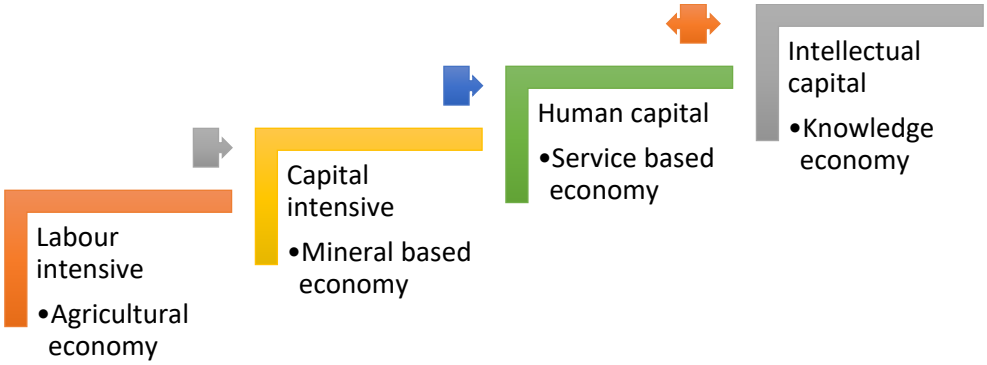

Figure 1.1: Progression towards a knowledge economy

Source: Government of Botswana (2019)

In the quest to curb skills mismatch, the Government of Botswana promulgated the NHRDS 2009–2022, in pursuit of addressing the high unemployment rate problem in the country. The strategy emphasises investment in human resources. The NHRDS 2009–2022 provides an important framework for building sustainable economic growth based on the nation's human resource endowment. The implementation of the the strategy will transform the education and training from a supply-driven to a demand-driven system. This an attempt to align education and training to the needs of the dynamically changing and evolving labour market and economy.

1.6 KEY FEATURES OF THE NATIONAL HUMAN RESOURCE DEVELOPMENT STRATEGY 2009-2022

The Botswana Government has been using a manpower planning approach which had its limitations. HRD planning was seen as an isolated technical process not linked to national priority needs. Policymakers did not have adequate data on which to base their decisions. There was too much emphasis on quantitative aspects and too little on qualitative. The government has since adopted the National and Sector HRD Planning Framework (Government of Botswana, 2009:4) informed by the NHRDS 2009-2022. The NHRDS (Government of Botswana 2009:14) is a macro level initiative to ensure that "by 2022 it will be universally accepted that the quality, productivity and motivation of its people will be Botswana's single greatest and most valuable

resource". The aim is to interlink education outcomes to employment, growth and poverty reduction. It focuses on the need for Botswana to successfully deal with a rapidly changing national context and a highly competitive global marketplace. The strategy recognises the strategic role of HRD so that each citizen can play a meaningful role in his or her community, society and the world.

According to NDP 10 (Government of Botswana, 2009), the strategy provides a basis for achieving the NDP 10 goal of matching skills with the national labour market requirements. In essence, the strategy promotes individuals' potential to advance and contribute to social development and economic growth. A key output for NDP 10 is the development and implementation of an HRD plan based on the requirements of the economy. The strategy seeks to match skills with the needs of the labour market. This subsequently will substitute importation of foreign skills and reverse migration of the labour. It will improve Botswana's global competitiveness, enhanced economic growth, and diversification.

The key features of the NHRDS 2009–2022 are as follows:

- The relevance and quality of education and training; and
- Focus on employability and skills;

The new approach to National HRD planning provides the framework for development of competitive and productive human resources. It is important to have an explicit, strategically focused and sustained approach to national HRD. This links social, cultural, political and economic strategies in a holistic and integrated manner around human capabilities and opportunities for the nation. HRD planning is also expected to provide information on the projected demand and supply of skills for the economy. This will ultimately facilitate employment and improve living standards. HRD planning will also serve as a monitoring and evaluation and capacity development tool. Employers, students and employees will have access to timely and accurate information about the labour market, while training institutions will have better appreciation of the demand for skills.

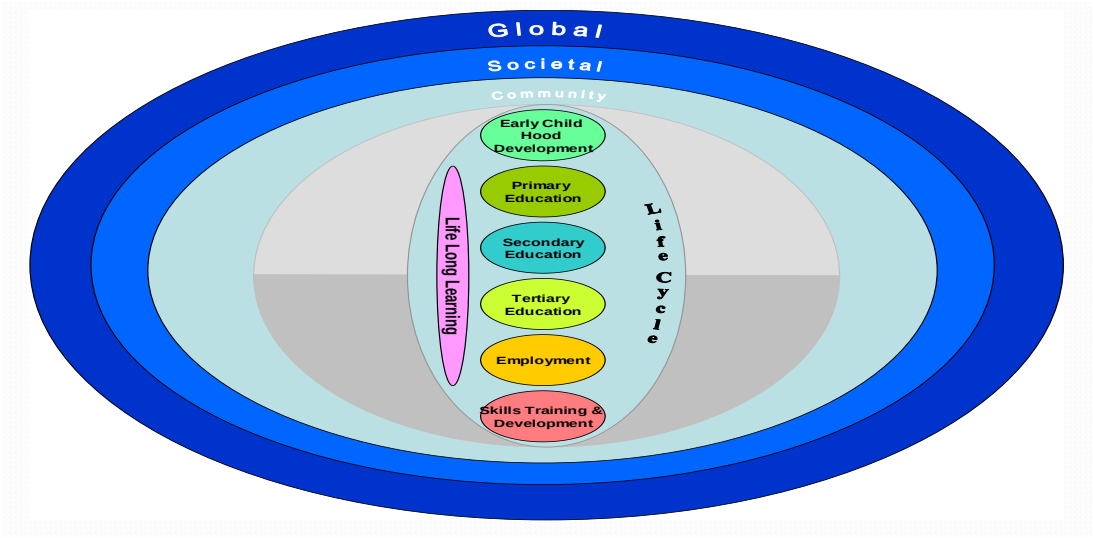

Figure 1.2: The National HRD Life Cycle Conceptual Model

Source: Government of Botswana (2009)

The NHRDS 2009-2022 hinges on the lifecycle model of HRD which sets out to ensure continuity in education from pre-primary to post-secondary school. It also aims to better manage transistion of students into the workplace and ensure that they are matched to the needs of the economy. The strategy is based on an analysis of problems in each of the life cycle and is an attempt to address these issues. While the NHRDS 2009–2022 focuses on education and its link to employment, it is essential that it also address the human resource challenges associated with HIV/AIDS, COVID-19 and poverty.

Table 1.3: NHRDS problem analysis

Education Life Cycle	Problem Analysis
Early Childhood Development	• Low levels of access and low level of participation outside urban areas. • No national curriculum and poor articulation of what is taught with primary level. • Inadequate resources – funding, facilities and staff.
Primary	• Uneven levels of participation for children who live outside urban areas and geographical disparities in terms of student performance. • Pupil performance negatively impacted particularly in specialised subjects such as English, Mathematics and Science. • Children's individual abilities not adequately identified and addressed.
Secondary	• Uneven levels of participation for children who live outside urban areas in small villages. • Minima target of 100% transition to senior secondary still to be achieved.

Education Life Cycle	Problem Analysis
	• Pupil performance negatively impacted by automatic progression from primary which leads to many being inadequately prepared. • Children insufficiently guided in terms of future career choice and poorly equipped for employment with lack of relevance of curriculum to job market. • Inadequate preparation for tertiary education.
Tertiary	• Limited levels of opportunity, highly selective and restrictive access. • Poor quality due to programmes being too theoretical and failing to develop students' critical individual work-based and lifelong learning competencies. • Students are poorly equipped to take up employment and employment creation due to lack of relevance of curriculum to real life. • Mismatch between supply and demand leading to growing levels of graduate employment and skills deficits in the labour market.
Skills Training and Development	• Limited levels of opportunity, highly selective and restrictive access. • Poor quality of institutions, students lack critical individual and work-based skills – weak recognition by employers. • Negative perceptions of students and parents of the critical value of vocational skills training and poor linkages to labour market needs.
Lifelong Learning	• Limited levels of opportunity, highly selective, restrictive access due to lack of facilities and opportunities especially in non-urban areas. • Lack of personal commitment and recognition of the need for self-development. • Lack of appreciation that learning is a lifelong activity.

Source: Government of Botswana (2009)

Botswana as a developing economy, needs citizen skills that can grow and sustain the country's economic activities towards the much-envisaged knowledge-based economy. A growing concern is the importance of developing curricula that are responsive to the needs of the labour market through the acquisition of relevant skills. To this end, the Government of Botswana, through its strategic advisory organisation, the HRDC, develops national and sector-specific HRD plans with an emphasis on transforming from a supply-driven to a demand-driven education system. The HRD plans are intended to strengthen the match between qualifications and labour market requirements, thereby ensuring that education outputs are more closely aligned to future employment needs. The conceptualisation and implementation of the HRD plans rely on strong research evidence-based outcomes as to "what works" to meet the goals and needs of a demand-driven education system.

1.7 BOTSWANA HUMAN RESOURCE DEVELOPMENT COUNCIL (HRDC)

The Government of Botswana embarked on a rationalisation roadmap, essentially to eliminate overlapping mandates and duplication of services between the then Tertiary Education Council (TEC) and Botswana Training Authority (BOTA). The Government approved the Human Resource Development Council (HRDC) Act 17 of 2013 and established the HRDC that became operational on 8 November 2013, effectively replacing the TEC. The HRDC was established as a high-level single support agency to the Ministry of Education and Skills Development (MoESD, 2011) to act on behalf of the Government to provide a single, connected integrated approach to HRD that is strategic, focused and long-term.

The HRDC is responsible for providing policy advice on all matters of national HRD; coordination and promotion of the implementation of the NHRDS 2009–2022; the development of the national and sector HRD Plans; and planning and advising on tertiary education financing and workplace learning.

1.8 NATIONAL AND SECTOR HUMAN RESOURCE DEVELOPMENT PLANS

The task of advancing national and sector HRD Plans is the responsibility of the HRDC, which brings together key stakeholders to design the roadmap for the process of economic and social transformation that Botswana has embarked on. HRDC is mandated to establish committees to represent key and strategic sectors of the economy and create partnerships that work together to form a strategic collaborative alliance and develop the sector HRD plans, which in turn are consolidated into a National HRD Plan. The membership of each committee comprises sector-specific representatives from a wide range of constituencies and organisations including business and employers; employees and labour unions; educators and educational institutions; advisory, steering, support and regulatory agencies; skills training and development specialists and institutions; professional, employer and employee associations; relevant civil society stakeholders; and central and local government representatives. The purpose of the committees is to provide a single nexus which focuses on determining the human resource development needs and skills and designing collaborative actions that will serve the long-term needs of the sector.

The sectoral level HRD planning approach for Botswana has been determined based on identifying the key sectors that are a national priority in terms of Botswana's drive towards becoming an investment and innovation economy, their strategic importance to the economy and the rapid pace at which they are forecast to grow and develop. The HRD plans are aimed at addressing the misalignment between the supply of graduates and the demand for skills from the labour market. As illustrated in Figure 1.3 below, they have been categorised as 1) Driving sectors which are currently leading Botswana's growth and development and 2) Enabling sectors which currently play a supporting role, but which have the potential to become strategic drivers in the future.

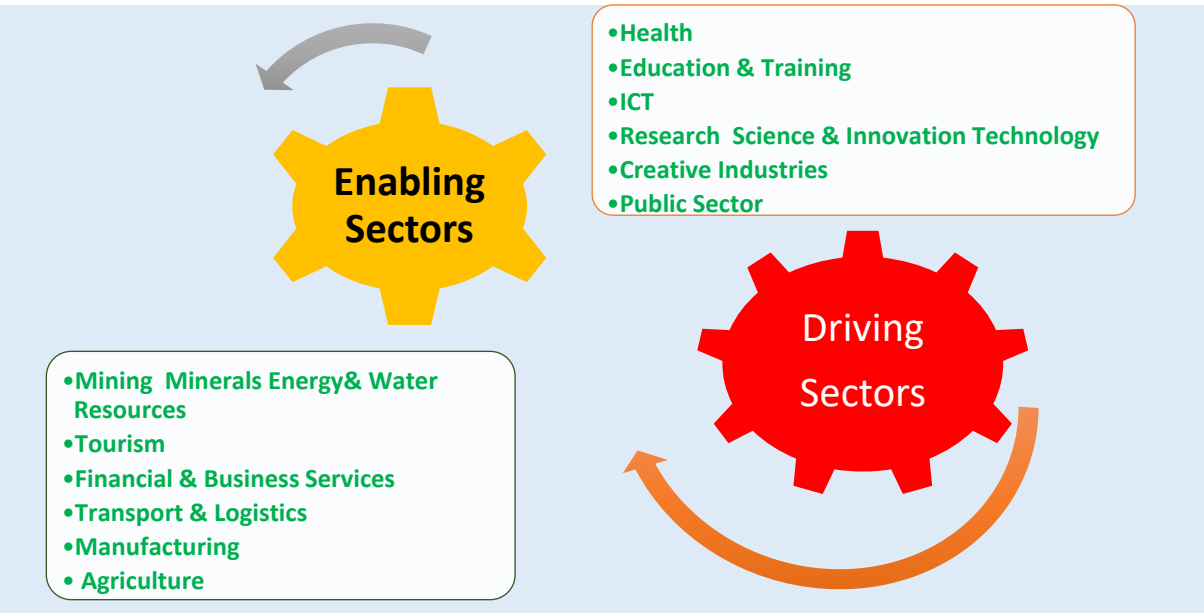

Figure 1.3: National and Sector HRD planning

Source: HRDC (2016)

The next section deals with deals with the process of developing national and sector HRD Plans.

1.8.1 The Process of Developing National and Sector HRD Plans

The development of national and sector-specific HRD plans entails conducting a situational and environmental scan of skills in demand by the industry. The systematic process followed is clearly outlined in the National and Sector HRD Planning Framework (Government of Botswana, 2009:12). The process includes the situational

analysis, environmental scan, the demand and supply outlook model and finally the findings and recommendations.

1.8.1.1 Situational analysis

The framework stipulates that the plans are developed as holistic strategic policies and implementation instruments and the process follows a scaffolding approach grounded on Vision 2036, NDP 11 and complementary policies. The situational analysis is conducted to address the knowledge gaps about the present and future skills supply and demand in the labour market: it identifies key data and information requirements and collects and reviews existing information on labour market dynamics providing markers from which to move forward. The situational analysis anticipates current and emerging trends based on demographic, social, cultural, political, economic and geographic factors. Figure 1.4 presents the situational analysis process:

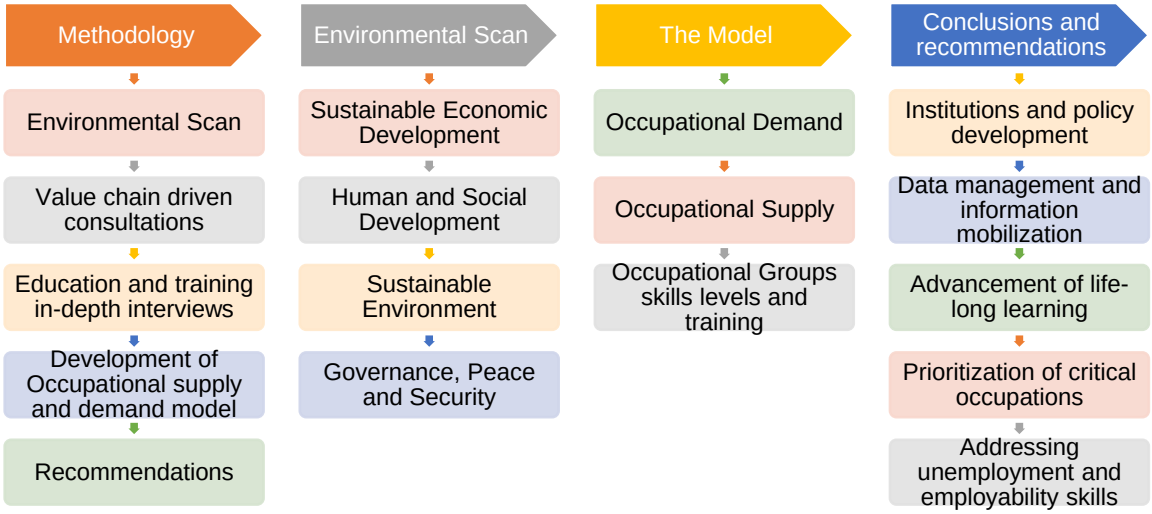

Figure 1.4: Situational analysis process for national and sector HRD planning framework

Source: Human Resource Development Council (2018)

1.8.1.2 Environmental scan

The environmental scan undertaken involved considering the factors that could influence the direction and goals regarding Human Resources Development in line with Vision 2036. The scan entailed a desk review of government official reports, peer-reviewed research papers and individual interviews. There were high strategic

meetings with different representatives, followed by a value chain analysis to provide an understanding of:

- The economic context as experienced by employers;
- Productivity and growth outlook;
- Technological outlook;
- Occupational structure and outlook;
- Opportunities for employment; and
- Skills needs.

1.8.1.3 The demand and supply outlook model

A demand and supply outlook model was developed with a view to forecasting occupational gaps. The main components of the model are occupational demand, occupational supply, and imbalances forecast or outlook. The occupational demand component refers to the number of workers required by employers for an occupation, that is the demand for new workers due to economic growth (expansion demand), and employers' requirements to replace workers leaving their occupations (replacement demand). On the other hand, occupational supply refers to the ongoing availability of qualified workers for an occupation. This allows for an assessment of how changes in enrollment, graduation and programmes impact labour market imbalances. The other component is the imbalances forecast that require balancing supply and demand, both expressed in terms of occupation, where the difference provides insights into future labour market imbalances.

1.8.1.4 Findings and recommendations

Recommendations corresponding to strategic pillars of Vision 2036 creating a decision-making platform defining HRD strategies in operational terms.

The HRDC engages consultants that produce an HRD plan research report that is shared with members of the committees for implementation. The question that arises is whether the members have the technical capacity to manage the research evidence to inform and implement the HRD plans.

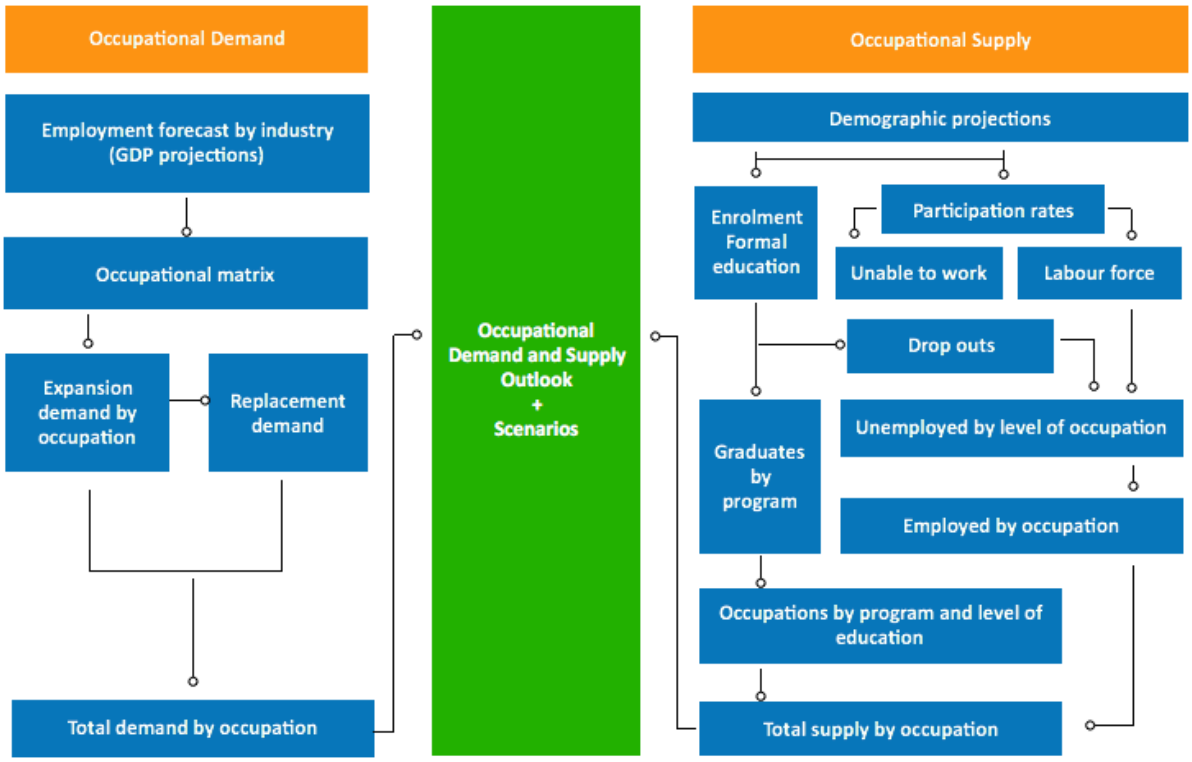

Figure 1.5: The demand and supply outlook model

Source: Human Resource Development Council (2018)

1.9 RESEARCH CONTEXT

The nexus of this study revolves around the promotion of using research evidence to inform policy and practice. McKenzie, Parkinson, Mangold, Burrows, Ahmed and Menalled (2018:15) indicated that for management researchers, the emphasis is on the use of the knowledge they create so that it has impact on managerial practice. This study explores the extent to which the HRD committees use management theories and research evidence when implementing the national and sector HRD plans. The committees engage consultancy services to collect and collate up-to-date data through a situational analysis of each sector. The deliverable of the consultancy service is either a national or sector HRD plan report, which the relevant committee assesses and incorporates into a sector HRD plan. The HRD plan outlines priority skills need in the labour market and then guides ETPs in terms of which programmes to offer in their institutions. This study brought attention to whether the research evidence being produced in the sector HRD plan reports was being used to inform policy and practice, in particular, the implementation of sector HRD plans and whether the committees had

the technical capacity to use the research evidence generated to address the issue of skill mismatch.

This study was intended to contribute to the body of knowledge in managing the use of research evidence in the field of HRD Planning in Botswana context. It was designed to provide guidance for members of committees in executing their mandate through the management of EBP. Committees provide an ideal opportunity to explore the management of research evidence emanating from commissioned research consultancies. Due to limited literature in managing research evidence in HRD planning, the study adopts an exploratory inductive approach in addition to the deductive use of the CIHR Knowledge-to-Action (KTA) framework proposed by Graham, Logan, Harrison, Straus, Tetroe, Caswell and Robinson (2006:19). The KTA framework has two separate but related phases: the knowledge creation phase and the action cycle phase, a process leading to the actual application of research evidence in informing policy and practice.

The action cycle of KTA framework informed the exploration of whether committee members have the technical capacity to manage the use of research evidence to inform the implementation of both national and sector HRD plans. This is so because of growing concerns over under-utilisation of research evidence despite heavy investments in policy research. The study primarily focused on the technical capacity of members of the committees to adapt the knowledge generated through research consultancies; identify inhibiting/ facilitating factors to use research evidence; assess and validate the research evidence and use the research evidence sustainably.

Studies have shown gaps between research and practice. Van Voorst and Zwaan (2019:367) contended that there is little use of research output by policymakers, and thus limited policy influence for research. There are few studies that have attempted to explore the individual and organisational capacity to use research evidence to inform policy and practice in Botswana, leading to questions such as: What explains this state of affairs? What might be done to correct it, and, most important, how? In the context of this study, to what extent is the knowledge generated in the consultancy reports used in informing demand-driven education? Are there necessary conditions, systems, processes and incentives in place to ensure the management of KTA? Alternatively, do these labour-intensive and relatively costly plans remain under-

utilised? The level of maturity of managing research evidence in Botswana is questionable as evidenced by many policy failures probably because of lack of capacity to manage EBP. There is a notion that Botswana has an effective and sound development policy framework, but these policies are characterised by poor implementation. Persistent unemployment and poverty are some of the signs of the problem of poor policy implementation (Kaboyakgosi & Marata 2015:310). The goal of this study was to verify or dismiss the notion that policymakers do not make use of research evidence from research consultancy reports.

1.10 PROBLEM STATEMENT

To achieve the objectives of the NHRDS 2009-2022, the HRDC has adopted a sectoral approach to HRD planning and is demand/industry driven. The approach is a divergence from the manpower planning approach. The HRDC has started the development of sector-based HRD plans through committeees. The HRD plans are aimed at addressing the misalignment between the supply and the demand for skills from the labour market, which has been identifed as one of the problems contributing to unemployment in the country (HRDC 2017:13).

While acknowledging the need to use research evidence in daily practice, the process by which members of the committees can and do translate research evidence from the consultancy reports in the course of developing and implementing HRD plans is poorly understood. The production of policy-relevant research is only one step in managing EBP; equally important is supporting the use of this research by members of the committees. The question that arises is whether the committees have the technical capacity to manage and integrate the research evidence when developing HRD plans? Members of the committees are tasked with constantly making decisions while developing HRD plans. These decisions are often of considerable importance with substantial consequences and thus increasingly need to turn to findings from research to reduce uncertainty and supplement experience-based practices (Barends & Rousseau 2018:16).

Despite an increased interest in the use of research evidence to inform policy and practice, it is surprising that, so little empirical research has actually been conducted on the topic, especially from the Botswana context. Nilsen (2015:2) indicated that a number of theories have been developed about how to enhance the management of

EBP. Like in most developing countries, there is limited empirical evidence in Botswana that suggests activities aimed at improving the management of EBP in supporting the use of research evidence. Little is known about how best to organise such a range of activities in the context of Botswana. The primary interest of this study was to respond to the challenge of weak capacity among policymakers to find and use research evidence to inform policy and practice. From the literature review, most articles discuss the importance of why policymakers should be using research evidence without providing guidelines on the use of research evidence in policymaking. It appears that there have been limited attempts to analyse how policymakers use research evidence or what forms of evidence they use (Leuz 2018:585). Exploring the process of managing the use of research evidence may assist policymakers in improving the use of research evidence to inform policy and practice.

Emphasis has been placed on researchers supplying high-quality research, with limited attention given to the demand for evidence use by policymakers. There is emerging evidence to the effect that the capacity of policymakers in low and middle-income countries to use research effectively is questionable, which inhibits the use of research evidence to inform policy and practice. Brownson, Fielding and Green (2018:28) asserted that, while research evidence is intended to inform policy and practice, contextual issues are usually overlooked. Issues include the ability of policymakers to understand complex scientific language found in research reports. It should be noted that policymakers will have their own policy interpretations as influenced by their unique experiences and contexts. Mistakenly, there is an assumption that once the research consultancy report is handed over to the decision-makers and in the context of this study, members of the committees, it is thought the research evidence will automatically be used to inform policy or identification of priority skills needs in a sector. The process of gathering research evidence for policy making tends to be given more prominence in the policy implementation phase.

This unfortunate scenario affirms the view that the disjointed production and implementation of policy results is a top-down approach. This kind of approach usually raises questions of policy ownership during the implementation stage: the policy implementers may feel aggrieved, followed by strong resistance and unexpected outcomes. The research evidence presented would undergo different kinds of

interpretations that may vary according to the prevailing circumstances in which the evidence is applied. More emphasis has been placed on the production of research evidence by researchers and handing over recommendations to policymakers, with the assumption that the evidence will be automatically used to inform policy and practice, with less attention to the interpretation of the research evidence.

Another pertinent issue of concern is the prevailing methodological limitations of conceptual and empirical studies on the use of research evidence. This is despite numerous studies conducted to formulate frameworks explaining the use of research evidence. There is lack of an integrated framework used by policymakers in managing EBP (Tricco, Zarin, Rios, Nincic, Khan, Ghassemi, Diaz, Straus & Langlois 2018:2). These methodological limitations include, amongst others, the complexity of determining the impact of research evidence, as it is difficult to pinpoint the impact of the research evidence due to many factors that may effect change. There is also failure to consider biased responses by respondents and most studies conducted are based on the views of subjects from a single policy domain and single level of responsibility of decision-makers. This study attempted to address the methodological limitations in the sense that it offered further research to explore diverse policy domains as committee members are a diverse representation of multiple policy domains and multiple levels of responsibilities from their respective organisations. This study will help to create an environment in which research findings are used to inform policy and practice in Botswana.

1.11 RESEARCH OBJECTIVES

The main objective of the study was to explore the technical capacity of members of HRDC 12 Sector HRD Committees in the management of EBP in the course of implementing the national and sector-specific HRD plans on all matters of national human resource development. In so doing, the study sought:

- To improve HRDC's Sector Committees' awareness and ability to adapt EBP;
- To assess factors and conditions that may facilitate or inhibit the management of EBP by HRDC's Sector HRD Committees;
- To evaluate HRDC Sector HRD committees' skills in assessing and making sense of research evidence in informing policy and practice;

- To conceptualise intervention mechanisms for sustaining the management of EBP amongst HRDC and its key stakeholders.

1.12 RESEARCH QUESTIONS

1.12.1 Main Research Question

To what extent is the management of EBP used as a pillar of the Botswana National Human Resource Development Strategy 2009-2022?

1.12.2 Sub-Questions

The research sub-questions for the study are as follows:

- To what extent are HRDC Sector HRD committees using EBP in the course of implementing national and sector-specific HRD plans?
- What factors and conditions have facilitated or inhibited the management of EBP by HRDC's Sector HRD Committees?
- To what extent do HRDC Sector HRD committees possess skills to assess and make sense of research evidence to inform policy and practice?
- What alternatives might be considered to sustain the management of EBP for HRDC and its key stakeholders?

The study took stock of four factors most likely to have a strong influence on the committees to use research evidence. These four factors are informed by the action cycle of the KTA Framework adopted for this study which are adaptation of knowledge; inhibiting/ facilitating factors; assessing and validation of research evidence and sustainability in managing research evidence. These factors encourage partnerships with end-users at every step of implementing research evidence in informing policy and practice.

1.13 RESEARCH METHODOLOGY

This section introduces the research design, paradigm, research approach and strategy used; however, more details are given in the research methodology chapter of the study. Research methodology outlines the conduct of a research project and entails the theoretical frameworks and various techniques that complement one another to deliver data and findings that answer the research question and suit the

research purpose (Williams, Kolek, Saunders, Remaly & Wells 2018:30). Research methodology is a systematic way of solving the research problem under investigation and considers the logic behind the methods that are used in the context of the research.

The study explored the technical capacity of members of HRDC 12 Sector HRD Committees in managing EBP while implementing national and sector-specific HRD plans on all matters of national human resource development. The researcher's worldview based on some assumptions influenced the research philosophy adopted for this study. The study adopted a sequential, mixed-methods, exploratory, inductive approach in addition to the deductive use of the CIHR KTA framework proposed by Graham et al (2006:19). Williams et al (2018:35) explained that knowledge and the process by which this knowledge is developed and our view about this influences the philosophy we adopt. Since triangulation of both quantitative and qualitative techniques are used in this study, both positivist and interpretivist philosophical principles were adopted.

According to Modesto (2013:106), the positivist methodology applies to research that is considered as objective and structured, where the detached observer considers reality as unchangeable and does not interfere with the phenomenon being studied. Empiricism is the core of the scientific undertaking that is associated with quantitative methods of data analysis. This is an attempt to operationalise and give numerical values to social phenomena where observable social reality generates law-like generalisations similar to those produced by the physical and natural scientists (Ryan 2018:44). By contrast, interpretivists present the notion that that way human beings think and reflect can change their behaviour if they know they are being studied. The researcher is more involved in attempting to understand reasons and meanings that influence actions from an individual perspective and the underlying complexities of the social world. This approach is aligned to qualitative techniques, which aim to develop a rich and complex understanding of each individual's interpretation of the world. It attempts to describe phenomena and deal with impressions, understandings, views, thoughts or perceptions difficult to quantify. The data usually consists of interview responses, behavioural observations, or answers to open-ended questions.

According to Ryan (2018:45), interpretivism advocates that it is necessary for the researcher to understand differences between humans in their role as social actors and the way they interpret their everyday social roles in accordance with the meaning they give to these roles. In addition, people interpret the social roles of others in accordance with their own set of meanings.

However, both approaches have limitations. The positivist approach can lead to a partial and distorted picture of social reality in the sense that it neglects the proper context of individuals and their environment. Those researchers critical of positivism argue that rich insights into this complex world are lost if such complexity is reduced entirely to a series of law-like generalisations. On the other hand, with interpretivism, the findings may be influenced by the researcher's subjectivity and participants for one reason or another may withhold information from the researcher. In the case of this study, a mixed-methods approach has been adopted to complement the limitations of each approach.

1.13.1 Research Design

This empirical study used an exploratory, convergent, sequential mixed methods approach, drawing on quantitative and qualitative data gathered sequentially through a survey and interviews. Creswell (2015:35) explained convergent sequential mixed-method as a procedure in which qualitative and quantitative data are collected in one after the other, the two data sets are analysed separately and the results are merged. This is followed by mixing or combining the results during the overall interpretation. The researcher converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem. The strategy adopted for this study was the collection and analysis of quantitative data in the first phase followed by the collection and analysis of qualitative data in the second phase that builds on the results of the initial quantitative results. Weight was given to the quantitative data and the mixing of data occurred when the initial quantitative results informs the secondary qualitative data collection. Thus, the two forms of data are separate but connected. The results were analysed separately but merged to interpret the findings of the study. Thus, to operationalise the research questions, a predominantly quantitative design using survey questionnaire was chosen sequentially with qualitative interview data collection and analysis methods. Survey and interview data enable "how" and "why"

questions to be explored. The mixed method approach, therefore, allowed for the use of both pre-determined and emerging methods, open- and closed-ended questions with both statistical and thematic analysis. The mixed-methods approach enables data gathered via survey instruments to be complemented and extended by interview data. The use of the mixed-methods research approach in this study allowed multiple viewpoints, perspectives, positions and standpoints. The adoption of the mixed-methods approach in analysing data is considered ideal in instances where the research issues being explored are complex and the research is exploratory. The mixed method approached was adopted to establish a complete understanding of the complex nature of EBP concept in the context of members of HRDC 12 Sector HRD Committees in the management of EBP in the course of implementing the national and sector-specific HRD plans on all matters of national human resource development. The mixed-methods approach was also used to provide stronger, deeper and broader inferences in answer to the problem under investigation and the strength of each approach is used to alleviate weaknesses in the other approach. The survey results of the quantitative phase are complemented by means of interview data.

1.13.2 Research Methods

This section describes population and sampling techniques, procedures and methods for data collection and data analysis. The main aim of the study was to explore the technical capacity of members of the HRD committees in the management of EBP in implementing national and sector-specific HRD plans on all matters of national human resource development using the the CIHR KTA framework.

1.13.2.1 Population and Sampling

- Population

The target participants for the study were members of the 12 sector committees who were, by virtue of their membership, policymakers and were expected to use research evidence from consultancy reports to implement national and sector-specific HRD plans. The primary sampling units for this study were HRD committees for Tourism; Health, Education and Training; Mining, Minerals, Energy and Water Resources; Agriculture; Research, Innovation, Science and Technology; Finance and Business Services; Creative Industries; Manufacturing; Transport and Logistics; Information and

Communication Technology; and the Public Sector. Approximately 10-18 members constitute each committee, and 201 were eligible for this study.

- Samples

Sampling is the process of selecting a group of individuals from a larger group that is known as a population (Modesto, 2013:122). It was more feasible to employ a non-probability (purposive) sampling strategy, which includes convenience sampling to identify information-rich participants. For the survey, a simple random sampling method was used to select six (6) members from each committee, where pseudonyms of members of the committee were put in a hat so that six names could be drawn. This was done in order to avoid cognitive bias in selection of the participants. Seventy-two (72) members were targeted to respond to the survey for generating quantitative data.

The database of members of the committees was used to select participants for the study with the assistance of the Department of Human Resource Development Planning – Demand Side Planning, the secretariat of the sector committees. A letter was sent to the HRDC Chief Executive Officer seeking permission to conduct the study (Appendix B, 165) and a letter of request for consent for participation of members of the committees was written and given to each sampled participant (Appendix C, 167).

Members of the committees were contacted by either telephone or e-mail to establish their willingness to participate in the study. Once they had consented, the researcher invited them to complete a self-administered questionnaire (Appendix D, 169). Similarly, a purposeful (convenience) method of sampling was used to sample interview participants. Purposeful sampling seeks information-rich cases which can be studied in depth. Qualitative data collection was through an in-depth interview with the chairpersons of the committees since they were more likely to have experience that may reflect and influence the implementation of EBP. There are twelve (12) HRDC Sector HRD Committees, therefore, all the 12 chairpersons were sampled for the interviews. The researcher contacted the chairpersons through telephone and email to inform them of the intent to undertake a study and that they were the target participants. This was also to establish their willingness to participate in the study. Qualitative data collection was through an in-depth interview with each Chairperson of the 12 Committees since they were more likely to have experience that reflected and

influence the implementation of EBP. Thus, a total of eighty-four (84) members of the committees were sampled for the study.

1.13.2.2 Instrumentation and data collection techniques

Given that there were no existing instruments that match the sources of data for the inquiry's variables in the context of Botswana, a new self-administered questionnaire with selected response structured items and a semi-structured (open-ended) interview guide (Appendix E, 175) were developed as tools used to collect data for this investigation. The questionnaire and interview guide were developed based on the empirical literature reviewed and modified to take account of the local settings. The researcher ensured that the research questions in the questionnaire and interview schedules were good enough to elicit a rich description from the participants by conducting pilot testing of the instruments. After several drafts and revisions, the questionnaire and the semi-structured interview schedules were shared with the supervisor for feedback. Thereafter, the instruments were given out for pilot testing. The experiences and lessons learnt from the pilot study were seriously considered and incorporated to enhance the credibility of the data collection instruments. Following the research design for the study, the investigator collected both forms of quantitative and qualitative data sets in parallel and then integrated the information in the interpretation of the overall results.

1.13.3 Data Analysis and Interpretation

Ghosh, Neha and Saha (2018:1510) stated that data analysis is a practice in which raw data is ordered and organised so that useful information can be extracted from it. Thus, analysis of data is a process of inspecting, cleaning, transforming and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision-making. The quantitative and qualitative strands of data were analysed independently through factor analysis of survey data and thematic analysis respectively. The completed questionnaire was analysed using the Statistical Package for Social Sciences (SPSS) 24.0 where data was entered and coded. Descriptive statistical analysis of frequencies was used. The audio-taped interviews were transcribed verbatim and subjected to an inductive-to-deductive thematic analysis. The KTA framework was used to organise inductively derived themes into higher-order categories.

1.13.4 Trustworthiness

Cook, Lloyd, Mellor, Nosek and Therrien (2018:4) defined trustworthiness as the extent of reliability and validity of the research methods and data underlying findings in relation to reality based on rigour of research design and quality of study method. This is usually related to qualitative research. Rigorous methods when collecting and analysing data are critical in enhancing the trustworthiness of the study. Korstjens and Moser (2018:122) revealed that best-known criteria for trustworthiness entail credibility, transferability, dependability and confirmability. They further stated that credibility of the study is judged on whether or not there is correspondence between the respondents' perceptions as it relates to the theoretical assumptions guiding the study. Transferability means the provision of sufficient details to enable the reader to generalise the results of the study. With regard to confirmability, the procedures and interpretation of results should be free of bias and that the data collected, and the conclusions drawn would be confirmed by other researchers investigating the same situation.

There is a possible challenge of subjectivity that include the researcher imposing his opinions. It is critical to declare and indicate possible cases of biasness by the researcher. The researcher acknowledges that his experience as Manager, Graduate Research and Innovation at HRDC might influence this study. His insider role may impact on the choice of data sets to be collected, ease of access to research participants, interactions during interviews and also on how data will be interpreted. In order to avoid insider bias and possible manifestations, the researcher presented himself as a student undertaking a study in fulfilment of the requirements for the Degree of Doctor of Philosophy. Furthermore, to avoid misleading and influencing the attitude and expectations of the participants, the researcher did not present his position or institution.

1.13.5 Reliability

Reliability is a quantitative concept that relates to the consistency with which constructs are measured, the extent to which a test or procedure produces similar results under constant conditions on all occasions (Bell, 2014:199). It is also critical to ensure that instructions for administering the data collection instruments are clear. The

reliability index of variables for the questionnaire was analysed using SPSS version 24.0, using correlation and Cronbach's alpha data analysis.

1.13.6 Validity

Validity is extremely important when presenting quantitative research. Hughes (2018:2) defines validity as the extent to which a question or a variable accurately reflects the concept the researcher is actually looking for; this implies whether an item measures or describes what it is supposed to measure or describe. The researcher ensured that the research questions in the data collection instruments were good enough to elicit a rich description from the participants by conducting pilot testing of the instruments. Questionnaires were pilot-tested and lessons from it were incorporated to improve the final instruments. The questionnaire for this study was also examined and approved by my supervisor (Appendix D). Interview guides were pilot-tested and lessons from it were incorporated to improve the final instruments. The interview questions for this study were also examined and approved by my supervisor (Appendix E, 175). This content validity approach was to ensure that the instruments included an adequate and representative set of items that relate to the concept of EBP; that is, how well the dimensions and elements of EBP were defined.

1.13.7 Ethical Considerations

The researcher applied for ethical clearance from the UNISA College of Education Postgraduate Research Ethics Committee (Appendix A, 163) which assessed the methodological, technical and ethical soundness of the proposal, followed by obtaining permission from HRDC (Appendix B, 165) with the assurance and agreement that the fieldwork would be conducted in accordance with ethical procedures at all times throughout the study. A participant information statement and informed consent form (Appendix C, 167) that is written and verbal information about the purpose of the study and its procedures were given to participants before signing the consent form at the time of administering the questionnaire and conducting interviews.

Alter and Gonzalez (2018:151) stipulated that, in return for their cooperation, participants should be assured of anonymity and protection of confidential information; that is, researchers must explain the purposes, risks, use of data and benefits of participating in the research. If feeling uncomfortable to respond to specific questions,

the respondent has the option to decline to answer those questions and can also withdraw from the study with an assurance that his/ her responses will not be used in the study. The participants were assured that all information given by them would be treated with sensitivity and strict confidentiality. All the responses remained anonymous to protect participants' identities unless the participant consented to have his or her identity revealed. Respondents' participation in the study was voluntary and it was expected that they would fully cooperate with the researcher by furnishing him with honest and truthful responses. This study was conducted according to accepted and applicable national and international ethical guidelines and principles by ensuring that the research being carried out refrained from any unethical breaches.

1.14 DEFINITION OF KEY CONCEPTS

Policy	A programme of action to give effect to specific goals and objectives aimed at changing (and preferably improving) an existing unsatisfactory situation (World Health Organization, 2018:19).
Evidence-based Policy	A policy process that helps planners make better-informed decisions by putting the best available evidence at the centre of the policy process. (Howlett and Mukherjee, 2018:73).
Evidence	Information produced by integrated monitoring and evaluation systems, academic research, historical experience and "good practice" information (Kislov et al, 2019:685).
Research Management	Any activity instigated at the level of the institution, which seeks to add value to the research activity of staff, either during the commencement of a research project and assistance to the research team in project management and administrative functions such as financial reporting, commercialisation of intellectual property and dissemination of research results to the wider community (Lumsden and Goode, 2018:814)
Research Utilisation	Activities aimed at increasing the use of research knowledge to solve a human problem (Ion, Stîngu, and Marin, 2019:485).
Research Uptake	All the activities that facilitate and contribute to the use of research evidence by policymakers, practitioners and other

	development actors (Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström & Gilson 2016:2).
Research Dissemination	Conscious effort to spread new knowledge to specific target audiences (Adedoyin, 2015:2).

1.15 CHAPTER DIVISION

In Chapter 2, the literature on the management of EBP is explored, followed by outlining the policy development process. This led to an overview of research evidence in policymaking and why research evidence is critical for policymaking. The chapter proceeds with a brief account of some of the theoretical frameworks for EBP and culminates in discussing the KTA framework that informed and served as a conceptual framework for the study. It continues with a review of empirical research findings giving a summary of the most popular practices and perspectives on the management of EBP guided by the KTA framework. The literature on the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, the capacity to assess and approve HRD plans based on quality and sustainability of using research evidence is examined in the last section of the chapter.

Chapter 3 begins with a description of the research methodology that was employed in this study. It describes the setup of the research design, procedures and methods for data collection and statistical analysis that were used. The section comprises the research orientation, population of the study; sampling and sample selection; instrumentation; data collection and analysis techniques and measures of trustworthiness and ethical considerations considered. The study adopted a convergent, concurrent, parallel, mixed-methods, exploratory inductive approach in addition to the deductive use of the CIHR KTA framework proposed by Graham et al (2006:19).

Chapter 4 provides the data presentation and analysis of results from both the quantitative and qualitative phases of the study. The chapter focused on presenting the findings and analysis from both the survey of committee members of and interviews with the chairpersons of the committees on how they perceived the management of EBP in implementing the HRD plans. This is with specific reference to the adaptation of research evidence, inhibiting or facilitating factors on the use of

research evidence, the capacity to assess and approve HRD plans based on quality and sustainability of using research evidence.

Chapter 5 discusses the findings of the study by converging data sets from both the survey of members of the committees and interviews with the chairpersons of the committees on how they perceived the management of EBP in implementing the HRD plans. Their perceptions revealed the current state of affairs about members of the HRDC Sector HRD committees technical capacity to manage EBP when rolling out the HRD plans. Once the current state was established, a gap analysis was carried out by validating the current state against the best practices identified in the empirical literature in Chapter 2 with specific reference to the extent to which the findings support or refute the KTA conceptual framework that guided the study. Based on the analysis carried out, the study identified possible solutions to close the gaps as well as constraints that can hinder the successful management of EBP by policymakers, thus creating a desired state for the use of research evidence to inform policy and practice.

Chapter 6 pulls together the results of the study in a manner that aims to advance the theoretical and practical implications and contributions of this current research; it clarifies some limitations to the study and provides suggestions for further research and ends with a conclusion.

1.16 CHAPTER SUMMARY

The first chapter of the thesis has set out the nature and scope of research evidence on policy and practice as an agenda that has been gathering momentum. First, the chapter began with the background information to the assumptions and principles that frame this study. The research context gave an account on the importance of managing EBP to inform policy and practice. The chapter proceeded with describing the challenges that may be encountered by policymakers in using research evidence to inform policy and practice. The brief overview of the research methodology adopted for the study, definition of key terms and chapter divisions are discussed in the last section of this chapter. The next chapter explores the management of EBP, policy development process, the theoretical framework that serves as the conceptual framework for the study and empirical literature on the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, the capacity

to assess and approve HRD plans based on quality and sustainability of using research evidence.

CHAPTER 2: CONTEXTUAL BACKGROUND, THEORETICAL AND CONCEPTUAL FRAMEWORKS

2.1 INTRODUCTION

This chapter discusses the contextual background, theoretical and conceptual frameworks informing the study. It continues with an overview of research evidence in policymaking and its importance for policymaking. The chapter proceeds with a brief account of some of the theoretical frameworks for EBP and there is a review of empirical research findings related to the management of EBP to inform policy and practice guided by the KTA framework. The KTA framework is introduced as the conceptual framework adopted for the study with justification of why the KTA framework was best suited to explore implementation issues of national and sector-specific HRD plans by the committees. The action cycle of the KTA Framework guides the implementation of research evidence in policymaking for this current study. The literature on the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, the capacity to assess and approve HRD plans based on quality and sustainability of using research evidence is examined in the last section of the chapter. EBP is a phenomenon that features predominantly in Western countries, and, in the Botswana context, there is an absence of empirical research that has been conducted on the topic, specifically in HRD planning.

2.2 CONTEXTUAL BACKGROUND

2.2.1 Management of Evidence-Based Policymaking

EBP has become a major part of many governments' approaches to policymaking and has become a noticeable issue for consideration and reflection. There is growing interest globally in making better use of research evidence in policy and practice (Lumsden & Goode, 2018:813). Despite widespread research on evidence-based policy and practice, policymakers still face challenges in applying research evidence to inform policy and practice. Policymakers tend to exhibit a flawed understanding of using research evidence to inform policy and practice. Chalmers and Glasziou (2014:88) pointed to areas of 'waste' in terms of investing resources in research against the return on investment for policy and practice, which result from mismatches between research agendas and the needs of research users.

There are different strategies used to enhance the use of research evidence to inform policy and practice. Management of EBP is one intervention that policymakers can embrace to facilitate the process where they can make extensive use of different knowledge management strategies with reference to how research evidence is both produced and consumed A range of terms has been used to describe the concept of translating and exchanging evidence between researchers and knowledge users (Morton, 2018:157). In this study, the term EBP is used and taken to generally encompass terms such as research utilisation, research uptake, knowledge translation, knowledge transition, knowledge transfer, evidence-based decision-making and research dissemination. These are previously existing concepts related to moving theoretical knowledge to practical use. The common thread cutting across the definitions is more than simply disseminating knowledge for the active use of research-generated knowledge.

Lumsden and Goode (2018:814) asserted that management of EBP means translating principles based on best evidence into organisational practices. Howlett and Mukherjee (2018:73) revealed that EBP represents an attempt to enhance the possibility of policy success by improving the amount and type of information processed in public policy decision-making as well as the methods used in its assessment. Based on the idea that better decisions are those that incorporate the most available information, it is expected that enhancing the information basis of policy decisions will improve the results flowing from their implementation, while iterative monitoring and evaluation of results in the field will allow errors to be caught and corrected

White (2018:4) articulated that evidence-informed initiatives have been more advanced in specific social policy sectors. These sectors include healthcare services, child and youth development, education and vocational skills, crime control and corrections, family services, social care for vulnerable groups, and technology-assisted innovations in service delivery. Various professions, including education, are stressing evidence-based practice. Professional practices in this regard vary, but most professions issue various guidelines to their members on the basis of emerging research.

Craveiro, Hortale, Oliveira, Dal Poz, Portela and Dussault (2018:51) posited that all over the world, governments, universities, school systems and various other parties are looking at new ways to find, share, understand and apply the knowledge emerging from research, leading to increasing conceptual and empirical work to understand how this can be done. The management of EBP addresses the multiple ways in which stronger connections can be made between research, policy and practice. According to Craveiro et al (2018:52), governments are giving increasing attention to management of EBP, including establishing new policies and organisations to this end. International agencies such as the Organisation for Economic Cooperation and Development (OECD) or the World Bank are trying to strengthen their own use of evidence and to assist member countries in doing so. Evidence from research can enhance policy development by identifying new issues for the policy agenda, informing decisions about policy content and direction, or by evaluating the impact of policy.

2.2.2 Policy Development Process

The World Health Organization (WHO) (2018:19) defined policy as a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions. Policy is central to guiding personnel in decision-making and organisational control and gives direction to the organisation with respect to any activity over which the organisation has jurisdiction. There is limited success in enhancing public policy with research evidence, which has affected exploration of effective ways of integrating evidence into policy, and this has been undertaken to encourage the use of evidence-based knowledge in informing policy and practice (Spiel, Schober & Strohmeier 2018:338). The policy development process is complex, multifactorial and non-linear, involving multiple stakeholders with different interests, who all produce and use evidence as a tool for influence throughout the process. The policy development process generally involves research, analysis, consultation and synthesis of information to produce recommendations that involves the assessment of options against a set of criteria used to assess each option. The policy process as outlined by WHO Policy Cycle (WHO, 2018) which constitutes the following.

2.2.2.1 Engaging stakeholders

Policy development entails interactions among different key stakeholders about what course of action should be taken and this constitutes the policy process which

represents a wider environment, or context. Tricco et al. (2018:31) confirmed that the consultation of key stakeholders in the policy making process reveals new perspectives about local situations and ensures input of different actors with suggestions of possible measures of intervention to be considered. Further to that, the process combines the political, economic, cultural, social and environmental aspects as a basis for possible measures of interventions in socio-economic development. The successful implementation of policies depends on the inclusion of critical stakeholders during policy development which can be achieved through broad consultation, and policy dialogue to build consensus on policy directions.

2.2.2.2 Situation analysis and priority setting

A situation analysis is an assessment of the current socio-economic situation and is fundamental to designing and updating national policies, strategies and plans. A strong situation analysis is not just a collection of facts describing the socio-economic status quo. Instead, it should be comprehensive, encompassing the full range of current and potential future national issues and their determinants. It should also assess the current situation compared to the expectations and needs of the country. Such a situation analysis can then serve as the basis for setting priorities to be addressed in the policy, strategy or plan through the process of a broad, inclusive policy dialogue.

2.2.2.3 Monitoring and evaluation

Monitoring and evaluation of how policies, strategies and plans are implemented is critical to improve outcomes. During joint annual reviews, for example, different actors can undertake assessments and performance reviews as per the stipulated key performance indicators to report and track progress being made towards the execution of strategic initiatives. This will ultimately result in learning and growth, timely interventions, continuous improvement and documentation of policy reform processes.

2.2.3 Phases of Policy Process

Naude, Zani, Ongolo-Zogo, Wiysonge, Dudley, Kredo, Garner and Young (2015:2) articulated that policymaking processes entails a series of steps: policy formulation, review, translation, adaptation and implementation and guideline development, adaptation and implementation, as well as monitoring of implementation. The policy

making process is collaborative in nature and involves diverse stakeholders. In establishing what services and programmes to offer, how to deliver them and how to implement change, there is need for concrete evidence with reference to defining the problem, assessing potential policy and programme options and identifying implementation considerations. Phases of policy process are from agenda setting through policy formulation to implementation and evaluation as set out in Table 2.1 below.

Table 2.1: Phases in the policy process

Phase	Description
Problem Identification and Agenda Setting	This is a stage in which policy problems are defined and the policy agenda set, what is the major problem or problems to be solved? In the context of this study, research evidence helps to identify new problems so that the relevant political players know they are facing an important issue.
Policy Formulation	This stage defines policy alternatives where policies are created or changed. Policies are products of the political context within which they are developed.
Implementation	Activities that put policies into effect, that includes the actions and mechanisms whereby policies are brought into practice.
Monitoring and Evaluation	The final stage in the policymaking process, includes subjecting existing or proposed policies to ongoing monitoring and evaluation to ensure their relevance and effectiveness.

2.2.4 Research Evidence in Policymaking – An Overview

Policymakers need access to robust evidence to inform policy decisions on what services and programmes to execute. EBP is a critical component in ensuring that research evidence is applied to inform policy. Evidence can be viewed as knowledge obtained from a diversity of sources exposed to rigorous testing and found to be credible by end-users. Evidence constitute facts that can be used to support a conclusion, while a fact, is an element known to exist through experience or observation (Kelly & McGoey 2018:3). Literature shows the zeal for the use of research evidence to inform policy and practice in Botswana, which is revealed by the significant amount of resources invested in public research as an attempt to solve policy issues.

Policy success can be improved by information processed and inclusive of the methods used to assess it (Berry & Berry 2018:265). White (2018:4) affirmed that organisations are looking at new ways on the uptake and use of knowledge emerging from research, resulting in developing conceptual frameworks and conducting further research to understand how this can be done. Understandings of research evidence in policy making, as portrayed in the literature, tend to emphasise a decision-making process that is well-informed by the best available research evidence. Research evidence in policymaking is characterised by the fact that evidence is an input into the policymaking process.

2.2.5 Why Evidence-based Policymaking?

Pew-MacArthur Results First Initiative (PEW Trusts 2014:2) articulated that EBP guides decisions at all stages of the policy process with the best available research and information on the initiative. The process ascertains what works, detects gaps and facilitates the use of evidence in budget and policy decisions, and subjects the policy programme to evaluation and monitoring to find out if the intended objectives are achieved, essentially to continually improve programme performance. By taking this approach, organisations:

- Reduce wasteful spending – Budget choices are informed by evidence on programme outcomes and can lead to the elimination of ineffective initiatives, providing a cost-cutting measure that results in the limited resources being available for other competing initiatives.
- Expand innovative programmes – Continuous evaluation of programmes helps to determine whether they work and identifies opportunities to target funding to innovative initiatives that deliver better outcomes.
- Strengthen accountability – The tracking and reporting on the execution of strategic initiatives and outcomes promotes accountability for results.

The above sentiments are affirmed by Harvey, McCormack, Kitson, Lynch and Titchen (2018:142) that research evidence can distinguish effective from ineffective interventions, and thus inform decision-making. In addition, research evidence is deemed to be instrumental in enhancing service delivery. Karam-Gemael, Loyola, Penha and Izzo (2018:126) further argued that the inability to manage EBP results in policymakers not able to access and synthesise sound information on which to base

decisions. The management of EBP in the context of this study entails a process directed towards the translation of research evidence into practice. The assumption is that adherence to practices that are based on research evidence, such as evidence-based guidelines, are likely to result in improved policy formulation and implementation (Sharpe 2019:102). Considering the above, the main research question that this study attempted to answer is: “To what extent is the management of EBP used as a pillar of the Botswana National Human Resource Development Strategy 2009-2022?”

The next section deals with theoretical frameworks for evidenced-based policymaking.

2.3 THEORETICAL FRAMEWORK FOR EVIDENCED-BASED POLICYMAKING

The traditional methods of policymaking are dominated by mere distribution of research findings and are thus not likely to be helpful to policymakers and may result in limited incorporation of research evidence into policies. Strategies need to be identified to facilitate the use of research to inform policy and practice. The value of research evidence is dependent on whether it is put into practice and its success monitored and regularly evaluated. Tajedini, Azami and Sadatmoosavi (2018:19) affirmed that the CIHR are the pioneers of bridging the KTA gap and that CIHR proposed a global knowledge translation (KT) model. CIHR defines KT as the exchange, synthesis and ethically sound application of knowledge within a complex system of interactions among researchers and users, with the view to enhance the benefits of research to policymakers. There is a considerable body of literature that exists detailing the nature of policy processes and on whether and how research does or does not inform policy. There are numerous frameworks and or models found within the literature to help explain or represent the use of research evidence in decision-making as well as frameworks explaining how policy change occur (Rabin & Brownson 2018:20).

The philosophical underpinnings of the various frameworks cover a wide spectrum of theories and most are based on common concepts. Some of the theories that inform these frameworks include amongst others planned action theory, diffusion of innovation, change management theory, and decision-making theories. An article by Kondo et al (2018:19) on KT framework for ageing and health gives a basis for the review of various theoretical frameworks and models for facilitating the use of research evidence to inform policy and practice. Different interactive and context-focused

frameworks are used to understand the contextual factors that could play important roles in the success or failure in using research evidence to inform policy and practice. The following sections provide a brief overview of selected frameworks and followed by the detailed discussion and justification for the framework adopted for the study. Lazo (2018:1056) contends that the frameworks explain contextual factors that dictate the success or failure of using research evidence to inform policy and practice.

2.3.1 Ottawa Model of Research Use (OMRU)

Within these frameworks, used to augment the CIHR's KT model, there is the OMRU by Logan and Graham developed in 1998. According to Casey, O'Leary and Coghlan (2018:1052), the development of the model was influenced by the lack of using research evidence in clinical settings. The model was revised, and the latest version comprises of six key elements: evidence-based innovation; potential adopters; the practice environment; implementation of interventions, adoption of the innovation, and outcomes resulting from implementation of the innovation. In this model, research use is viewed as a dynamic process of interconnected decisions and actions in relation to each of the model elements. There are claims to the effect that the model is applicable to the different levels of the health system such as individual, professional, team, organisation and the health system in general.

The model relies on the assessment, monitoring and evaluation of each element prior to, during and after each stage of the KT process (Casey, O'Leary & Coghlan, 2018:1052). The strength of the model lies in defining key elements in the process of research use and that it is easy to use. The model has its own limitations, in that it focuses on the clinical practice setting as opposed to the health system in general. There is need for further development and validated instruments to support the model with tools to assist in the implementation. It is also noted that the model does not address research production or knowledge creation as part of KT.

2.3.2 Promoting Action on Research Implementation in Health Services (PARIHS)

The PARIHS framework is the culmination of a project team's work. Kitson, Harvey, and McCormack conceived the framework, first published in 1998 (Laycock, Harvey, Percival, Cunningham, Bailie, Matthews, Copley, Patel & Bailie 2018:121). Since that

time, a larger project team, led by Jo Rycroft-Malone, has shaped its ongoing development and refinement. The PARIHS framework is a function of the interplay of three core elements: (1) The level and nature of evidence being translated; (2) the context or environment in which a change is implemented; and (3) the method of facilitation for the translation. Evidence is based on a combination of research, local data or information, and clinical and patient experiences. Context, on the other hand, is the local environment where the setting is proposed to take place and focuses on the local culture, leadership and evaluation. Facilitation is a technique by which one person makes things easier for others, and focuses on three elements: purpose, roles, and skills and attributes.

It is critical to note that the three elements have equal importance in influencing the success of using research to inform policy and practice. The elements are positioned on a low-to-high continuum, with an assumption that the most successful implementation of research use occurs when all elements are at the high end of the continuum. Strengths of the framework relate to its ability to examine different dimensions of context on research use and are premised on facilitation as a factor affecting research use. The framework has an intuitive appeal and flexible application. It was further revised through a concept analysis of each element evidence, context, and facilitation. However, the framework does not provide specific tools to assist how variables can be measured and does not address research production or knowledge creation as a component of KT. Furthermore, the framework is focused more on clinical settings than health systems in general (Harvey, McCormack, Kitson, Lynch, & Titchen 2018:143).

2.4 THEORETICAL FRAMEWORK FOR THE STUDY

In this era, it is critical to ensure that the use of research evidence informs policy and decision-making since there is a concern that research evidence is not always communicated effectively or in a timely manner. It is apparent that policymakers do not always have the skills, tools and capacity to find and use research evidence. In Botswana, there has been a neglect of the theme of managing the use of research evidence implementing policy intervention programmes (Adedoyin, 2015:2). Often there is the implicit assumption that the point of research dissemination guarantees the use of research evidence to inform policy and practice. However, experience

suggests that simply possessing the research evidence in the form of a report is no guarantee of the effective use of the evidence. Enhancing the use of research evidence requires the development of policymakers' technical capacity and competency skills to absorb and optimise the use of research evidence. The implication for policy support is that it should cover the post-dissemination of research evidence period as well as promote or facilitate its adoption.

The thesis deals with the management of EBP as a means of enhancing the use of research evidence to inform policy and practice. This study explores the extent to which committees apply the management field in the use of research evidence when implementing the national and sector-specific HRD plans. The study explores the practical elements of the action cycle of the KTA Framework to understand how it may be operationalised to enhance the management of EBP in implementing national and sector-specific HRD Plans.

2.4.1 The CIHR Knowledge-to-Action Framework

Implementing research in practice is a complicated process because it involves interactions among individuals, teams and organisations. As a result of the complexity of implementing research in practice, and limited literature on managing research evidence in HRD planning, the research within which the current study is located, is guided by the adoption of an exploratory inductive approach in addition to the deductive use of the CIHR KTA framework proposed by Graham, Logan, Harrison, Straus, Tetroe, Caswell and Robinson (2006:19). The KTA framework has two separate but related phases, the knowledge creation phase and the action cycle phase, a process leading to the actual application of research evidence in informing policy and practice (Figure 2.1). The objectives of this thesis align with and is located at the start of the action cycle with a focus on the adaptation of knowledge; inhibiting/ facilitating factors; assessing and approval; and sustainability.

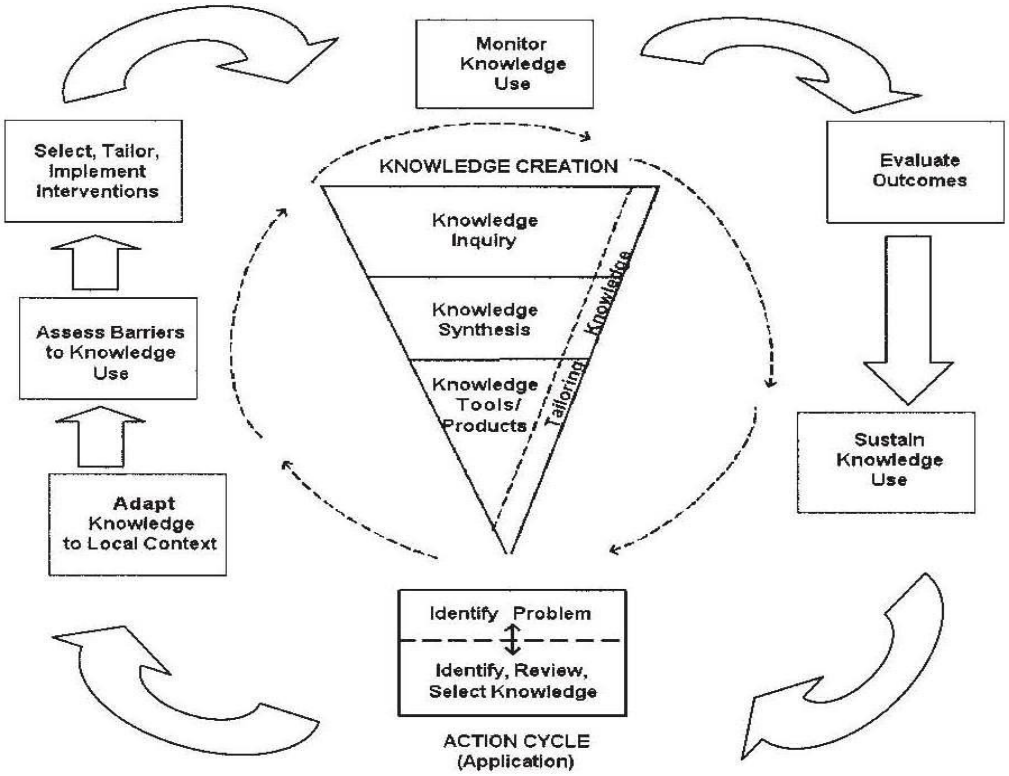

Figure 2.1: Knowledge-to-action process

Source: Graham et al (2006:19)

The CIHR KTA framework was adopted for this study on the basis that the general trend towards increased interactions between researchers and users increasingly incorporate active processes and interactive engagement and exchange (Graham, Kothari & McCutcheon, 2018:25). This contrasts with other frameworks with a linear process through which research is first conceptualised and conducted, and the results are then handed over to the end-users. The unidirectional nature of knowledge transfer has been criticised with a demonstration that such strategies have not proven to be effective in encouraging the adoption and implementation of new results. The mere reception of knowledge by the potential user does not imply its 'use' (Graham et al 2018:26). This implies that passive approaches to sharing information, such as conference presentations are less effective than two-way interaction between the researcher and users. With the need to ensure that research evidence is effectively translated to policy and practice, the objective of the KTA framework is to assist policymakers on integrating evidence to inform policy and practice.

Lazo (2018:1056) outlined the KTA framework and discloses that the framework has two fluid concepts that do not always occur exclusive of each other, namely, knowledge creation and the action cycle.

2.4.1.1 Knowledge creation

The circle in the centre represents knowledge creation starting with inquiry, narrowing through synthesis of the available literature on the question/topic, and finally leading to the tools and products that can come from this knowledge.

2.4.1.2 The action cycle

The action cycle is the implementation of the knowledge. There are seven steps, all of which may inform each other. Partnering with knowledge users (end-users) is encouraged at every step.

1. Identify the problem as well as the knowledge needed to address this. You should also address the usefulness and validity of the knowledge you intend to use.
2. Adapt the knowledge to the local context by assessing its worth and utility to the setting for which you intend it.
3. Assess barriers and facilitators related to the knowledge to be adopted, the potential adopters, and the context in which the knowledge will be used.
4. Develop and execute your KT plan and any strategies to promote awareness and use of the knowledge.
5. Monitor knowledge use to determine whether your plan was effective and implement any changes that this monitoring may indicate is necessary.
6. Evaluate the impact of the knowledge use to determine you have achieved the desired outcomes, as well as the success of the KT plan itself.
7. Sustain the use of the knowledge over time. Challenges to ongoing use of the knowledge may be very different than the challenges at implementation.

2.4.2 Theoretical Underpinnings of the KTA Framework

Lazo (2018:1056) alludes to the fact that the KTA framework assumes that knowledge translation is the process that emphasises the use of research evidence by translating and applying it in policy and practice. The KTA framework is premised on sustained interactivity between researchers and policymakers to support ongoing exchange of

research evidence to enhance the potential impact of the evidence on policy. It is reasonable to conclude that research evidence is more likely to influence policy and practice through established trusting relationships between researchers and policymakers. In this instance, researchers will appreciate and understand the priorities and needs of policymakers, on the other hand, policymakers' expectations are that research results are presented in a way that answers key questions of policymakers (Graham et al 2018:26). The more sustained and intense the interaction between researchers and policymakers, the more likely that the research evidence will be used to inform policy and practice, from which a feasible and acceptable policy may emerge.

McLean, Graham, Tetroe and Volmink (2018:47) emphasised that engaging policymakers who can be involved in the generation of the research evidence is the best predictor for ensuring that the evidence is applied. For instance, policymakers are expected to comply with their practice guidelines if involved in the development of the guidelines. Seemingly, it is more difficult to reject or ignore the research evidence when one has contributed to it. The KTA process is dynamic and iterative involving interactions between researchers and policymakers that can enhance the application of research evidence to inform policy and practice. Researchers and policymakers are engaged from the onset in identifying the research problem through to applying the research evidence (Graham et al 2006:17). Trust and ongoing relationships between policymakers and researchers are critical to enhancing the use of research evidence to inform policy and practice.

The strongest point of the KTA framework as outlined by Lazo (2018:1056) is that it details the process of facilitating the use of research evidence to inform policy and practice since it includes the knowledge creation process and tailoring the new knowledge for different user groups. The framework is dynamic by nature with a clear illumination of the process by which policymakers make decisions and implement knowledge. The framework goes beyond just disseminating knowledge but takes into account the importance of adapting knowledge to the local context. It is also an easy to use framework in understanding the overall process of research use in practice. The use of the KTA framework tools as provided in literature shows that they have been used mostly in clinical settings comparative to the policy context with a few exceptions. To sum up, the KTA framework requires adapting knowledge to the local context,

considering potential barriers, determining appropriate actions or interventions, monitoring and evaluating those actions, and sustaining those changes.

The KTA framework has been successfully applied to a range of empirical studies of the policymaking implementation process across various disciplines such as health, sports and education, to mention but a few. Amongst the empirical research that applied the theoretical and conceptual elements of the KTA framework is a qualitative study of research priorities among representatives of Canadian Provincial Sport Organisations (PSO) by Holt, Pankow, Tamminen, Strachan, MacDonald, Fraser-Thomas, Côté and Camiré (2018:3). Their study was also located at the at the start of the action cycle of the KTA Framework with a primary focus on research priorities in youth sport and secondarily searching for existing knowledge. The overall purpose of the study was to examine Canadian PSO representatives' research priorities to provide directions in KT initiatives in youth sport. The priorities were identified through interviews and comparison of findings to existing research in youth sport. The study found that people who worked in the sports sector faced numerous barriers that restricted their ability to assess and use research evidence. The study concluded that there is need to develop programmes of research dedicated to KT, which involve engaging stakeholders from the onset rather than merely developing dissemination strategies (Holt et al 2018:15).

Issues of importance considered from the Action Cycle for this study is exploring HRDC Sector HRD Committee members' ability to adapt research evidence to fit the local context. This is followed by the assessment of inhibitors and facilitators related to the research evidence to be adopted and the capacity to appraise the research evidence in terms of its quality, validity and usefulness for the policy issue at hand. And finally, the development of a plan to sustain the use of the research evidence during the implementation of the National and Sector HRD Plans. The next section deals with the conceptual framework for the study.

2.5 CONCEPTUAL FRAMEWORK FOR THE STUDY

This study advances a conceptual model adopted from the Action Cycle of the CIHR KTA Framework with an assumption that the factors are some of the most likely to have a strong influence on HRDC Sector HRD committees to use research evidence in the course of implementing the National and Sector-specific HRD plans. There is

clear expectancy for the HRDC Sector HRD committees to acknowledge the value of managing EBP in the process of implementing sector HRD plans. If the intention is to move towards an evidence-based culture, it is essential that HRDC Sector HRD Committee members embrace the practice of EBP to address the issue of skills mismatch. The key underpinning that will determine success or failure of the NHRDS 2009-2022 will be the capacity to manage EBP.

Multiple management, theoretical, conceptual, and empirical perspectives were explored and integrated to develop a conceptual framework, for the sustainable management of research evidence in developing HRD plans. The framework provides insight into the process and will be useful for HRDC Sector HRD committees, in developing practical strategies to use evidence into practice when implementing the HRD plans. The four factors under investigation and most likely to have a strong influence on HRDC Sector Committees to use research evidence are adaptation of knowledge; inhibiting/ facilitating factors; assessing and approval; and sustainability.

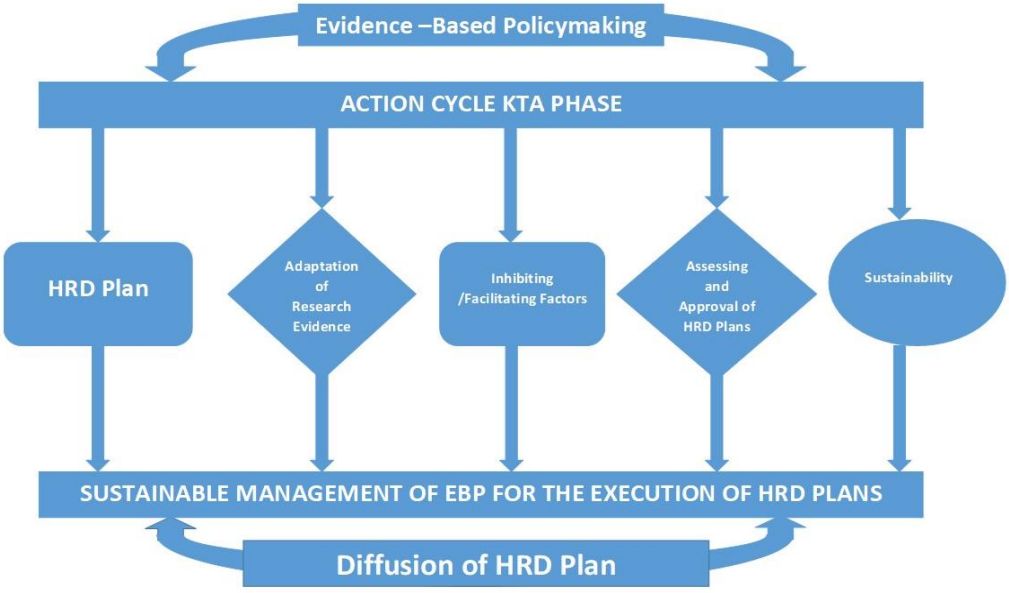

Figure 2.2: Conceptual Framework of the Study

The development of national and sector-specific HRDPs entails a number of strategic initiatives through research and consultancy as an attempt to provide adequate data. This process largely depends on among other things, observing trends of several education variables and labour market indicators to give information on future sector

skills and competency requirements. This necessitates an improved packaging and ease of accessibility to the data emanating from the situational analysis and that the data is actually used by the HRDC Sector HRD committees. Much emphasis has been on the production of quality research and with less focus in ways that the research evidence is easily understood by and accessible to policymakers. Policymakers as research evidence consumers may lack a thorough interpretation of statistics or research methods, or limited time required to analyse and interpret the results of large research studies, or sometimes the voluminous research evidence that makes it difficult for one person to absorb.

This study was conducted to enhance the management of EBP by HRDC Sector HRD committees when implementing National and Sector HRD plans and on strengthening their capacity to adapt the knowledge generated; identify inhibiting/ facilitating factors; assessing and approval of research evidence and sustainable use of research evidence.

2.5.1 Adaptation of Knowledge

The successful implementation of EBP depends largely on the development of individual and organisational strategies that address factors that interfere in its use. In presenting on adapting evidence-based approaches for communities at the National Cancer Institute Research to Reality Mentorship Programme, Escoffery and Carvalho (2012:7) defined adaptation as making changes, additions, deletions, substitutions to an evidence-based intervention as a way of making it ideal for a particular population and/or an organisation's capacity. Adaptation is the process of modification according to different circumstances or environmental conditions. It relies on judgements of whether a plan is applicable (i.e. relevant to a local setting in a specific setting) or transferable from one setting to another (Adler, Hadorn, Breu, Wiesmann & Pohl 2018:182). Rabin and Brownson (2018:20) contend that knowledge adaptation is the extent to which potential users can access and comprehend research results. Knowledge adaptation is critical for the management of EBP as it can influence the user to either adapt or not adapt the knowledge generated by researchers. Literature shows that the context in which the research results are presented could be a facilitator or hindrance to use of research evidence (Rabin & Brownson 2018:21). Research reports are written in a format that is complex to most policymakers and usually

published in academic rather than practitioner journals. Adaptation of EBP would, therefore, entail making research reports appealing and easy to comprehend in an attempt to make research validations more specific and applicable.

DuMont (2015:23) affirmed that knowing more about the potential users of research would improve the production and use of research. There is need to understand the effective approaches to the adaptation of research evidence in order to achieve value for money for investing in policy research. There are instances where research evidence will not generate any impact: either the research has no apparent application for policymakers or the findings are not conclusive. Kalavani, Kazerani and Shekofteh (2018:288) showed that the acceptance and use of research evidence is based on transferring actionable messages from a body of research knowledge, and not simply sharing results of a study through a research report. The packaging of the research evidence should be aligned to the target policymakers. This is followed by fine-tuning the process of knowledge transfer to the types of decisions the policymakers undertake and the policymaking environments in which they operate.

2.5.1.1 Planning and implementing EBP adaptation

Ivanich, Mousseau, Walls, Whitbeck, and Whitesell (2018:2) outlined how to make adaptations to EBP in a planned and thoughtful approach. The steps as influenced by several theoretical approaches on how to make adaptations to EBP include:

- Assess – analyse target population and organisation's capacity to identify factors to include in the adaptation process;
- Know the selected adaptation approach – establish the objectives and cultural appropriateness of the adapted research evidence;
- Identify adaptation challenges – assess adaptation challenges that may arise from the research evidence conflicting with the target population needs, capacity and logistical constraints. It is also critical to establish appropriate motives for adaptations;
- Select and plan adaptations – determine if proposed adaptation is an acceptable change; and
- Pilot and monitor adaptations – before full rollout, pilot test the proposed adaptation to correct any shortcomings. It is also important to monitor and assess the success

of the adaptations, with provision of feedback for continuous improvement for implementation.

A study deeply pertinent to adaptation of research evidence conducted by Aarons, Green, Palinkas, Self-Brown, Whitaker, Lutzker, Silovsky, Hecht and Chaffin (2012:7) presented the Dynamic Adaptation Process (DAP) that provides a four-phased approach to adapting EBP in a planned rather than a random way. The study contributed to implementation science through addressing adaptation in a diverse context of multi-regions in the state of California implementing SafeCare, an EBP programme developed to prevent child neglect. By using the mixed-methods approach, the study aimed at advancing implementation science by addressing tension between adaptation and fidelity (Aarons et al 2012:8). DAP involves the four phases of exploration, preparation, implementation and sustainment. DAP is an implementation approach based on data collection and feedback processes to guide appropriate adaptations to EBP. The DAP outlines core elements and adaptable features of EBP by supporting the implementation of the adapted model with consideration of organisational characteristics.

The process of developing HRD plans entails the production of a research report that should be adapted, accessible and understandable to committees as end-users of the consultancy research. There is an argument to the effect that the adaptation and use of research evidence by policymakers is not guaranteed by mere availability of research results. The format in which the research evidence is presented has potential to influence the use of research evidence to inform policy and practice.

This implies that the successful use and sustenance of research evidence can only be achieved if adapted as necessary over time. The main limitation that usually arises is researchers being ill equipped to adapt research evidence to the format accessible and understandable to policymakers. Oliver, Roche, Stewart, Bangpan, Dickson, Pells, Cartwright, Hargreaves and Gough (2018:8) argued that research evidence that is implemented with no effort to adapt it to local context risks being irrelevant to policymakers. Munn, Stern, Porritt, Lockwood, Aromataris and Jordan (2018:84) summed it up well by stating that based on organisational interests, the use of research evidence is enhanced when research incorporates the needs of the end-users. In other words, knowledge transfer increases as the salience of research for policymakers

increases. Factors that influence the transferability of research evidence should be considered systematically and a relevant adaptation approach established in line with the values, costs and the availability of resources.

2.5.2 Factors that may Inhibit or Facilitate the use of Research Evidence-Based Policymaking

There is an international consensus on the need for integrating research-based evidence into the daily practice of policymakers. However, from most of the research commissioned, only a small percentage of findings is implemented into policy and practice (Odukoya, Bowale & Okunlola 2018:2). Critical to designing and tailoring strategies that can enhance the use of research evidence to inform policy and practice is the identification of barriers to and facilitators of using research evidence in policymaking. The current study also investigated factors and conditions that may facilitate or inhibit the committees in using research evidence to inform policy and practice. There is scarcity of empirical research conducted in Botswana that has explored inhibitors to and facilitators of research use in detail. This study, therefore, sought to increase our understanding of these factors in the context of the HRD committee members' perceptions.

Failure to effectively implement evidence-based HRDPs may impede progress towards dealing with issues of skills mismatch. Identifying these factors is just the first step to enhancing committee members' technical capacity to manage EBP that will ultimately lead to the successful implementation of the NHRDS 2009-2022. Facilitating the implementation of EBP from high-quality research into policy and practice should be standardised and be cost effective. Inhibitors and facilitators to the use of research evidence are the most studied concepts as shown by dozens of studies and literature on healthcare and education. Hagan, Armbruster and Ballard (2019:44) confirmed that there has been much discussion on this topic.

Regardless of the legitimacy of using research evidence to inform policy and practice, there are inhibiting factors in doing so. Shayan, Kiwanuka and Nakaye (2019:13) identified three major categories of barriers to research use. These factors included individual inhibitors such as lack of research knowledge and policymakers' attitude to research; research-related inhibitors such as the difficulty in finding and understanding research articles and the gap between research and practice; and systemic inhibitors

or organisational context such as insufficient time to implement new ideas and read research and inadequate support to implement EBP. The following is the discussion of each category of the inhibitors to EBP with possible strategies that can facilitate the use of research evidence and overcome these barriers.

2.5.2.1 Individual inhibitors and facilitators

Individual inhibitors that are frequently reported in the literature include lack of knowledge about research methods, poor awareness of research findings, and negative attitudes towards research (Turk, Al Saadi, Alkhatib, Hanafi, Alahdab, Firwana, Koudsi & Al-Moujahed 2018:25). Turk et al (2018:24) conducted a cross-sectional study using a self-administered, pretested questionnaire. The aim of the study was to assess the attitudes of a sample of Syrian medical students toward research and suggest plausible solutions to reduce their self-reported barriers. Respondents embraced EBP as a critical ingredient in enhancing policy reforms and strategic interventions but considered the knowledge research gap as a major inhibitor to implementing EBP. This clearly implies that policymakers lack the technical capacity to conduct research, with poor understanding of the research process. Policymakers are unable to read and interpret the research evidence to inform policy and practice (Makkar et al 2018:2).

This lack of understanding of research by practitioners is confirmed by Fry and Attawet (2018:11) who showed in their study that 46.9% of the respondents indicated limited knowledge on understanding the research design of an empirical study, with 37.6% unable to conduct a research study, 32.7% unable to analyse data, and 23.1% finding it difficult to translate research evidence to inform policy and practice. Due to limited capacity to understand and value research evidence, it is difficult for policymakers to find and use research evidence to inform policy and practice. It is, therefore, imperative to empower and upskill policymakers with the necessary skills to appraise the quality of the evidence, capacity to read and interpret research evidence, conduct research studies and the capacity to apply evidence to inform policy and practice.

Policymakers' attitudes to research are another element of individual inhibitors to research evidence use. A descriptive cross-sectional study was conducted in Lusaka, Zambia among selected public health decision and policymaking institutions (Katowa-Mukwato, Mwape, Siwale, Musenge & Maimbolwa 2018:511*).* The study aimed to

establish the views, attitudes and practices of policymakers on the use of research evidence in policy and decision-making process in Zambia. The study revealed that most of the participants embraced the use of research evidence to inform policy and practice 13 (61.9%). However, despite acknowledging the importance of using research evidence to inform policy and practice, most participants reported that they sparingly used research evidence to make policy decisions. Is this a question of policymakers being apathetic towards the notion of science-driven policy due to varying cultural and psychological factors?

Li, Brossard, Scheufele and Wilson (2018:773) affirmed that one common conclusion emerging from research that examined policymakers' perceptions on the use of research evidence to inform policy and practice is that policymakers' attitudes vary depending on their responsibilities, needs, and goal-oriented interests. Factors such as communication styles and cognitive frameworks like perception and motivation influence policymakers' use of research evidence to inform policy and practice. The availability of on-site research resources and strong motivation to promote use of research evidence can enhance policymakers' organised interest in embracing the use of research evidence. It must be acknowledged that policymakers have distinct institutional responsibilities and interests.

2.5.2.2 Research-related inhibitors and facilitators

One of the common primary barriers to the use of research in practice has been linked to the difficulty in finding and understanding research articles and and how the research is communicated or presented. Makkar et al (2018:2) reported that the sub-optimal use of research to inform policy and practice is attributable to research often not presented in a clear, user-friendly, and summarised format with clear policy implications. Allen, Ruiz and O'Rourke (2015:688) substantiated this by revealing that, in most cases, research evidence is presented to policymakers using too much scientific jargon. This makes it difficult to comprehend and apply research evidence when making policy decisions. Sometimes the research evidence is even bypassed by events; it is shared at a time when opportunities for policy change are no longer available.

Karam-Gemael et al (2018:129) confirmed that scientific publications using complex statistical language prevented research evidence from being accessible outside the

academic sphere and excluded non-scientists as possible readers of publications. To enhance the applicability of research evidence, it should be translated into, simpler, less technical language and be made more understandable for non-scientists. Karam-Gemael et al (2018:130) revealed one common strategy used in making research evidence understandable to policymakers that entails training of writers of journal articles specialised in science communication. They argued that, by so doing, it will allow researchers to concentrate on their core business of doing research and the scientific communicator would be responsible for translating the research evidence into a less technical language for policymakers. A science-policy interface platform created with the function of translating research into a less technical language and understandable to policymakers should be established. This calls for a significant investment in science communication.

Previous research shows that the disconnect between research and practice is one of the several factors that inhibit the use of research evidence to inform policy and practice. Karam-Gemael et al (2018:129) indicated that poor alignment on policy concerns between researchers and policymakers shows that research evidence does not reflect policymakers' needs in their daily practice, and this mismatch of priorities could have serious consequences in terms of the need to address those policy concerns. Li et al. (2018:773) were of the view that an epistemological and cultural gap between researchers and policymakers does exist. It must be acknowledged that policymakers have varied understanding of scientific concepts. The divergent views on the normative and pragmatic value of scientific evidence between researchers and policymakers is inhibitive to the effectiveness of the research-policy interface. Given this scenario, it is critical to understand how HRD committee members perceive the role of research evidence in informing policy and practice. Full research partnerships between researchers and policymakers can yield benefits stemming from improved relevance of research to increased research adoption by policymakers (Carman & Workman 2017:27).

This partnership benefits are further validated by Carrington, Uljarević, Roberts, White, Morgan, Wimpory, Ramsden and Leekam (2016:127) who suggested that an attempt to close the research-practice gap should be based on closer collaboration between researchers and policymakers such that both parties are engaged in the research process from the onset. This line of argument implies that improved engagement

between researchers and policymakers will enhance the likelihood that the research evidence presented focuses on priority areas that meet the needs of policymakers. It is apparent that engagement is a central component in the interactive nature of the KTA framework; it facilitates co-participation and knowledge exchange.

2.5.2.3 Organisational inhibitors and facilitators

Previous studies have identified some of the inhibitors to EBP implementation related to organisational features (Boström, Sommerfeld, Stenhols & Kiessling 2018:2). Amongst those inhibitors is insufficient time to read research and implement new ideas. Respondents in a study by Yahui and Swaminathan (2017:12) reflected that due to high workloads, it was difficult to consult related literature because of insufficient time to implement new ideas and read research. The process of appraising a research article was considered a demanding and time-consuming process. This view ultimately discourages EBP related activities during working hours since it is deemed more cost-effective for employees to spend time doing core activities rather than implementing EBP. The study further identified limited access to search engines and journal articles as an inhibitor to EBP. It was argued that despite journal articles being online, some databases required a fee or membership for access (Yahui & Swaminathan, 2017:14). This calls for a significant investment in subscribing for relevant content-rich scientific databases for access by policymakers.

Another study conducted by Karam-Gemael et al (2018:126) aimed also reflected that it is time-consuming to locate, access and read primary literature. Their findings on the barriers to accessing scientific literature confirmed what other studies found related to limited time available to consult literature and that accessibility to journals is restricted to the scientific community or by purchasing content. The study strongly recommended investments in science communication to ensure scientific evidence is useful to support public policies. The study made mention of a common strategy that entails the training of authors of journal articles in science communication. This implies that researchers will have time dedicated to conducting investigations and the scientific journalist/communicator would be responsible for packaging, translating and the delivery of understandable research evidence to policymakers. This could be complemented by developing accessible tools for evidence-based practice for

application by policymakers in their endeavour to use the evidence to inform policy and practice (Karam-Gemael et al 2018:130).

Other organisational factors reported to also impede the use of research evidence to inform policy and practice are lack of managerial support, professional bodies, material and personnel resources. Liyanage, Thakore, Amaratunga, Mustapha and Haigh (2018:1231) revealed that a lack of peer mentoring and support, lack of research networking and integration and lack of opportunities for collaboration inhibit research and innovation. They argued that strong policy support can enhance and provide incentives to policymakers to apply research evidence while developing strategic interventions. They went on to indicate that these shortcomings can be addressed through training and development initiatives, specifically training on supplementary skills to improve skills in managing research projects, peer mentoring and support.

Hall, Oldfield, Mullins, Pollard, and Criado-Perez (2017:916) identified a lack of authority amongst professionals as another major barrier related to organisational setting. The authors posited that organisations have a complex hierarchical structure of stakeholders that often limits the professional autonomy to implement research to practice. Practitioners have little control over variables such as budget and timelines; for instance, research evidence may show that a particular strategic intervention can address specific challenges but the final decision-makers in organisation will be management. The adoption of a seamless organisational structure and excellence criteria for longer-term relationships is a necessity. Management of an organisation is responsible for creating a conducive institutional climate that encourages the use of research evidence since this will facilitate improved practice of EBP. Emphasis should be placed on research collaborations; ideal for documenting practices in peer-reviewed formats and increase longitudinal validity of an organisation's practices.

It is, therefore, critical that researchers acquire a deep understanding of how to interact with HRD committees, what information they require, and in what form and with whom to establish interactions, and similarly educate the committees about the relevance of evidence produced.

2.5.3 Skills of Assessing and Approving Research Evidence

Estai, Kanagasingam, Tennant and Bunt (2018:2) stated that there are four guiding principles that underpin the content of assessing research evidence. They posited that research should:

- contribute to the development of knowledge and understanding about policy, practice, theory or a specific field;
- be defensible in design with the provision of a research strategy that can address the question under investigation;
- provide a transparent and robust systematic review in the data collection, analysis and interpretation process; and
- be credible through offering well-founded and plausible arguments about the significance of the evidence generated.

Stewart, Langer, Wildeman, Erasmus, Maluwa, Jordaan, Lötter, Mitchell and Motha (2018:242) presented a review of the South African evidence-policy landscape and identified strategies for enhancing the appraisal of research evidence through EBP capacity-building activities. According to Stewart et al (2018:243), policymakers should possess skills that enable them to access and make sense of various forms of research evidence to inform policy and practice. Literature has shown that lack of technical skills by policymakers is one of the main inhibitors to policymakers' effective use of evidence (Oliver, Innvar, Lorenc, Woodman & Thomas, 2014:6).

It is evident that capacity building for policymakers can enhance relationships between policymakers and researchers and specifically empower policymakers to access and make sense of evidence. Capacity building for EBP can thus be deemed to build demand for evidence, promoting the use of research evidence to inform policy and practice through joint interaction (Stewart et al: 2018:243). Abdullah, Rossy, Ploeg, Davies, Higuchi, Sikora and Stacey (2014:287) demonstrated that mentorship programmes can propel policymakers' attitudes towards EBP that may ultimately impact on organisational outcomes, since training in critical appraisal skills seems to empower policymakers' knowledge and related behaviour towards EBP.

Samuel, Hoffmann, Wright, Lalu, Patlewicz, Becker, DeGeorge, Fergusson, Hartung, Lewis and Stephens (2016:643) suggested that the criteria most commonly proposed

for quality appraisals should be based on consensus, buy-in and comparison across assessments. These criteria target the assessment of methodological and reporting quality of research conducted. They further argued that incomplete reporting can obstruct understanding of the research evidence that may result in research wastage due to poor reporting which can also affect the assessment of methodological quality. There is a conclusion that any criterion proposed for methodological quality should consider and accommodate reporting quality since there is a strong linkage between the two. This is underscored by the authors in positing that aiming for high methodological quality standards goes hand-in-glove with reporting the results of the research conducted. They emphasised the need to report research accurately, thoroughly and transparently (Samuel, et al, 2016: 630).

This is consistent with a study conducted by Hodgetts, Elshaug and Hiller, (2014:2198) who found that the appraisal of the evidence in a healthcare field was based on currency, proximity, selectivity and biases. This accounted for what should count as evidence with a set of decisions undertaken when selecting and evaluating the quality of the research evidence. There is emphasis to negotiate the nature of the research evidence in terms of empirical, contextual and anecdotal features. This entails a high-level discussion to determine what counts and how to count it when making policy decisions.

The findings of a study conducted by Awaisu, Bakdach, Elajez and Zaidan, (2015:263) revealed participants' acknowledgement that they lacked competence and confidence in several aspects of research, including critically appraising research evidence. They recommended the implementation of short- and long-term interventions for practitioners to embrace the importance of EBP. This can be achieved through the establishment of research networks between researchers and policymakers to enhance research culture and facilitate mentoring.

A similar conclusion was drawn by Sabey, Bray, and Gray (2018:63) who identified lack of skills to appraise and understand research evidence as one of the most common barriers to EBP. The article reported on the development of an innovative capacity-building programme by the National Institute for Health Research (NIHR) in England that established 13 Collaborations for Leadership in Applied Health Research and Care (CLAHRCs). The initiative brought together National Health Service

professionals and universities to improve health and health care. The CLAHRCs were set up to promote the development of skills in understanding, using and producing research evidence. The assessment of the initiative revealed that skills and expertise in appraising and undertaking research are central to EBP. It was observed that there is an appetite for skills development across organisations; however, there is little or no systematic provision of continuous professional development in research across different professional groups. It was evident that the inter-professional capacity-building programme successfully met a need for practical short-term training in appraising the quality of research evidence (Sabey et al., 2018:68).

Slade, Philip and Morris (2018:4) conducted a review to evaluate frameworks for embedding a research culture in allied health practice with the aim of quality assuring research evidence for policymaking. The review considered peer-reviewed publications and government reports on frameworks aligned to allied health research frameworks. The reviewers searched eight electronic databases and four government websites, with one of the key search terms being research capacity building for policymakers. The review emphasised the need for research capacity building for policymakers to develop higher levels of skills to enable them to appraise the quality of research evidence presented to them. The review called for a framework to be designed and developed to inculcate research capacity amongst policymakers, and provide a lens through which research capacity-building strategies for policymakers could be developed and evaluated.

The lack of quality criteria to guide and assess the quality of research evidence saw the proliferation of various frameworks as an effort to standardise the assessment of research evidence. The frameworks differ in terms of their philosophical, ideological and methodological premises. Gavine, MacGillivray, Ross-Davie, Campbell, White, and Renfrew (2018:3) were of the view that there is lack of consensus on the most effective assessment methods of the quality of research evidence. They derived an evidence-synthesis framework aimed at producing collaborative, targeted and efficient evidence assessment for policymaking. They engaged Scottish Government's Review of Maternity and Neonatal Services to conceptualise the framework in an effort to validate research evidence reviews so that they would be policy-relevant, high quality and up-to-date. There was an emphasis on presenting the reviews in a consistent, transparent and accessible format.

The framework developed followed a number of stages, and are outlined as follows (Gavine et al, 2018:4):

- The establishment of a review team with experts in the topic following systematic reviewing process;
- Clarification of review questions with policymakers and subject experts;
- Development of review protocols;
- Developing a standard framework that structures the review through a set of key concepts and outcomes;
- Establishing an iterative process between policymakers, reviewers and sponsors;
- A rapid review of related literature;
- Analysis of related literature in line with the standardised framework, and
- Recommendations aligned to the framework.

The framework took into account elements of pre-existing rapid review methodology to facilitate the structuring of review questions, analysis and providing a consistent template for recommendations (Gavine et al 2018:7).

In a note that carries a similar approach, Mårtensson, Fors, Wallin, Zander and Nilsson (2016:595) conducted a study that presented an actionable and multidisciplinary framework for the assessment of the quality of research evidence that can be used as a guide in different scientific fields. The study highlighted lack of a widely acknowledged quality standards for research practice and lack of uniformity in current assessment methods. The study developed an inventory of elements associated with the quality of the research evidence, what quality entails and how it can be defined. Researchers should attempt to produce research that is both rigorous and relevant. A comprehensive quality model with 32 concepts informed by four main concepts (credible, contributing, communicable and conforming) was developed detailing elements of the quality of research evidence. If HRD committees were to apply the quality model developed, the simplified version of the process would constitute the following (Mårtensson et al 2016:601):

- Selection of an evaluation committee;

- Discussion of four key elements of the framework (credible, contributing, communicable and conforming) and what they mean to members of the committees;
- Weighting of concepts: committees would have to identify the most important concepts or sub-concepts; and
- Operationalisation of concepts; collection and analysis of data on research projects and analysis of findings.

This is supported by a paper by Redman, Turner, Davies, Williamson, Haynes, Brennan, Milat, O'Connor, Blyth, Jorm and Green (2015:148) that details strategic interventions designed to enhance the use of research evidence amongst policymakers. The framework was developed between 2011 and 2013 by a study team of policymakers, researchers and knowledge exchange specialists. The SPIRIT Action Framework included four properties of a useful action framework:

- an articulated purpose: the framework was developed purposively to guide action on the use of research evidence;
- the framework was informed by existing understanding and drew on existing models and empirical findings about the use of research to inform policy and practice;
- the framework guides the development and evaluation of interventions; and
- the framework can be used as an organising structure to build knowledge and can be used to create testable hypotheses (Redman et al 2015:152).

The framework hypothesises that if an agency has internal capacity, it will facilitate the process of engaging with and using research evidence to inform policy and practice. The underlying assumptions of the SPIRIT Action Framework are confidence in skills and knowledge in accessing, appraising and generating research. There should be tools, systems, training and programmes to assist in assessing the quality of research evidence. One of the key concepts in enhancing the use of research evidence to inform policy and practice identified during the conceptualisation of the framework was knowledge and skills of policymakers to engage with and use research evidence to inform policy and practice (Redman et al., 2015:149).

It is vital to ensure comprehensive, context-specific, timely research is conducted to inform decisions relating to HRD plans. The approval of national and sector-specific HRD plans requires that committees have the capacity to assess the validity and quality of the plans prior to approval and implementation. The committees should be able to assess the key components of the HRD plans, the development process and research methods for determining skills needs. This justifies the need to develop the guidelines for assessment and approval of the plans.

2.5.4 Sustaining the Management of Evidence-based Policymaking

It is commonly believed that knowledge constitutes the major source of competitive advantage for organisations. The effectiveness of organisations in creating, organising and using knowledge assets in relation to competition dictates productivity (Abualoush, Masa'deh, Bataineh & Alrowwad 2018:281). Sustainability of knowledge use as an aspect of KTA process has not been explored at length in Botswana context. There is little understanding of how committees incorporate research evidence generated by research consultants in their plans. The main challenge that exists is the gap between the outcomes of policy research and its application in EBP. It is critical therefore, that the committees identify strategies that enhance the use of research evidence in an effort to improve the impact and sustainability of policy interventions.

Sustaining effective HRD plans is essential to aligning supply of skills with labour market needs. Botswana's policy implementation efforts are not sustained beyond their critical intended objectives (Kaboyakgosi & Marata 2015:311). Sustainability of managing EBP will be critical to the successful implementation of HRD plans; committees should be concerned with how best to ensure continued use of research evidence to inform HRD plans to address the issue of skills mismatch. There is a concern with the continued existence of policy challenges that remain high despite several years of developing policies and implementing interventions.

Cowie, Campbell, Dimova, Nicoll and Duncan (2018:1) focused attention on the challenges experienced in sustaining policy interventions. This is despite the fact that the formulation and implementation of policy interventions is a response to calls for remedial action and possible systematic weaknesses. More attention needs to be paid to the problem that policy interventions are frequently not sustained as revealed in the study that 60% of policy interventions are not sustained a few years after initial funding

ends. Policy failure has significant consequences in that it is a hindrance to best practices, is a wastage of limited resources and effects mistrust between researchers and policymakers.

Shelton, Cooper and Stirman (2018:55) recognised the strong interest and rapid growth of the sustainability of evidence-based interventions and implementation science. They contended that sustainability involves the intensive use of programme components with the aim of achieving the intended objectives. Implementation science unpacks factors and strategies that facilitate the adoption and integration of research evidence into policy and practice. Despite the advancement of these strategies, there is limited understanding on how the HRD committees use research evidence to inform policy and practice. Shelton et al (2018:56) were of the view that there is need to invest significantly in sustainability research to better appreciate strategies that can facilitate the continued use of research evidence in policymaking. An integrated sustainability framework should unpack various conceptual features in terms of interventions, contexts and processes that can impact the sustainability of policy interventions. Sustainability research is key to impactful maintenance of long-term strategic interventions.

Koorts, Eakin, Estabrooks, Timperio, Salmon and Bauman (2018:2) contended that most policy interventions that are initially successful fail to be sustained as habits and routines of the implementing organisation. There is advocacy for the use of best practices to achieve better policy outcomes, therefore, there is need to devote resources and invest significantly in evidence-based interventions. They recognised that policy interventions generally do not proceed as initially planned irrespective of success in the early stages of implementation. This is due to possible developments or the discovery of a more effective policy intervention, new evidence, changes in policy issues and resource allocations. It is imperative to understand processes that facilitate ongoing sustainability of effective policy interventions in order to yield desired outcomes.

Vitale, Blaine, Zofkie, Moreland-Russell, Combs, Brownson and Luke (2018:136) defined sustainability as established adaptive structures and processes that facilitate effective implementation and institutionalisation of EBP activities. They emphasised that an intervention must benefit the target population, and that failure to sustain the

intervention may result in loss of trust in policy initiatives and waste of valuable resources. However, there is empirical evidence to the effect that sustainability can be enhanced through practical, action-oriented training and technical assistance.

Furthermore, there is a need to create an action plan to enable sustainability of interventions (Vitale et al 2018:137). The existence of sustainability planning determines the survival of an EBP intervention. Despite a growing body of research on aspects affecting sustainability, authors are of the view that there is limited effort to develop practical guides and tools for use by policymakers. The study provided an innovative approach to increase the sustainability capacity of policymakers in developing a sustainability action-planning model and training curriculum to support evidence-based initiatives as a way of sustaining their positive impact. The study also gave more clarity on effectiveness testing and early-phase implementation. The intent was to appreciate what, why and how policy interventions work in real-world settings and to test approaches to improve them. There is a need to understand the context, assessment of performance, improvement of quality to facilitate strengthening of systems, and informing large-scale use and sustainability of interventions.

Salgado, Abbott and Wilson (2018:163) using an action research approach, conducted a study to investigate policymakers' sustainability competences in the field of sustainability. There was interaction between professional practitioners and facilitators called to explore and reflect on knowledge, skills, attitudes and behaviours essential to facilitate change processes for sustainability of policy interventions. Specifically, the study focused on the competences of policymakers required to achieve the desired change processes. The authors' identified seven dimensions of intervention competence critical to obtaining meaningful effective and sustainable policy interventions. The dimensions include policymakers' engagement in political-strategic thinking and actions; appreciation of different perspectives; being goal-oriented; execution of adequate action; the adoption and communication of ethical practices; and acknowledging the complexity of policy issues. Critical to policymakers' capacity to sustain policy interventions is their capacity to understand and take account of different perspectives when addressing policy issues.

A study on identifying a practice-based implementation framework for sustainable interventions for improving the evolving working environment by Højberg, Rasmussen,

Osborne and Jørgensen (2018:174) resulted in the development of the “hitting the moving target” framework. The study focused on the implementation components, which entails resources and structures essential for effective implementation of policy interventions. The study used concept mapping to identify practice-based knowledge about implementation components. Højberg et al (2018:170) raised concerns about the continued existence of policy challenges and failure despite several years of developing policies and implementation of policy interventions to tackle policy issues. They argued that there is need for policymakers to have the technical capacity and knowledge about implementation components that facilitate sustainable interventions during policy changes.

Højberg et al (2018:170) cast attention on previously reported implementation challenges that include poorly targeted intervention concept or theory; inadequate implementation; low organisational readiness for change; poor intervention fit; lack of involvement of key stakeholders and contextual factors. They asserted that policy intervention is complex in nature due to an ever-changing environment and new and emerging challenges. Policymakers need to identify and respond to changes through relevant policy interventions. Key to this equation is an appreciation of risks associated with policy interventions. For instance, interventions can be overtaken by events that render them irrelevant and inadequate. As alluded to, the study culminated in the development of a practice-based implementation component framework to embed and sustain policy interventions (Højberg et al 2018:174).

The framework is influenced by the daily practice of policymakers and comprises of four overall domains that extends previous models or frameworks by adding new practice-based processes to existing implementation strategies. The domains emphasise

- engagement of key stakeholders with mutual goals;
- the intervention should be fitted to the organisation it is implementing;
- there should be a supportive organisational platform; and
- the intervention must be the optimal choice.

The framework demonstrates a promising approach to implementing policy interventions through active co-production between researchers and policymakers in order to fast track knowledge-to-action initiatives.

2.6 CHAPTER SUMMARY

The intent of this study is to enhance the HRD committee members' technical capacity to use research evidence to inform policy and practice. This chapter explored the management of EBP, the policy development process, the KTA framework that serves as the conceptual framework for the study and empirical literature on the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, and policymakers' capacity to assess and approve HRD plans based on quality and sustainability of using research evidence. The next chapter discusses in detail the mixed-methods approach adopted to address the research questions for the study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

There is limited understanding of the factors that may induce or constrain members of HRDC Sector HRD Committees to use research consultancy evidence in implementing the National and Sector HRDPs. The intent of this study was set to explore the technical capacity of members of the committees to find and use research evidence to inform policy and practice. Some of the steps in the action cycle of the KTA framework adopted for this study, which are adaptation of knowledge; inhibiting / facilitating factors; assessing and approval and sustainability, informed the study. These factors encourage interaction and partnership with end-users at every step of implementing research evidence in informing policy and practice. The next section deals with the rationale for empirical research.

3.2 RATIONALE FOR EMPIRICAL RESEARCH

The idea for this study was borne out of the researcher's experience when coordinating the HRDC Research and Innovation Grant Project 2013/14. Despite the significant amount of resources invested in conducting the project, the output had little or no impact. I was also driven by the desire that the best available evidence from research is at the heart of policymaking and implementation at HRDC. The objective of the study was to recommend best research uptake strategies, identify best practices and to optimise and foster the management of EBP. Through the management of EBP, practising managers develop into experts who make organisational decisions informed by social science and organisational research. The answers provided by this investigation put EBP in its right context and perspective, identify concepts and actions that hold promise for improving the use of research evidence in informing policy and give suggestions for the successful execution of the NHRDS, 2009-2022. The study was aimed to contribute to the urgency and growing importance of evidence as the basis for making informed policy and practical decisions across the world. The aim is to take small steps towards gaining an overall impression of the range of practice by members of the committees in the management of EBP process.

The capacity to find and use research evidence can strengthen policymakers' ability to do their jobs better and more efficiently. The most important capacity needs of committee members is the knowledge and skills to access and consume research

evidence from consultancy research reports to conceptualise sector HRDPs that will ultimately solve the issue of skills mismatch between supply and demand. This study explored committee members' existing knowledge and capacity to use research evidence to design capacity enhancement and intervention strategies for evidence-to-policy process. This is an attempt to create and cement a sustainable platform where policymakers, researchers, and other stakeholders discuss issues of using research evidence to inform policy and practice.

3.3 RESEARCH DESIGN

This section describes the setup of the research design, paradigm, research approach and strategy used. Research design outlines the conduct of a research project and entails the theoretical frameworks and various techniques that complement one another to deliver data and findings that reflect the research question and suit the research purpose (Saunders, 2011:108). Research design is a systematic way of solving the research problem under investigation and considers the logic behind the methods that are used in the context of the research. The research design was informed by the complexity of the research problem under study and research objectives outlined in Chapter 1.

3.3.1 Research Paradigm

A mixed-methods approach was adopted to address the research questions for the study. Quantitative data sets were obtained through a survey of members of the committees and qualitative data sets were obtained through in-depth interview with chairpersons of the committees. The study adopted a convergent, sequential, mixed-methods through exploratory inductive approach, in addition to the deductive use of the KTA framework. Since triangulation of both quantitative and qualitative techniques is used in this study, both positivist and interpretivist philosophical underpinnings are adopted. According to Modesto (2013:106), positivist methodology is research considered to be objective and structured where the detached observer considers reality as stable and does not interfere with the phenomenon being studied. Empiricism is the core of the scientific undertaking that is associated with quantitative methods of data analysis. This is an attempt to operationalise and give numerical values to social phenomena where observable social reality generates law-like generalisations similar to those produced by the physical and natural scientists

(Saunders, Lewis, Thornhill & Wilson 2009:113). In contrast, interpretivists base their approach on the notion that human beings think and reflect and can change their behaviour if they know they are being studied. The interpretivist is more involved in attempting to understand reasons and meanings that influence actions from an individual perspective and the underlying complexities of the social world. This approach is aligned to qualitative techniques, which aim to develop a rich and complex understanding of each individual's interpretation of the world. It avoids the use of quantities and attempts to describe phenomena and deal with impressions, understandings, views, thoughts or perceptions that are difficult to quantify. The data usually consists of interview responses, behavioural observations, or answers to open-ended questions. According to Saunders et al (2009:116), interpretivism advocates that it is necessary for the researcher to understand differences between humans in our role as social actors and the way we interpret our everyday social roles in accordance with the meaning we give to these roles. In addition, we interpret the social roles of others in accordance with our own set of meanings.

However, both approaches have limitations. The positivist approach can lead to a partial and distorted picture of social reality in the sense that it neglects the proper context of individuals and their environment. Those researchers critical of positivism argue that rich insights into this complex world are lost if such complexity is reduced entirely to a series of law-like generalisations. Meanwhile, with interpretivism, the findings may be influenced by the researcher's subjectivity, and participants for one reason or another may withhold information from the researcher. In the case of this study, a mixed-methods approach has been adopted to address the limitations of each approach.

3.3.2 Research Approach

This empirical study used an exploratory, convergent, sequential mixed methods approach, drawing on quantitative and qualitative data gathered sequentially through a survey and interviews. Creswell (2015:35) explained convergent sequential mixed-method as a procedure in which qualitative and quantitative data are collected in one after the other, the two data sets are analysed separately and the results are merged. This is followed by mixing or combining the results during the overall interpretation. The researcher converges or merges quantitative and qualitative data to provide a

comprehensive analysis of the research problem. The strategy adopted for this study was the collection and analysis of quantitative data in the first phase followed by the collection and analysis of qualitative data in the second phase that builds on the results of the initial quantitative results. Weight was given to the quantitative data and the mixing of data occurred when the initial quantitative results informs the secondary qualitative data collection. Thus, the two forms of data are separate but connected. The results were analysed separately but merged to interpret the findings of the study. Thus, to operationalise the research questions, a predominantly quantitative design using survey questionnaire was chosen sequentially with qualitative interview data collection and analysis methods. Survey and interview data enable “how” and “why” questions to be explored. The mixed method approach, therefore, allowed for the use of both pre-determined and emerging methods, open- and closed-ended questions with both statistical and thematic analysis.

The mixed-methods approach enables data gathered via survey instruments to be complemented and extended by interview data. Another justification for using mixed method was to capitalise on the strengths of both the quantitative and qualitative methods. The statistical and descriptive instruments complimented the weakness of each method where the quantitative data sets provided the basis for the collection of qualitative data sets. This implied that the analysis of the quantitative data raised issues that were addressed in the qualitative data collection and analysis. The use of the mixed-methods research approach in this study allowed multiple viewpoints, perspectives, positions and standpoints. The adoption of the mixed-methods approach in analysing data was considered ideal in instances where the research issues being explored are complex and the research is exploratory. The mixed method approached was adopted to establish a complete understanding of the complex nature of EBP concept in the context of members of HRDC 12 Sector HRD Committees in the management of EBP in the course of implementing the national and sector-specific HRD plans on all matters of national human resource development. The mixed-methods approach was also used to provide stronger, deeper and broader inferences in answer to the problem under investigation and the strength of each approach is used to alleviate weaknesses in the other approach. The survey results of the quantitative phase are complemented by means of interview data.

3.3.3 Research Type/Strategy

The study explored the technical capacity of members of HRD Committees in the managing EBP in the course of implementing sector-specific and national HRD plans on all matters of national human resource development. The researcher's worldview based on some assumptions influenced the research philosophy adopted for this study. The study used mixed-methods approach in conjunction with the application of the CIHR KTA framework proposed by Graham et al (2006:19). Saunders (2011:108) explained that knowledge and the process by which this knowledge is developed and our view about this influences the philosophy we adopt.

3.4 RESEARCH METHODS

This section describes population and sampling techniques, procedures and methods for data collection and data analysis. This study was set to explore the technical capacity of members of HRD Committees in the management of EBP in the course of developing national and sector-specific HRD plans on all matters of national human resource development using the the CIHR KTA framework.

3.4.2 Selection of Participants/Respondents/Sampling

Target Population

The target participants for the study were members of the HRD committees who are, by virtue of their membership, policymakers and are expected to use research evidence from the consultancy reports to implement national and sector-specific HRD plans. The assumption is that the members of the HRDC Sector HRD committees are best positioned to inform inquiry around the management of EBP. The primary sampling units for this study were the committees for Tourism, Health, Education and Training, Mining, Minerals, Energy and Water Resources, Agriculture, Research, Innovation, Science and Technology, Finance and Business Services, Creative Industries, Manufacturing, Transport and Logistics, Information and Communication Technology, and Public Sectors. A database of members of the committees was used to select participants for the study with the assistance of the Department of Human Resource Development Planning – Demand Side (HRDP), the secretariat of the committees. The secretariat had the contact addresses and profiles of the members of the committees. Approximately 10-18 members constitute each committee, and 201

were eligible for this study. A letter was sent to the HRDC Chief Executive Officer seeking permission to conduct the study (See Appendix B, 165). A letter of request for consent for participation of members of the committees was written and given to each sampled participant (See Appendix C, 167).

Sampling Survey

It was more feasible to employ a non-probability (purposive) sampling strategy, which included convenience sampling, the strategy identified information rich participants. It is in this regard that a total of eighty-four (n=84) members of the committees were sampled for the study. A simple random sampling method was used to select six (n=6) members from each committee, where pseudonyms of members of the committee were put in a hat and six names were drawn. This was done in order to avoid bias in selection of the participants. This means that seventy-two (n=72) members were targeted to respond to the survey thereby generating quantitative data. Members of the committees were contacted by either telephone or e-mail to explain the purpose of the study and to establish their willingness to participate in the study. Once they had consented, and for the period between September – November 2019, the researcher either emailed or distributed the self-administered questionnaire to the participants for its completion.

Sampling Interview

Similarly, a purposeful (convenience) method of sampling was used to sample interview participants. Purposeful sampling seeks information-rich cases which can be studied in depth. Qualitative data collection was through an in-depth interview with the chairpersons of the committees since they were more likely to have experience that may reflect and influence the implementation of EBP. There are twelve (12) HRDC Sector HRD Committees, therefore, all the 12 chairpersons were sampled for the interviews. The researcher contacted the chairpersons through telephone and email to inform them of the intent to undertake a study and that they were the target participants. This was also to establish their willingness to participate in the study. Prior to the signing of the consent forms, the Chairpersons were given both written and verbal information about the purpose of the study and the procedures to be followed. Furthermore, the researcher was given an opportunity to leverage on the

committee meetings to present the purpose of the study to members of the committees.

Data Collection

The survey and interview questions that covered the technical capacity of committees to use research evidence with a specific focus on adaptation of knowledge or research evidence; inhibiting/ facilitating factors to using research evidence; assessing and approval of research evidence; and sustainability of using research evidence were developed. Given that there were no existing instruments that matched the sources of data for the inquiry's variables in the context of Botswana, a new self-administered questionnaire with selected response structured items and a semi-structured (open-ended) interview guide were developed as tools used to collect data for this investigation. The questionnaire and interview guide scale items were developed based on the empirical literature reviewed, (Cherney, Head, Boreham, Povey & Ferguson 2011:13). There were modifications to align scale items to be in context with the local settings and target participants.

3.4.2.1 Data Collection Survey

Upon being given permission to collect data from the target participants from HRDC Chief Executive Officer (CEO), the researcher through the assistance of the secretariat scheduled one-one appointments with the target participants. Furthermore, the researcher appointed through telephone and email with the respondents to set the date and time for administering the questionnaire. The participants were invited to join in the study voluntarily. The principle of voluntary participation requires that the participants not be coerced into participating in the study. The researcher proceeded to explain the study, assured participants of ethical clearance, gave instructions through participant briefing and discussed issues about consenting to participate in the study. Alter and Gonzalez (2018:151) stipulated that in return for their cooperation, participants should be assured of anonymity and protection of confidential information; that is, researchers must explain the purposes, risks, use of data and benefits of participating in the research. If feeling uncomfortable to respond to specific questions, the respondents had the option to decline to answer those questions and could also withdraw from the study with an assurance that their responses would not be used in the study.

Once they had consented, and for the period between September – November 2019, the researcher either emailed or distributed the self-administered questionnaire to the participants for its completion which took about 45 minutes. The completed questionnaires were collected after five working days, and placed in a sealed envelope for confidentiality purposes. The envelope from each participant was marked with a pseudonym and a code allocated for each sector as a way of establishing if participants' views were influenced by being in a particular sector of the economy.

3.4.2.2 Data Collection Instrument Survey

The instrument used for gathering survey data for this study was a questionnaire administered to members of the committees (Appendix D, 169). The descriptive survey questionnaire approach provided a numeric description of trends, attitudes, or opinions of the respondents. The approach was chosen based on the economy of the design, and the rapid turnaround time in data collection. Furthermore, the researcher would be able to identify attributes of a large population from the sample. Additionally, the respondents have adequate time to give well thought out answers. Another advantage of a questionnaire approach is that respondents, who were not easily approachable, can also be reached conveniently. The questionnaire comprised of 43 select response structured items to be rated on Likert scale of 1 to 4 and participants were also asked to give any five possible strategic interventions to sustain EBP. The questionnaire consisted of the following five parts outlined below:

- Socio-demographic data: entailed how long the participant had been a member of the committee, age, highest qualification, gender, level of position at work. Empirical literature has shown that these variables can have a bearing on the extent to which individuals embraced the practice of EBP.
- Adaptation of research evidence: this section explored the perceptions of members of the committees regarding the format in which the research evidence was presented to them as it had the potential to influence the use of research evidence to inform policy and practice. It constituted 16 positive statements in no specific order. Participants were asked to select their response indicating the extent to which they agreed or disagreed with each statement.
- Factors that may inhibit or facilitate the use of research evidence: this section enquired whether members of the committees experienced any of the factors that

may facilitate or inhibit the use of research evidence to inform policy and practice. Respondents were asked to indicate the extent to which they agreed or disagreed with each statement**.** This section had four positive and 12 negative randomly ordered statements.

- Assessing and approving research evidence: The approval of national and sector HRD plans requires that committees have the capacity to assess the validity and quality of the plans prior to approval and implementation. The committees should be able to assess the key components of the HRD plans, the development process and research methods for determining skills needs. Respondents were asked to indicate the extent of their agreement with four positive and seven negative randomly ordered statements.
- Strategic interventions to sustain EBP: Respondents were given an opportunity to suggest any five strategic interventions that might be considered to sustain the management of EBP. Respondents were asked to rate them where 1 demonstrated the highest priority and 5 was the lowest priority.

Pilot testing survey instrument

Before the questionnaire could be administered to respondents in the study, a pilot study was conducted to test the questionnaire on a small sample. The pilot study was conducted on a population with similar features, but not on those who formed part of the final sample. This was to avoid influence on the behaviour of research subjects due to having already self-administered the questionnaire. In this regards, two officers from the HRDC Sector Committee and four policymakers from both the public and private sector were identified for the pilot study. It became evident that questionnaire wording, sequence, form and layouts were vague and therefore, needed to be revised. After completing the pilot study, the necessary adjustments were undertaken to enhance clarity, sequence and layout of the questionnaire. Section B sub-section 1 and 2 of the questionnaire are improved versions. The final questionnaire was compiled, approved by the supervisor and UNISA Ethical Clearance committee.

3.4.2.3 Interview Data Collection

The same procedure of participant briefing and informed consent was followed to collect qualitative data through in-depth interviews with the chairpersons of each sector committee. For the period of January-February 2020, the researcher appointed

through telephone and email with the Chairpersons to set the date and time for the interviews. Prior to the signing of the consent forms, the Chairpersons were given both written and verbal information about the purpose of the study and the procedures to be followed. The interviews were conducted at HRDC, where a meeting room was requested to be used. All interview participants were issued with the semi-structured interview questions in advance for clarity and focus of the mind. The participants were asked to allow the researcher to audio record the interviews. This was complemented by a written journal. Each interview took no longer than 30 minutes. The in-depth interviews were conducted in a meeting room for privacy and confidentiality reasons. At the end of the interviews, the researcher gave each participant an opportunity to add anything to the discussions. Participants were contacted for any follow-up questions that arose and to confirm and approve the accuracy of the transcriptions of their interviews.

3.4.2.4 Semi-Structured Interview Instrument

The in-depth, face-to-face interviews were conducted using the semi-structured interview schedules (Appendix E, 175) developed by the researcher. Semi-structured research interview schedules were used mainly to gain access to the senior executives who make up the majority of the chairpersons. The semi-structured interview schedules facilitated deep inquiry and gauged perceptions and motivations as well as actions (Thurman 2018:5). The approach allowed the researcher to adapt questioning in line with the participants' level of understanding of the topic; questions were randomly discussed as they emerged during the interview and there were probing questions to get greater details about phenomenon under discussion.

The scope of questions for the chairpersons touched on their level of understanding the management and practice of EBP, followed by their perceptions on the importance of using research evidence to inform policy and practice over other factors such as political, experience and intuition. Another question was on whether EBP was embedded in the different sectors, and, most critically, built in as part of the research consultancy process. Participants were asked about the degree of accessibility and clarity of the research evidence presented to them and their perceptions on factors that might inhibit or facilitate the use of research evidence to inform policy and practice. There was a question on whether they had the technical capacity to assess and

approve the quality of the research evidence. Another question sought to establish if there were any policies, structures, systems and processes guiding the management of EBP or any efforts to promote and support EBP practice. Was there evaluation of the effectiveness and impact of research evidence in policymaking? Finally, there was a discussion on possible strategic interventions to sustain the management of EBP.

Pilot testing interview schedules

The researcher ensured that the research questions in the interview schedules were good enough to elicit a rich description from the participants by conducting pilot testing of the instrument. After several drafts and revisions, the semi-structured interview schedules were shared with the supervisor for feedback. Thereafter, the interview schedules were given out for pilot testing. The same sample for the survey instrument pilot study of two officers from the HRDC Sector Committee and four policymakers from both the public and private sector participated in the pilot study. It was established that the wording of some interview schedules were ambiguous and adjustments were made to make them less so. The researcher also picked that the timing of questioning should be shorten and regulated. After this exercise, the supervisor approved the final interview schedules.

3.4.3 Data Analysis

Ghosh et al (2018:1510) were of the view that data analysis is a practice in which raw data is ordered and organised so that useful information can be extracted from it. Thus, analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision-making. The quantitative and qualitative strands of data were analysed independently through factor analysis of survey data and thematic analysis respectively.

3.4.3.1 Data analysis survey

Demographic data of committee members is analysed through comparisons between level of educational qualifications and ability to understand and interpret research evidence were examined using the Chi-Square (χ^2) test of independence. Psychometric properties of the sub-constructs in the hypothesised relationships were discerned in order to investigate the psychometric nomenclature of the scale items.

Various statistical analysis approaches such as descriptive and inferential statistics were conducted to infer the findings of the current study. SPSS (24.0) software was used for psychometric properties and inferential statistics. According to Tampakis, Andrea, Karanikola and Pailas (2019:4), the minimum threshold of any statistical measure for internal consistency is 0.70, thus a coefficient equal to or higher than 0.70 is deemed satisfactory and more than 0.80 reveals scale items that are very satisfactory. The authors further contended that there are, however, cases where reliability coefficients lower than 0.60 are acceptable in practice. The internal consistency was measured using Cronbach Alpha while the factor structure was measured using Kaiser Meyer Olkin (KMO) of sampling adequacy and Battlett's test of sphericity. Factor analysis is conducted to validate whether there are common factors within a group of variables. The Kaiser Meyer-Olkin (KMO) measure of sampling adequacy has an index range from 0 to 1, where its minimum threshold should be greater than 0.5, and thus considered suitable for factor analysis. The Bartlett's Test of Sphericity should be significant ($p<.05$) for factor analysis to be suitable. Frequency tables representing committee members' perceptions regarding adaptation of research evidence, inhibiting and facilitating factors, assessing and approving research evidence are presented in each section of the sub-constructs of the study.

3.4.3.2 Data analysis of interview transcripts

The recorded interviews were transcribed verbatim into written text by the researcher. Analysis procedures that follow a step-by-step constant comparison method (Yang, Pankow, Swan, Willett, Mitchell, Rudes & Knight 2018:818) were used to develop themes. In Step 1, an outline of paraphrased items was generated based on each interview text. This transformed the raw data into manageable units for analysis. In Step 2, each transcript was examined separately. Whenever a new theme emerged, it was highlighted. The identified themes within the transcript were then compared across transcripts in Step 3.

Overall themes were then developed in Step 4. The step-by-step constant comparison method was followed for each transcript analysed. A summary of all transcripts was compiled in which sub-themes were compared to develop overall themes that were used to report the findings of the study. After preliminary findings, a check exercise

was carried out by allowing participants to review their transcripts and the preliminary themes. In addition, they were also asked to add any information that may have been missed. Briefly, the recorded interviews were transcribed verbatim and subjected to an inductive-to-deductive thematic analysis. The KTA framework was used to organise inductively derived themes into higher-order categories.

3.4.4 Measures for Trustworthiness, Validity and Reliability

3.4.5.1 Trustworthiness

The researcher has the responsibility of ensuring that the study carries credibility and trustworthiness since the study will be ultimately be judged for its credibility, transferability, dependability and confirmability. Rigorous methods when collecting and analysing data are critical in enhancing the trustworthiness of the study.

Credibility

The credibility of the study was judged on whether or not there was correspondence between the respondent's perceptions as it related to the KTA framework used to guide this study. In order to enhance the credibility of the study, the researcher gave each participant an opportunity to feel free to add anything to the discussions. Participants were contacted for any follow-up questions that arose and to confirm and approve the accuracy of the transcriptions of their interviews. Transcriptions were done verbatim to avoid misquoting participants' views; and direct quotes were presented for some participants. Furthermore, drafts and notes from the coding process were shared with colleagues of the researcher and supervisor for their review and feedback. The researcher was able to make objective decisions with limited influence on the findings of the study.

Transferability

Transferability means the provision of sufficient details to enable the reader to generalise the results of the study (Mertens & McLaughlin 2003:107). The researcher presented in detail the descriptions of the findings of the study. The researcher gave the descriptive characteristics of the respondents for consideration of the feasibility to apply the findings of the current study to other individuals, groups, similar situations, settings and contexts. While it is intended for HRDC, the findings of this study can be

applied in a variety of contexts. It is addressed to a broader audience of managers, decision-makers, stakeholders and public policymakers. The study can also inform professionals acting as liaison officers, knowledge translation officers, researchers or knowledge brokers in their respective sectors. This, in turn, could shed more light on opportunities for further research in solving the quest for optimum use of research findings to inform policy and practice. Concisely, the study is primarily directed at researchers who are interested in learning more about the management of EBP. It provides a foundation for researchers who may be interested in doing further investigation into the use of research evidence in Botswana.

Dependability

The researcher kept the audit trail of all tape-recorded interviews, transcribed notes and personal diary to promote the dependability of the study. Additionally, the researcher documented all the research process and full description of settings to provide evidence of how the researcher reached the conclusion. Precisely, the researcher gave a detailed and accurate account of data collection and analysis processes. This was to give the reader a true picture of what transpired throughout the journey of this study.

Confirmability

With regard to confirmability, the procedures and interpretation of results should be free of bias and that the data collected, and the conclusions drawn could be confirmed by other researchers investigating the same situation (Ary, Jacobs, Irvine & Walker, 2018:511). To ensure the confirmability of the study, the researcher provided details of the methodology, described and interpreted the main theme, as well as sub-themes of the study. The researcher provided the list of the survey and interview questions in the appendices. The researcher provided the description of the context and setting of the study to enable other researchers to replicate the study.

3.4.5.2 Reliability

Reliability is a quantitative concept that relates to the consistency with which constructs are measured, and the extent to which a test or procedure produces similar

results under constant conditions on all occasions (Bell, 2014:199). It is also critical to ensure that instructions for administering the data collection instruments are clear. The reliability index of variables for the questionnaire was analysed using SPSS version 24.0, using correlation and Cronbach's alpha data analysis. The reliability index for the scale items for each of the four sub-constructs of the study are presented in Chapter 4.

3.4.5.4 Validity

Validity is extremely important when presenting quantitative research results. Hughes (2018:2) defines validity as the extent to which a question or a variable accurately reflects the concept the researcher is actually testing; this implies whether an item measures or describes what it is supposed to measure or describe. The researcher ensured that the research questions in the data collection instruments were good enough to elicit a rich description from the participants by conducting pilot testing of the instruments. Questionnaires were pilot-tested and lessons from the pilot test were incorporated to improve the final instruments. The questionnaire for this study was also examined and approved by the research supervisor (Appendix D, 169). This content validity approach was to ensure that the instruments included an adequate and representative set of items that relate to the concept of EBP; that is, how well the dimensions and elements of EBP were defined.

3.4.5 Ethical Measures

The researcher applied for ethical clearance from UNISA College of Education Postgraduate Research Ethics Committee which assessed the methodological, technical and ethical soundness of the proposal (Appendix A, 163), followed by obtaining permission from HRDC (Appendix B, 165) with the assurance and agreement that the fieldwork will be conducted in accordance with ethical procedures at all times throughout the study. A participant information statement and informed consent form (Appendix C, 167), that is written and verbal information about the purpose of the study and its procedures were given to participants before signing the consent form at the time of administering the questionnaire and conducting interviews.

Alter and Gonzalez (2018:151) stipulated that in return for their cooperation, participants should be assured of anonymity and protection of confidential information;

that is, researchers must explain the purposes, risks, use of data and benefits of participating in the research. If feeling uncomfortable to respond to specific questions, the respondent has the option to decline answering those questions and can also withdraw from the study with an assurance that their responses will not be used in the study. The participants were assured that all information given by them would be treated with sensitivity and strict confidentiality. All the responses would remain anonymous to protect participants' identity unless the participant consented to have their identity revealed. Respondents' participation in the study was voluntary but they were expected to fully cooperate with the researcher by furnishing him with honest and truthful responses. The questionnaire and the interview questions for this study were examined and approved by my supervisor. This study was conducted according to accepted and applicable national and international ethical guidelines and principles by ensuring that the research being carried out refrained from any unethical practices.

3.5 CHAPTER SUMMARY

The study adopted a concurrent mixed-methods through exploratory inductive approach in addition to the deductive use of the CIHR KTA framework proposed by Graham et al (2006:19). It drew on quantitative and qualitative data gathered through a survey of members of the committees and in-depth interviews with the chairpersons of the committees. The target participants for the study were members of the committees who are deemed policymakers in this study and eighty-four (84) members of the committees were sampled.

The data collection instruments used to collect data for this investigation entailed the development of a new self-administered questionnaire with selected response structured items and semi-structured (open-ended) interview guide. The qualitative and quantitative strands of data were analysed independently through thematic analysis and factor analysis of survey data respectively. The completed questionnaire was analysed using SPSS 24.0 where data was coded and entered. Descriptive statistical analysis of frequencies was used. The recorded interviews were transcribed verbatim and subjected to an inductive-to-deductive thematic analysis. The KTA framework was used to organise inductively derived themes into higher-order categories. The next chapter provides the data presentation and analysis of results from both the quantitative and qualitative phases of the study.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS
4.1 INTRODUCTION

This chapter provides data presentation and analysis of results from both the quantitative and qualitative phases of the study. The chapter focus on presenting the findings and analysis from both the survey of members of the committees and in-depth interviews with the chairpersons of the committees on how they perceived the management of EBP in implementing the HRD plans. First, a summary of demographic data of committee members is presented. Comparisons between level of educational qualifications and ability to understand and interpret research evidence were examined using the Chi-Square (χ^2) test of independence. This is followed by presentation of quantitative data on the respondents' perceptions on the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, the capacity to assess and approve HRD plans and sustainability of using research evidence. The final section of the chapter presents qualitative data from in-depth interviews with the chairpersons of the committees. It follows that the findings of this study are presented in accordance with the steps of the action cycle of the KTA Framework.

Psychometric properties of the sub-constructs in the hypothesised relationships were discerned in order to investigate the psychometric nomenclature of the scale items. Various statistical analysis approaches such as descriptive and inferential statistics were conducted to infer the findings of the current study. SPSS (24.0) software was used for psychometric properties and inferential statistics. According to Tampakis, Andrea, Karanikola and Pailas (2019:4), the minimum threshold of any statistical measure for internal consistency is 0.70, thus a coefficient equal to or higher than 0.70 is deemed satisfactory and more than 0.80 reveals scale items that are very satisfactory. The authors further contended that there are, however, cases where reliability coefficients lower than 0.60 are acceptable in practice. Factor analysis is conducted to validate whether there are common factors within a group of variables. The Kaiser Meyer-Olkin (KMO) measure of sampling adequacy has an index range from 0 to 1, where its minimum threshold should be greater than 0.5, and thus considered suitable for factor analysis. The Bartlett's Test of Sphericity should be significant ($p<.05$) for factor analysis to be suitable. Frequency tables representing

committee members' perceptions regarding adaptation of research evidence, inhibiting and facilitating factors, assessing and approving research evidence are presented in each section of the sub-constructs of the study. The next section presents the demographic data for the respondents.

4.2 DEMOGRAPHIC DATA FOR HRDC SECTOR HRD COMMITTEES MEMBERS

Seventy-two (n=72) committees members were sampled to participate in the survey. Fifty-nine (n=59) of the seventy-two (n=72) members completed the questionnaires, thus giving a response rate of 82%. Qualitative data was collected through conducting interviews with Chairpersons of the HRDC Sector HRD Committees and eight (8) of the twelve (n=12) targeted chairpersons were interviewed. The demographic data collected from respondents entailed duration of Sector Committee membership, age, highest qualification, gender and category of position at work. Empirical literature has shown that these variables can have a bearing on the extent to which individuals embraced the practice of EBP.

The first question address the duration of the membership of the committees as shown in Table 4.1.

Table 4.1: Duration of membership in HRDC Sector HRD Committee

How long have you been a member of your Sector Committee?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Duration	0-1 Years	1	1.7	1.7	1.7
	1-3 Years	29	49.2	49.2	50.8
	3-5 Years	27	45.8	45.8	96.6
	5-7 Years	1	1.7	1.7	98.3
	8-9 Years	1	1.7	1.7	100.0
	Total	59	100.0	100.0	

Table 4.1 portrays the duration of membership of a committee. The highest number of 49.2% (n=29) reported to have 1–3 years, while 45.8% (n=27) had 3–5 years. The rest of the respondents showed that 1.7% had 0–1 years, 1.7% had 5–7 years, and 1.7% had 8–9 years respectively.

Respondents were asked to state their age as shown in Table 4.2 below.

Table 4.2: Age profile of committee members

What is your age?					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Age	20-29	1	1.7	1.7	1.7
	30-39	14	23.7	23.7	25.4
	40-49	26	44.1	44.1	69.5
	50-59	14	23.7	23.7	93.2
	60+	4	6.8	6.8	100.0
	Total	59	100.0	100.0	

Table 4.2 above illustrates that the highest number of the respondents 44.1% (n=26) were in the age range of 40–49 years. This was followed by 23.7% (n=14) being in the age range of 30–39 years and 50–59 years respectively. Respondents in the age range 60 or more comprised 6.8% (n=4) and only 1.7% (n=1) in the age range 20–29 Years.

Table 4.3: Highest qualification of committee members

What is your highest qualification?					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Highest Qualification	Diploma	1	1.7	1.7	1.7
	Degree	11	18.6	18.6	20.3
	Masters	42	71.2	71.2	91.5
	PhD	5	8.5	8.5	100.0
	Total	59	100.0	100.0	

In terms of highest qualification, the highest number of respondents 71% (n=42) reported to have master's level degree qualification while 18.6% (n=11) indicated that they had a degree qualification. In addition, 8% (n=5) reported that they had a PhD level qualification and only 1.7% (n=1) indicated that they had a diploma qualification. It is evident that most respondents 42.9% (n=18) had master's degrees and were in the age range of 40–49 years.

Table 4.4: Gender profile of the committee members

What is your gender?					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Gender	Male	31	52.5	52.5	52.5
	Female	28	47.5	47.5	100.0
	Total	59	100.0	100.0	

Table 4.4 above shows the gender distribution of the respondents. The gender distribution of the respondents shows about the same number of men 52.5% (n=31) and women 47.5% (n=28).

Table 4.5: Category of position for committee members

Category of position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Category of position	Top Management	19	32.2	32.2	32.2
	Middle Management	23	39.0	39.0	71.2
	Professional	16	27.1	27.1	98.3
	Not stated	1	1.7	1.7	100.0
	Total	59	100.0	100.0	

Table 4.5 above summarises respondents' category of position at their respective workplaces. The highest number of respondents 38.9% (n=23) indicated that they were in the middle management category, followed by 32.2% (n=19) of the respondents indicating that they were in the top management category. In addition, 27.1% (n=16) indicated that they were professionals and only 1.7% (n=1) did not state the category of their position at work.

It could be deduced that the demographic variables such as level of highest qualification and category of position categorise members of the committees into subgroups with distinct information profiles. Therefore, explanatory hypotheses may assume that understanding and interpreting of research evidence is associated with one's level of educational qualification. The next section present the test of association between respondent's level of educational qualification and ability to understand and interpret the research evidence.

4.3 TEST OF ASSOCIATION

Comparisons between level of educational qualification and ability to understand and interpret research evidence were examined using the χ^2 test of independence that is used to test the association between the two variables. The responses to the following two questions were used to test the said association;

- What is your highest qualification?
- I find it difficult to understand and interpret research evidence

Furthermore, new variables were derived from the above-mentioned questions. Responses from the question "What is your highest qualification?" were categorised into two categories; a) Degree and below (certificate, diploma and degree); and b) Postgraduate qualification (Master's and PhD). Responses to the question "I find it difficult to understand and interpret research evidence" which were in the Likert scale form were categorised in two categories being a) Agree (Strongly Agree and Agree) and b) Disagree (Strongly Agree and Disagree).

The above being the case, the χ^2 test is set at 10% significance level, and the hypothesis of testing independence between one's understanding and interpreting of research evidence and his/her qualification were set as follows;

H_0: Understanding and interpreting of research evidence is independent of level of educational qualification.

H_1: Understanding and interpreting of research evidence is dependent of level of educational qualification.

Table 4.6: χ^2 of association

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.262[a]	1	0.071		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.36.

b. Computed only for a 2x2 table

Table 4.6 shows the χ^2 value of 3.262 at one degree of freedom (df is 1) with a calculated p-value of 0.071 being 7.1 percent. Since the calculated p-value of 0.071 is

lower than 10% the null hypothesis is rejected as there is no association between understanding and interpreting of research evidence and the level of educational qualification attained. Furthermore, the calculated χ^2 value of 3.262 is higher than the tabulated value of 2.7055 suggesting that we reject the null hypothesis of independence, thus suggesting that there is dependence between the two variables under observation.

4.4 PRESENTATION AND ANALYSIS OF SURVEY DATA

4.4.1 Adaptation of Research Evidence

This section presents the findings of the first research question: To what extent are HRDC Sector HRD committees using EBP in the course of implementing national and sector-specific HRD plans?

The question explored the perceptions of members of the HRDC Sector HRD committees with regard to the format in which the research evidence is presented to them. The capacity to adapt the research evidence has potential to influence the use of research evidence to inform policy and practice. The respondents were asked to select their response indicating the extent to which they agreed or disagreed with each statement. A four-point Likert scale was used to analyse the respondents' opinion on the adaptation of research evidence: 1= strongly disagree; 2= disagree; 3=agree; and 4= strongly agree. The next section presents the psychometric properties and descriptive statistics for the sub-construct adaptation of research evidence.

Table 4.7: Psychometric properties of adaptation of research evidence

Cronbach's α	KMO	Bartlett's Test of Sphericity	Average Variance Estimate	Factor Metrics	Mean	Standard Deviation
Adaptation 0.912	0.866	1752.189 Df=120	80.55	0.54	1.29	0.49
				0.80	2.34	1.09
				0.76	1.66	0.69
				0.67	2.08	0.82
				0.82	2.37	0.98
				0.67	2.92	0.97
				0.52	2.37	0.91
				0.69	2.17	0.93
				0.54	1.78	0.56
				0.99	3.97	12.62
				0.99	4.15	12.65
				0.99	4.56	12.60
				0.99	3.00	12.74
				0.99	4.02	12.63
				0.99	4.44	12.56
				0.99	4.42	12.57

Table 4.7 above shows that the reliability or internal consistency/ Cronbach's α is 0.912, which indicates that the scale items for the sub-construct adaptation of research evidence, are reliable. As indicated in Table 4.7 (Validity) the KMO is 0.866. Furthermore, the Average Variance Estimate (AVE) is 80.55, which indicates that the scale items of the adaptation of research evidence account for 80.55% variation in adaptation of research evidence sub-construct. With respect to Factor Metrics (FM), it is noted that some scale items such as "researchers understand policymaking context" (FM=0.99) and "research findings and recommendations are readily applicable to implement HRD plans" (FM=0.99) have significant impact on the adaptation of research evidence sub-construct. Likewise, the scale items such as "research evidence is relevant to my needs and expectations" (FM=0.54) and "research reports are readable and easy to comprehend" (FM=0.52) have minimal impact on adaptation of research evidence. In addition, the scale items such as "researchers conduct formal meetings to share and discuss findings with policymakers" and "researchers have expertise in how to communicate their findings to policymakers" have higher mean values of 4.15 and 4.56 respectively. This indicates that majority of the sampled respondents corroborate the assertion espoused above. However, the extent to which these scale items influence adaptation of research evidence is questionable in terms policy implementation. Table 4.8 presents respondents' opinions on the adaptation of research evidence.

Table 4.8: Committee members' perceptions with regard to adaptation of research evidence

Statements on Adaptation of Research Evidence	**Strongly Agree**	**Agree**	**Strongly Disagree**	**Disagree**
Research evidence is relevant to my needs and expectations	43 (72.9%)	15 (25.4%)	1 (1.7%)	0 (0.0%)
Researchers have the capacity to present their findings in the context of policymakers' expectations	15 (25.4%)	22 (37.3%)	9 (15.3%)	13 (22.0%)
Research evidence is valid, reliable, and trustworthy	25 (42.4%)	31 (52.5%)	1 (1.7%)	2 (3.4%)
Researchers engage policymakers in order to plan the scope of the project	11 (18.6%)	38 (64.4%)	4 (6.8%)	6 (10.2%)
Research evidence is clearly presented	9 (15.3%)	31 (52.5%)	7 (11.9%)	12 (20.3%)
Research findings are made available in a timely fashion	4 (6.8%)	18 (30.5%)	16 (27.1%)	21 (35.6%)

Statements on Adaptation of Research Evidence	Strongly Agree	Agree	Strongly Disagree	Disagree
Research reports are readable and easy to comprehend	7 (11.9%)	33 (55.9%)	9 (15.3%)	10 (16.9%)
Research evidence unbiased	11 (18.6%)	37 (62.7%)	1 (1.7%)	10 (16.9%)
Research reports provide summaries of key findings	16 (27.1%)	41 (69.5%)	1 (1.7%)	1 (1.7%)
Researchers conduct regular formal meetings to report on the progress of the project with policymakers	11 (18.6%)	26 (44.1%)	12 (20.3%)	10 (17.0%)
Researchers conduct formal meetings to share and discuss findings with policymakers	10 (17.0%)	31 (52.5%)	4 (6.8%)	14 (23.7%)
Researchers have expertise in how to communicate their findings to policymakers	6 (10.2%)	23 (39.0%)	8 (13.6%)	22 (37.3%)
Research findings have direct implications for HRD plans	44 (74.6%)	11 (18.6%)	0 (0.0%)	4 (6.8%)
Research findings and recommendations readily applicable to implement HRD plans	14 (23.7%)	22 (37.3%)	8 (13.6%)	15 (25.4%)
Implementation plan of research findings clearly articulated to policymakers	5 (8.5%)	19 (32.2%)	16 (27.1%)	19 (32.2%)
Researchers understand the policymaking context	7 (11.9%)	20 (33.9%)	9 (15.3%)	23 (39.0%)

Analysis of data shows that the highest number of respondents, 98.3% (n=58), (25.4% and 72.9% agree and strongly agree respectively) were of the view that research evidence is relevant to their needs and expectations. In addition, respondents were asked to indicate if research evidence is valid, reliable, and trustworthy, and most respondents, 94.9% (n=56) agreed or strongly agreed (52.5% and 42.4% respectively) with the statement. Furthermore, 81.3% (n=48) of the respondents agreed and strongly agreed (62.7% and 18.6% respectively) with the statement that research evidence is unbiased This implies that most members of the HRD committees embrace the use of and rely on research evidence to inform policy and practice. Interestingly, 67.8% (n=40) of the respondents were of the view that research evidence is clearly presented to them. This may suggest that there is an attempt by researchers to package the research evidence to the level of understanding and context of policymakers. The context in which the research results are presented could be a facilitator or hindrance to use of research evidence (Rabin & Brownson 2018:21).

Respondents were invited to provide their perceptions on collaboration between researchers and policymakers in view of incorporating the needs of the end-users of

the research evidence (policymakers). Table 4.8 depicts that 83% (n=49) of the respondents agreed and strongly agreed (64.4% and 18.6% respectively) with the statement “researchers engage policymakers in order to plan the scope of the project”. With respect to the statement “researchers conduct regular formal meetings to report on the progress of the project with policymakers”, more than half of the respondents, 62.7% (n=37), (44.1% and 18.6%) agreed and strongly agreed respectively with the statement. To assess whether implementation plans of research findings are clearly articulated to policymakers, the results show that 59.3% (n=35), (32.2% and 27.1%) disagreed and strongly disagreed respectively. The respondents perceived that the implementation plans were not clearly articulated to policymakers. Another interesting insight is that almost half of the respondents, 54.3% (n=32) disagreed and strongly disagreed (39.0% and 15.3% respectively) with the statement “researchers understand the policymaking context”. The results seem to indicate that researchers do not understand the policymaking context. It is imperative that implementation plan of research findings be clearly articulated to policymakers and that an effort should be made to adapt the results to policymakers’ context.

Respondents’ perceptions with regard to clarity of presentation of research evidence to policymakers are shown in Table 4.8. Interestingly, two thirds of the respondents, 62.7%, (n=37), (37.3% and 25.4% agree and strongly agree respectively) indicated that researchers have the capacity to present their findings in the context of policymakers’ expectations. However, 37.3% disagreed; therefore this suggests that researchers need to be capacitated in presenting research evidence in the context of policymakers’ expectations. Related to the statement that “research findings are made available in a timely fashion”, 62.7% of the respondents disagreed or strongly disagreed with the statement. It is critical that as soon as reported research evidence is available, researchers bring the results to the attention of policymakers. Concerning the statement “research reports provide summaries of key findings”, the majority of the respondents 96.6% (n=57) agreed and strongly agreed (69.5% and 27.1% respectively) with the statement. Concerning the statement “researchers have the expertise in how to communicate their findings to policymakers”, half of the respondents 50.9% (n=30), (37.3% and 13.6% disagreed and strongly disagreed respectively) were of the view that researchers did not have the expertise to communicate their findings to policymakers. There is need to explore ways to build

capacity for science communication to foster the use of research evidence. When asked if research findings had direct implications for HRD plans, most of the respondents, 93.2% (n=55) agreed and strongly agreed (18.6% and 74.6% respectively) with the statement. This may imply that the majority of the respondents embrace the idea of using research evidence to inform policy and practice. With reference to responses to the statement “research findings and recommendations readily applicable to implement HRD plans”, 61% (n=36) of the respondents were positive and 39% (n=23) were negative about the statement. This may warrant the development of an implementation strategy to ensure the appropriate use of research evidence in informing policy and practice. The next section presents psychometric properties of inhibiting and facilitating factors and perceptions of respondents on factors that may facilitate or inhibit the use of research evidence to inform policy and practice.

4.4.2 Factors that may Facilitate or Inhibit the Use of Research Evidence

The second research question aimed at understanding committee members’ perceptions of the factors that may facilitate or inhibit the use of research evidence to inform policy and practice. The research question asked: What factors and conditions have facilitated or inhibited the management of EBP by HRDC sector HRD committees? The section of the questionnaire consisted of 16 randomly ordered statements to which respondents were asked to select their response indicating the extent to which they agreed or disagreed with each statement. The statements representing the factors facilitating and inhibiting the use of research evidence were classified according to individual, research-related and organisational context. A four-point Likert scale was used to analyse the respondents’ opinions on the factors that may facilitate or facilitate the use of research evidence to inform policy and practice: 1= strongly disagree; 2= disagree; 3=agree; and 4= strongly agree. The next section presents the psychometric properties and descriptive statistics for the sub-construct inhibiting or facilitating factors.

Table 4.9: Psychometric Properties of inhibiting or facilitating factors

Cronbach's α	KMO	Bartlett's Test of Sphericity	Average Variance Estimate	Factor Metrics	Mean	Standard Deviation
Inhibiting and Facilitating Factors 0.54	0.574	546.022 Df=120	71.51	0.95	3.19	12.72
				0.94	2.90	12.74
				0.68	4.42	12.57
				0.59	2.39	0.97
				0.75	2.02	0.77
				0.74	1.95	0.71
				0.77	2.44	0.95
				0.70	2.54	0.95
				0.65	2.73	0.98
				0.71	2.19	0.80
				0.48	2.53	2.84
				0.73	3.17	1.19
				0.68	1.98	0.63
				0.72	2.44	0.97
				0.69	2.44	0.97
				0.65	2.69	1.00

Reliability and factor analysis were then applied to the variables referring to the sub-construct inhibiting or facilitating factors on the use of research evidence. Table 4.9 shows that the Cronbachs' α for the sub-construct inhibiting or facilitating factors on the use of research evidence is 0.54. This demonstrates that the scale items for this sub-construct are reliable. With reference to the validity metrics, the KMO for the sub-construct is 0.574 while as the AVE is 71.51. This suggests that the scale items account for 71.51% variation in inhibiting or facilitating factors on the use of research evidence sub-construct. Moreover, the factor metrics depicts that some scale items such as "I understand what evidence-based policymaking to be" (FM=0.95) and "I have positive attitude towards research" (FM=0.94) have significant impact on inhibiting or facilitating factors on the use of research evidence sub-construct. On the other hand, the scale items such as "Research reports written in a complex scientific format" (FM=0.59) and "Collaboration between researchers and policymakers is ineffective" (FM=0.48) have minimal impact on the sub-construct. The analysis further shows that scale item such as "I find it difficult to understand and interpret research evidence" and scale item "I understand what evidence-based policymaking to be" elicited the highest mean values of 4.42 and 3.19 respectively. This confirms the respondents' perceptions in relation to the scale items.

The response frequencies with regard to inhibitors and facilitators are presented in Table 4.10.

Table 4.10: Committee members' perceptions on factors inhibiting or facilitating the use of research evidence to inform policy and practice

Factors Facilitating Use of Research Evidence to inform Policy and Practice	Strongly Agree	Agree	Strongly Disagree	Disagree
I understand what evidence-based policymaking to be	35 (59.3%)	19 (32.2%)	0 (0.0%)	5 (8.5%)
I have positive attitude towards research	44 (74.6%)	14 (23.7%)	0 (0.0%)	1 (1.7%)
I find it difficult to understand and interpret research evidence	8 (13.6%)	15 (25.4%)	16 (27.1%)	20 (33.9%)
Research reports written in a complex scientific format	7 (11.9%)	35 (59.3%)	4 (6.8%)	13 (22.0%)
There is a gap between research and policymaking	12 (20.3%)	39 (66.1%)	3 (5.1%)	5 (8.5%)
There are different research orientations between researchers and policymakers	12 (20.3%)	42 (71.2%)	1 (1.7%)	4 (6.8%)
Researchers don't make effort to adapt the results of their research to policymaker's context	5 (8.5%)	37 (62.7%)	3 (5.1%)	14 (23.7%)
Researchers lack expertise in how to communicate their findings to policymakers	4 (6.8%)	34 (57.6%)	6 (10.2%)	15 (25.4%)
There are high costs (eg. Time and resources) in translating the results of research for policymakers	6 (10.2%)	20 (33.9%)	17 (28.8%)	16 (27.1%)
There are insufficient forums and networks available for bringing together researchers and policymakers	7 (11.9%)	41 (69.5%)	4 (6.8%)	7 (11.9%)
Collaboration between researchers and policymakers is ineffective	10 (16.9%)	36 (61.0%)	6 (10.2%)	7 (11.9%)
There is more time dedicated to read and interpret research reports	2 (3.4%)	16 (27.1%)	16 (27.1%)	25 (42.4%)
Support to implement and practice evidence-based policymaking is inadequate	9 (15.3%)	45 (76.3%)	2 (3.4%)	3 (5.0%)
Researchers don't make enough effort to disseminate their findings to policymakers	8 (13.6%)	29 (49.2%)	10 (16.9%)	12 (20.3%)
Researchers don't make enough effort to initiate contact with policymakers	6 (10.2%)	35 (59.3%)	4 (6.8%)	14 (23.7%)
The use of research evidence is a low priority in my Sector	7 (11.9%)	20 (33.9%)	16 (27.1%)	16 (27.1%)

4.4.2.1 Individual inhibitors and facilitators

The results suggest that most of the respondents 91.5% (n=54), agreed and strongly agreed (32.2% and 59.3% respectively) with the statement "I understand what evidence-based policymaking is". Interestingly, the statement "I have positive attitude towards research" registered "agree" and "strongly agree" from 98.3% (n=58) of the respondents. This clearly paints a positive outlook that committee members strongly

endorse and understand the significance of evidence-based policymaking. Similarly, almost 61% (n=36), (33.9% and 27.1% disagreed and strongly disagreed respectively) with the statement that “I find it difficult to understand and interpret research evidence”. This is attributable to the fact that most respondents have attained higher qualifications.

4.4.2.2 Research-related inhibitors and facilitators

In order to assess respondents’ perceptions to research-related inhibitors and facilitators, respondents were asked to indicate if the research reports were written in a complex scientific format. Most of the respondents, about 71.2% (n=42), agreed and strongly agreed (59.3% and 11.9% respectively) with the statement that “Research reports written in a complex scientific format”. This implies that policymakers may find it difficult to comprehend and apply research evidence when making policy decisions. There is need to translate the research evidence into a less technical language. Extant literature affirms that research reports are written in a format that is complex to most policymakers (Rabin & Brownson 2018:21). With regard to the statement “There is a gap between research and policymaking”, 86.4% (n=51), of the respondents (66.1% and 20.3% agreed and strongly agreed respectively) agreed with the statement. In addition, 77.9 (n=46) of the respondents agreed and strongly agreed (59.3% and 11.9% respectively) with the statement that “Collaboration between researchers and policymakers is ineffective”. There is a need for full research collaboration between researchers and policymakers to enhance the relevance of research evidence in informing policy and practice.

4.4.2.3 Organisational inhibitors and facilitators

Respondents’ perceptions of the statement “There is more time dedicated to read and interpret research reports” showed that 69.5% (n=41) disagreed and strongly disagreed (42.4% and 27.1% respectively) with the statement. It is imperative to dedicate more time for policymakers to consult related literature and reports to inform policy and practice. Furthermore, almost half of the respondents 54.2% (n=32), (27.1% and 27.1% disagreed and strongly disagreed respectively) with the statement that “The use of research evidence is a low priority in my sector”. In addition, there is need to prioritise and inculcate the culture of managing EBP amongst committee members. Furthermore, respondents were asked to indicate their opinion on the statement

“There are insufficient forums and networks available for bringing together researchers and policymakers”. In response, 81.4% (n=48) of the respondents agreed and strongly agreed (69.5% and 11.9% respectively) with the statement. This suggests there is limited interaction between researchers and policymakers. This calls for improved engagement between researchers and policymakers to enhance the alignment of the research evidence to the priority areas of policymakers. Engagement should be central to facilitate co-participation and knowledge exchange. Moreover, the results indicated that the majority of the respondents, 91.6% (n=54), (76.3% and 15.3% agreed and strongly agreed respectively) were of the view that there is inadequate support to implement and practice evidence-based policymaking. There is a need for strong managerial and policy support to enhance policymakers’ use of research evidence while developing strategic interventions. This can be achieved through training and development initiatives. The next section presents the psychometric properties of assessing and approving research evidence and perceptions of respondents on their capacity to assess and approve the quality of research evidence.

4.4.3 Assessing and Approving Research Evidence

The third research question was about the approval of national and sector HRD Plans that require committees to assess the validity and quality of the plans prior to approval and implementation. The question asked: “To what extent do HRDC Sector HRD committees possess skills to assess and make sense of research evidence to inform policy and practice?” The committee members should be able to assess the key components of the HRD plans, the development process and research methods for determining skills needs. The section of the questionnaire consisted of 11 randomly ordered statements to which respondents were asked to select a response indicating the extent to which they agreed or disagreed with each statement. The statements assessed committee members’ capacity to assess and approve the quality of the research evidence presented to them and its use in decision-making. A four-point Likert scale was used to analyse the respondents’ opinions: 1= strongly disagree; 2= disagree; 3=agree; and 4= strongly agree. The results are shown in Table 4.11 below.

Table 4.11: Psychometric properties of assessing and approving research evidence

Cronbach's α	KMO	Bartlett's Test of Sphericity	Average Variance Estimate	Factor Metrics	Mean	Standard Deviation
Adaptation 0.991	0.943	2592.886 Df=55	95.15	0.994	4.61	12.53
				0.995	4.58	12.53
				0.539	4.00	12.60
				0.994	4.56	12.60
				0.996	4.00	12.60
				0.990	3.78	12.67
				0.988	4.32	12.61
				0.990	3.98	12.62
				0.994	3.80	12.63
				0.991	4.12	12.60
				0.995	3.41	12.68

Furthermore, reliability and factor analysis were applied to the variables referring to the sub-construct assessing and approving research evidence. Table 4.11 above illustrates that the scale items for the sub-construct assessing and approving research evidence are significantly reliable as illuminated by the Cronbach's α value of 0.991. Concerning the validity metrics, KMO for the sub-construct is 0.943 and the results further show that the scale items account for 95.15% variation in assessing and approving research evidence sub-construct since AVE value is 95.15. In addition, factor metrics analysis revealed that scale items such as "my sector has no formal processes to translate research into policy and practice" (FM=0.996) and "sector committees are provided with training in assessing and approving HRD plans" (FM=0.988) have significant impact on the sub-construct assessing and approving research evidence. Furthermore, the scale item that has elicited minimum impact on the assessing and approving research evidence sub-construct is "I lack sufficient decision-making power to ensure policy is based on research evidence" (FM=0.539). The analysis further showed that the scale items such as "I do not have the necessary skills to interpret results from statistical analysis" and "I lack expertise in how to apply the results of the HRD plans" had higher mean values of 4.61 and 4.58 respectively. This indicates that majority of the respondents are in agreement with the scale items.

In order to assess respondents' perceptions on their capacity to assess and approve the quality of the research evidence, Table 4.12 shows that respondents perceptions to the statement "I don't have the necessary skills to interpret the results" slightly over one third, 61% (n=36) disagree and strongly disagree (27.1% and 33.9% respectively) with the statement.

Table 4.12: Committee members' perceptions on assessing and approving of research evidence

Statements on Assessment Skills Possessed by Respondents	**Strongly Agree**	**Agree**	**Strongly Disagree**	**Disagree**
I don't have the necessary skills to interpret results from statistical analysis	6 (10.2%)	17 (28.8%)	20 (33.9%)	16 (27.1%)
I lack expertise in how to apply the results of the HRD plans	1 (1.7%)	19 (32.2%)	20 (33.9%)	19 (32.2%)
I lack sufficient decision-making power to ensure policy is based on research evidence	9 (15.3%)	15 (25.4%)	15 (25.4%)	20 (33.9%)
Members of Sector Committees are not encouraged to use research evidence	3 (5.1%)	17 (28.8%)	19 (32.2%)	20 (33.9%)
My Sector has no formal processes to translate research into policy and practice	2 (3.4%)	40 (67.8%)	9 (15.3%)	8 (13.6%)
I have the necessary skills to collect and analyses policy-related data or information	15 (25.4%)	34 (57.6%)	8 (13.6%)	2 (3.4%)
Sector Committees are provided with training in assessing and approving HRD plans	5 (8.5%)	30 (50.8%)	6 (10.2%)	18 (30.5%)
Evidence-based policymaking is valued in my Sector	8 (13.6%)	34 (57.6%)	4 (6.8%)	13 (22.0%)
Senior decision-makers are usually generalists who may lack specified policymaking skill and knowledge	11 (18.6%)	33 (55.9%)	8 (13.6%)	7 (11.9%)
Policy decisions are based on research data and evidence about what works	5 (8.5%)	34 (57.6%)	5 (8.5%)	15 (25.4%)
There are too many competing interests to consider when making policy-relevant decisions	22 (37.3%)	31 (52.5%)	2 (3.4%)	4 (6.8%)

The result indicates that respondents were more likely to have the skills to deduce the meaning of the research evidence presented to them. Respondents were then asked to indicate their perception on the statement, "I lack expertise in how to apply the results of the HRD plans". In response, two thirds, 66.1% (n=39) of the respondents disagree and strongly disagree (32.2% and 33.9% respectively) with the statement. The results suggest that the respondents have the expertise to use research evidence to inform policy and practice. Interestingly, the majority of the respondents, at least 83% (n=49), agreed and strongly agreed (57.6% and 25.4% respectively) with the statement that "I have the necessary skills to collect and analyse policy-related data or information". Furthermore, to determine whether committees are provided with

training in assessing and approving HRD plans, the result shows that 59.3% (n=35) agreed and strongly agreed (50.8% and 8.5% respectively) with the statement. This suggests that there is some training conducted for the committees in assessing and approving the quality of the research evidence presented to them. Most notably, respondents' perception to the statement "senior decision-makers are usually generalists who may lack specified policymaking skill and knowledge" indicate that 74.5% (n=44) agreed and strongly agreed (55.9% and 18.6% respectively) with the statement. This indicates policy implementation failure due to lack of requisite policymaking skills and knowledge.

Respondents' perceptions on their capacity to use research evidence on decision-making and policy formulation policymakers were explored. Table 4.12 shows that slightly over half of the respondents, 59.3% (n=35), (33.9% and 25.4% disagreed and strongly disagreed respectively) with the statement: "I lack sufficient decision-making power to ensure policy is based on research evidence". Surprisingly, the respondents perceived that they had decision-making power to ensure policy is based on research evidence. It could be that members are given the opportunity to contribute to decision-making processes. Notably, two thirds of the respondents, 66.1% (n=39) disagreed and strongly disagreed (33.9% and 32.2% respectively) with the statement: "Members of the sector committees are not encouraged to use research evidence". This is further supported by 71.2% (n=42), of the respondents (57.6% and 13.6% agreeing and strongly agreeing respectively) with the statement "evidence-based policymaking is valued in my sector". This demonstrates that Sector Committees recognise the importance of using research evidence to inform policy and practice. On the other hand, respondents are of the view that their sector has no formal processes to translate research into policy and practice as depicted by 71.2% (n=42), agree and strongly agree (67.8% and 3.4% respectively) with the statement. When asked whether there are too many competing factors to consider when making policy-relevant decisions, majority of the respondents, 89.8% (n=53), agree and strongly agree (52.5% and 37.3% respectively) with the statement. The results suggest that respondents were of the view that there are other competing factors that influence policy-relevant decisions. The next section presents the correlation matrix of association between adaptation of research evidence, inhibiting and facilitating

factors, assessing and approving research evidence and research evidence informing policy and practice.

Table 4.4: Nexus of relationships

Correlations Adaptation of research evidence, inhibiting/ facilitating factors, Assessing and Approving research evidence and research evidence informing policy and practice					
		RPT	ADPT	INFT	AART
Research Evidence Informing Policy and Practice (RPT)	Pearson Correlation	1	.991**	.913**	.999**
	Sig. (2-tailed)		.000	.000	.000
	N	59	59	59	59
Adaptation (ADPT)	Pearson Correlation	.991**	1	.856**	.990**
	Sig. (2-tailed)	.000		.000	.000
	N	59	59	59	59
Inhibiting & Facilitating Factors (INFT)	Pearson Correlation	.913**	.856**	1	.908**
	Sig. (2-tailed)	.000	.000		.000
	N	59	59	59	59
Assessing and Approving (AART)	Pearson Correlation	.999**	.990**	.908**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	59	59	59	59

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

The results in Table 4.13 above show that there is a significant and positive association ($r=0.991$, $p<0.01$) between adaptation of research evidence and research evidence informing policy and practice. The analysis further shows that there is a significant and positive association ($r=0.913$, $p<0.01$) between inhibiting and facilitating factors and research evidence informing policy and practice. In addition, the results show that there is a significant and positive association ($r=0.999$, $p<0.001$) between assessing and approving research evidence and research evidence informing policy and practice. These findings indicate that sub-constructs adaptation of research evidence, inhibiting and facilitating factors, assessing and approving research evidence are significantly associated with research evidence informing policy and practice.

Table 4.5: Nomological web

Regression Coefficients Adaptation of research evidence, inhibiting/ facilitating factors, assessing and approving research evidence and research evidence informing policy and practice													
		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.78	.000				.000	.000					
	ADPT	0.36	.000	.348	8.47	0.00	1.000	1.000	.991	1.000	.035	.010	1.20
	INFT	0.13	.000	.116	5.42	0.00	1.000	1.000	.913	1.000	.034	.087	4.66
	AART	0.69	.000	.549	12.3	0.00	1.000	1.000	.999	1.000	.045	.007	5.87

a. Dependent Variable: RPT

This study hypothesised that:

H_1: Adaptation of research evidence is significantly and positively related to research evidence informing policy and practice.

H_2: Inhibiting and facilitating factors are significantly and positively related to research evidence informing policy and practice.

H3: Assessing and approving research evidence is significantly and positively related to research evidence informing policy and practice.

As shown in Table 4.14 above, the sub-construct adaptation of research evidence (β=0.348, t=8.47) is significantly and positively related to research evidence informing policy and practice. Adaptation of research evidence accounts for 34.8% variation in research evidence informing policy and practice. Based on the aforementioned, hypothesis H_1 is supported in this empirical study. Furthermore, inhibiting and facilitating factors (β=0.116, t=5.42) are significantly and positively related to research evidence informing policy and practice. Thus, inhibiting and facilitating factors account for 11.6% variation in research evidence informing policy and practice. Based on the assertion espoused above, hypothesis H_2 is also supported in this empirical study. With respect to assessing and approving research evidence, (β=0.549, t=12.3) the sub-construct is significantly and positively associated with research evidence informing policy and practice. The sub-construct accounts for 54.9% variation in research evidence informing policy and practice. This implies that hypothesis H_3 is also supported in this empirical study.

Vatcheva, Lee, McCormick and Rahbar (2016:1) defined multicollinearity, or near-linear dependence, as high correlation of two or more predictor variables in a multiple regression model while as Variance Inflation Factor (VIF) is a tool to measure the extent of variance inflation. According to extant literature, in order for multicollinearity assumptions not to be violated, the tolerance levels must be less than 1 and the VIF must be greater than 1. Based on the aforementioned and as indicated in the regression coefficient table above, the tolerance levels are less than 1 and VIF values are greater than 1, which explain the fact that multicollinearity assumptions are not violated in this empirical study. The next section presents the findings on possible strategic interventions to sustain the management of EBP.

4.4.4 Strategic Interventions to Sustain Evidence-based Policymaking

The fourth research question explored possible strategic interventions that might be considered to sustain the management of evidence-based policymaking. It is critical therefore, that committees identify strategies that enhance the use of research evidence to improve the impact and sustainment of policy interventions. The question asked: “What alternatives might be considered to sustain the management of EBP for HRDC and its key stakeholders?” Respondents were asked to consider all possible strategic interventions that could sustain the use of research evidence in informing policy and practice. An emergent thematic analysis was conducted on the suggested strategic interventions. Respondents were asked to rate them, where 1 demonstrated the highest priority and 5 the lowest priority. Thereafter, the frequency of responses was weighted inversely (by weighting scores of 1 as 5, 2 as 4, 3 as 3, 4 as 2, and 5 as 1). Furthermore, these weighted responses were added for each strategic intervention yielding a total weighted score. The top five (5) order of highest priorities as perceived by the members of the committees are presented in Table 4.15 below:

Table 4.6: Frequency of rankings on strategic interventions

Strategic Interventions	**Frequency of Respondents as per how they Ranked the Strategic Interventions**					
	Rank 1	**Rank 2**	**Rank 3**	**Rank 4**	**Rank 5**	**Total Weighted Score**
	Frequency	**Frequency**	**Frequency**	**Frequency**	**Frequency**	
Research capacity building for policymakers	17	11	9	6	4	172
Develop policy briefs	14	9	8	8	8	156
Develop EBP Implementation Plan	12	9	6	9	11	143
Stakeholder engagement (Networking and collaboration)	13	7	4	10	13	138
Build capacity for assessing quality of research evidence	9	8	7	7	16	128

Table 4.15 shows that among the 47 members of the committees who provided the strategic interventions, the order of highest priorities was “research capacity building for policymakers” (total weighted score =172). This was followed by “develop policy briefs” (total weighted score=156). “Develop EBP implementation plan had a total

weighted score =143. “Stakeholder engagement (Networking and collaboration)” had a total weighted score =138, and lastly “build capacity for assessing quality of research evidence” had a total weighted score =128.

4.5 PRESENTATION AND ANALYSIS OF IN-DEPTH INTERVIEW DATA

The survey data presented above provided an overview of the extent to which committee members perceived the management of EBP. This section presents qualitative data generated from in-depth interviews with the chairpersons of the committees. Qualitative data was collected through a semi-structured (open-ended) interview guide (Appendix E, 175) and eight (8) of the twelve (n=12) targeted chairpersons were interviewed. The in-depth interviews facilitated deep inquiry to provide much insight and detailed sense in the use of research evidence in informing policy and practice. Demographic data for the chairpersons is presented first. The four main themes that emerged from the in-depth interviews were subjected to an inductive-to-deductive thematic analysis. Similarly, the KTA framework was used to organise inductively derived themes into higher-order categories. The themes were drawn together to correspond to the steps in the action cycle of the KTA Framework adopted for this study, the four main themes are adaptation of knowledge; inhibiting / facilitating factors; assessing and approval, and sustainability. There are three sub-themes of factors that may inhibit or facilitate the use of research evidence that emerged from the data analysis. These sub-themes include individual inhibitors and facilitators; research-related inhibitors and facilitators; and systematic inhibitors or organisational context and their relative facilitators (See Table….) below. These factors encourage interaction and partnership with end-users at every step of implementing research evidence in informing policy and practice. It can be deduced from the in-depth discussions that several issues were raised that dictated the extent to which the chairpersons embraced the management of EBP in the course of implementing national and sector-specific HRD plans.

Table : Emergent themes and sub-themes

Emergent Themes	**KTA Framework**	**Data Analysis**
Adaptation of research evidence	x	
Factors that may inhibit or facilitate the use of research evidence	x	

• Individual inhibitors and facilitators • Research-related inhibitors and facilitators • Organisational inhibitors and facilitators		X X X
Assessing and approving research evidence	X	
Strategic interventions to sustain evidence-based policymaking	X	

4.6 DEMOGRAPHIC DATA FOR CHAIRPERSONS OF THE HRDC SECTOR HRD COMMITTEES

The chairpersons were six (6) men and two (2) women ranging from 40 to 60+ years of age. Three men held a PhD level qualification, three held a master's level qualification, and the two women held a master's level qualification. Six chairpersons were in full time employment in different sectors of the economy and two were in retirement. They had all been members of the committees for a period ranging from four to six years. In line with confidentiality protocols, the chairpersons were code-named CSC01–CSC08, where CSC represents Chairperson of Sector Committee. The next section presents the findings on adaptation of research evidence.

4.7 FINDINGS FROM INTERVIEWS

4.7.1 Adaptation of Research Evidence

This section presents the views of chairpersons of the committees pertaining to their ability to access and comprehend research results. Knowledge adaptation is critical for the management of EBP as it can influence the user to either adapt or not adapt the knowledge generated by researchers. The first set of the in-depth interview questions prompted responses that related to adaptation of research evidence. The questions started by soliciting information on chairpersons' understanding of EBP practice and its importance in informing HRD plans compared to other factors that can influence formulation of the plans (political, experience, intuition). Most of the respondents were familiar with the term EBP but did not fully understand what it entails. One of the chairpersons (CSC03) commented that:

“I understand evidence-based policymaking as a process that integrate evidence into practice in order to improve policy formulation. It is with evidence that we can get better results from policy implementation. However, I don’t know what evidence-based policymaking process entails; I only have read about it in theory and have not practically applied it.”

In light of the foregoing sentiments, it is imperative that policymakers become familiar with current EBP processes and practice implications. This can be achieved through engaging and networking with other experts in the field. According to the chairpersons, EBP is critical to addressing issues of national interest. They were of the view that the crisis with policymaking is essentially that of implementation; there is lack of effort in putting the ideas into action. CSC07 reckoned that:

“We have a challenge of policy failure in Botswana due to poorly prepared policies. Mind you, policies are formulated to tackle critical socio-economic challenges. Therefore, it is important that policies are developed based on relevant and high-quality research evidence for successful implementation.”

In-depth discussions further revealed that chairpersons strongly felt that the management of EBP was critical to inform policy and practice. They argued that research evidence is trustworthy and unbiased compared to other factors that can influence policy formulation. To quote one chairperson who felt that research evidence reduces guesswork:

“*While there can be many factors to consider when formulating a policy, I have on a number of occasions, witnessed policy failure based on other factors other than research, such as policies developed based on political influence. With relevant research, there is no guesswork. The research evidence usually reduces subjectivity and biasness, it is obvious that ineffective policies are eliminated and there is certainty that service delivery will improve.”* (CSC01)

It is clear that most of the chairpersons interviewed embraced the process of EBP, the reason for this could be attributed to the respondents occupying higher positions in their respective organisations and higher educational levels attained. It may be argued that this gives the respondents an advantage in comprehending the use of research evidence to inform policy and practice. Therefore, it could be concluded that

respondents embraced the use of research evidence to inform policy and practice. Their views are similar to those of committee members who have shown positive attitudes towards EBP.

With reference to whether the practice of EBP is embedded in their sector committees, the respondents highlighted that national and sector-specific HRD plans are developed after conducting situational analysis, thereby generating relevant research evidence. The development of national and sector-specific HRD plans entails conducting a situational and environmental scan of skills in demand by the industry. Notwithstanding that the respondents approve of EBP, they are of the opinion that they lack the skills needed for effectively implementing the findings of the research evidence generated through the situational analysis. Chairperson CSC04 lamented that:

"I want to indicate that from conception of a situational analysis project, consultants engage us and periodically conduct progress review meetings. Once they have compiled a report, they dump it on us. You'll find that as policymakers we will have different interpretations. We don't have the technical know-how to roll out the findings and recommendations on the report. This is why most policies fail. Researchers, in most instances, do not develop an implementation plan that should be followed towards achieving a policy intervention."

This comment could be an indication that there is no collaboration between researchers and policymakers during policy implementation. In a note that carries a similar understanding, chairperson CSC06 pointed out that:

"Many a times, policymakers are perceived as passive adopters faithfully conforming to the research evidence presented to them. There is an assumption that the presentation of the research evidence to policymakers guarantee its use to inform policy and practice. Without proper guidance, we cannot readily assimilate the evidence into our practice." (CSC06)

From the ensuing discussion, one discerns that the respondents are of the view that there is ineffective collaboration of researchers and policymakers during implementation of research findings. Most worrying trend is a consultancy arrangement that usually exclude the development of an implementation plan. This

gives an indication that researchers fall short of developing an implementation plan that could facilitate the successful use of research evidence to inform policy and practice. In essence, there is a gap between researchers and policymakers.

Another component of the interview questions in this study involved eliciting respondents' perceptions about whether the research evidence presented to them was clear and accessible. The format in which the research evidence is presented has potential to influence the use of research evidence to inform policy and practice. It is evident from the in-depth discussions that researchers compile lengthy reports using complex research language. One of the chairperson had this to say about the presentation of the research evidence:

"The thing is researchers compile lengthy reports, as policymakers we don't have time to read voluminous reports. The reports could be more user-friendly if they were summarised. Researchers should develop policy briefs highlighting key issues. In that way, it will be easier for us policymakers to pick critical areas of policy concern to address as per the recommendations in the reports. Otherwise honestly speaking, once I receive a lengthy report, I never get to read it in detail. Most of the time, it is shelved, and that is a waste of taxpayers' money considering the amount that was used to conduct the research." (CSC03).

Most respondents were worried that consultancy research is mainly about financial gain than aligning research priorities with those of the end-users (policymakers). Once the consultant has delivered the report to the client, they are not interested as to whether their findings are implemented. This is illuminated by the following sentiments:

"I mean, they use their complex technical language which we find difficult to interpret. How are we expected to successfully implement our policies? Researchers have assumed too readily that we can interpret their reports. Policymakers need more than simply being given the report; we need support in adapting the research evidence in line with our priorities principally to address policy concerns. If you're to write a report, you need to think very carefully about the consumers of your report. Will they be in a position to comprehend it?" (CSC05)

It is clear from the majority of the interviewees that researchers tend to overlook the importance of incorporating the needs of policymakers. They emphasised the need to

ensure that policymakers understand the research evidence presented to them. Another chairperson in support of the aforementioned sentiments said:

"I think that as policymakers, we are usually more than willing to use research evidence to inform policy and practice, but for the most part, we are overwhelmed by the complexity of the research evidence presented to us. Available research evidence is frequently not presented in a format that makes it useful to us. Researchers need to incorporate our needs and ensure that we fully appreciate the outcome of their research as the end-users." (CSC08)

According to this chairperson, researchers are not helpful; it is upon policymakers to make sense of the research evidence presented to them. The same chairperson went on to say:

"I am of the view that researchers are not helpful since they don't know the policymaking process. The question is do researchers ever appreciate how things work in a policymaking context? Similarly, do policymakers understand the research procedures and the scientific terminology used by researchers? It is imperative to strike a balance, knowledge producers (researchers) should appreciate how policymakers operate and on the other hand, knowledge consumers (policymakers) should understand researchers' context." (CSC08)

What can be deduced from this finding is that researchers do not seem to know the policymaking context, and contrariwise policymakers do not understand the research process. The chairperson quoted above went further to suggest that there is a need to strike a balance in which case both researchers and policymakers should appreciate each other's operational contexts for purposes of aligning research evidence to the needs of policymakers. The next section presents the findings on factors that may inhibit or facilitate the use of research evidence.

4.7.2 Factors that may Inhibit or Facilitate the use of Research Evidence

The analysis in this section is drawn from chairpersons' response to a set of questions that elicited information about factors that may inhibit or facilitate the use of research evidence to inform policy and practice. There are three categories of factors that may inhibit or facilitate the use of research evidence. These factors include individual inhibitors and facilitators; research-related inhibitors and facilitators; and systematic

inhibitors or organisational context and their relative facilitators. The chairpersons identified several inhibitors and facilitators, the themes that emerged were discussed under each category of the inhibitors and facilitators to EBP.

4.7.2.1 Individual inhibitors and facilitators

Unpredictably, the chairpersons identified the difficulty to understand and interpret research evidence as one of the inhibitors to informing policy and practice. This is despite most chairpersons having attained a master's qualification and above. Literature has shown that the ability to use research evidence to inform policy and practice is associated with higher educational qualifications with the assumption that they took a research module during their studies. The chairpersons' perceptions indicate that they did not have the technical capacity to understand and interpret the research evidence presented to them. It is worth noting that HRDC Sector HRD Committee members echoed the same sentiments of lack of skills. One of the chairpersons lamented that:

"Actually, I have never been trained to conduct research, matters worse interpret research evidence always presented by researchers in the form of reports, yet as a policymaker I'm expected to be informed by evidence when making policy decisions. This has always been a mammoth task for me, most of my decisions are based on my intuition and experience, but I want to strongly believe that if I had the research skills, my decisions could be spot on" (CSC02).

Not having the relevant skills in understanding and interpreting research evidence may lead to policy implementation failure. This could mean that HRDC should invest more in building capacity in the management of EBP for HRDC Sector HRD committee members. This is what chairperson CSC06 said to support chairperson CSC02:

"Probably the issue at hand is that we are never engaged in the research process, researchers or consultants do things their own way, following their processes in isolation from us policymakers. Truly speaking, there is a gap between researchers and policymakers. How are we expected to grasp the scientific knowledge they have generated when we were not engaged from the onset? This issue can be solved by researchers engaging policymakers through the research process, specifically through designing and facilitating training programmes in research for policymakers" (CSC06).

The point raised from the comments suggest that there is a knowledge research gap on the part of policymakers. Some chairpersons highlighted that they are never engaged in the research process and suggested that they should be engaged throughout the research process. The findings have also established that policymakers did not have the technical capacity to understand and interpret the research evidence presented to them. They advocated for training programmes designed for policymakers that are aimed at promoting the use of research evidence amongst policymakers.

4.7.2.2 Research related inhibitors and facilitators

Some chairpersons raised concern with regard to the relevancy and applicability of the research evidence presented to them. They are of the view that in most instances the evidence presented can be best understood by those operating in an academic setting rather than those in a policymaking environment. The chairpersons CSC03 and CSC04 explicitly stated that:

"I'm often baffled by the complex scientific knowledge presented to us policymakers with little or no effort to align research priorities to a policymaking context. So, we tend to miss out on rich data that we could use to inform our decision-making process in the quest to solve policy issues. This clearly shows that researchers are never exposed to a policymaking context. They need to appreciate how we operate to ensure the relevancy and applicability of their research outputs in addressing policy concerns." (CSC03)

"The complex language used in most research articles I have read is difficult to understand. I often fail to make sense of scientific terms used. I'll go with reports or articles that are written in simple and appropriate language. This means that researchers should make an effort to present their reports in a manner that is appealing and understandable to us the consumers." (CSC04)

Another chairperson who suggested the need for a science communicator supported this view:

"I think it's high time researchers spend some time in a policymaking environment so as to appreciate how things work. Most of their reports are based on theory than practice. That is why we rely mostly on our past experience when formulating policies.

I'll suggest that there be a science communicator responsible for aligning the research evidence to our priorities. This person will be a link between researchers and policymakers, specifically trained to break down the research evidence in a way that policymakers can make sense of it and use it to inform policy and practice." (CSC07)

The above comments by the chairpersons indicate that the research evidence presented to policymakers is not generalisable to their setting. They were adamant that researchers should appreciate how things work in a policymaking context. This would guide researchers to generate research evidence that reflects and prioritises the needs for policymakers. Another research-related inhibitor identified by the respondents was difficulty of accessing research articles relevant to their practice. As one chairperson explained:

"The nature of our work dictates that we respond to policy issues with immediate effect, as such we are interested in the evidence that be applied immediately. On the other hand, it is not easy for me to find research articles, I have to search from a wide array of journals and journal articles. I have to read all the articles I come across and try to sort out what may be relevant to me, and this is so exhausting and demanding." (CSC06)

All chairpersons except CSC07 reported lack of access to relevant databases and research journals. They pointed out that their organisations had not subscribed to the databases and research journals. CSC01 buttressed the point about difficulty to access research evidence in saying:

"In a situation where the research evidence is available, there is an issue of subscription to databases. This usually blocks us out to access the research evidence. You'll find out that our organisations have not subscribed to these databases, sometimes they don't see the value in doing that. I want to categorically emphasise the need to subscribe to relevant journals and databases for ease of access and reference." (CSC01)

This finding suggests that for timely access to research evidence by policymakers, chairpersons would appreciate subscriptions to relevant databases and research journals. Chairperson CSC07 on the other hand reported that their organisation subscribed to several databases and research journals, and this was complemented

by electronic library. This arrangement has proven to provide timely access by policymakers to available research evidence. CSC07 had this to say:

"My organisation has subscribed to a number of databases and journals. An information management system is available that acts as a data bank or research repository to store research evidence. In this way, we are able to retrieve research evidence immediately within the confines of our organisation. An e-library has made it easy for us to search for online journals, there is also a knowledge management system called LIBWIN that is used to archive research. The support for policymakers to access research evidence cannot be overemphasised." (CSC07)

These findings suggest that successful dissemination and uptake of research evidence requires the use of appropriate language understandable to end-users (policymakers). Furthermore, researchers should appreciate the policymaking context to align the research evidence to the priorities of policymakers. It is also suggested that subscriptions to relevant databases and research journals would enhance accessibility of research evidence to policymakers. The respondents have raised the importance of having knowledge management systems in place to archive and be able to retrieve research evidence.

4.7.2.3 Organisational inhibitors and facilitators

Almost all chairpersons voiced their concern on the issue of lack of organisational support. They believed that lack of support by their superiors discouraged them from suggesting possible areas of improvement to current practice.

"Our leaders tend to preach open door policy. You sit with them and share what you think could best improve our current approach to policymaking, [but] the moment you leave their office, your suggestion is water under the bridge. I often feel so frustrated by this development because the next thing the very same leaders complain that we are not applying ourselves, we're not creative enough to drive the mandate of the organisation. There is no support at all since our leaders ignore our input most of the time." (CSC05)

The chairperson believes leadership does not support subordinates in facilitating the use of research evidence to inform policy and practice. Another chairperson supported this view by suggesting that:

“I want to suggest a bottom-up approach to the process of policymaking; in this way most employees will feel that their contributions are valued. I can just imagine putting forward my idea being embraced and actually solving a policy issue, I’ll feel so elated and motivated to do more. Our leadership should create a platform where we can all be heard.” (CSC03)

The implication of the above remarks is that policymakers need support from management to endorse their thinking in improving current decision-making processes using research evidence. Another issue raised was insufficient time to read and evaluate research articles, and time to implement new ideas. This finding corresponds with the perception held by committee members. One chairperson argued that:

“As a matter of fact, there is insufficient time to engage in sound research activities. Although we are more than willing to incorporate new ideas as policymakers, we are overwhelmed by our core business. We tend to prioritise what is in our respective annual business plans than anything else. For us to be able to successfully use research evidence to inform policy and practice, time must be set aside for us to read, analyse and evaluate research evidence. When sufficient time is devoted to research, chances are very high that our policies can be informed by research evidence.” (CSC08)

Another chairperson had this to say:

“You know what, change in practice is not an easy thing. I’ve often seen new ideas as an extra burden, more so that we have very limited time on the job to complete what we do on daily basis. Otherwise if I cater for new things, I’ll be left behind and will’ve not delivered. Truly speaking, time is a constraint. There is need to plan for research activities from the onset for issues such as capacity building and dissemination activities.” (CSC02)

These views are based on the opinion that the use of research evidence leads to change in practice, challenging the status quo that may upset procedures and ultimately cause confusion amongst policymakers. It is evident from the above comments that if policymakers were given a certain period to engage in research activities, policies would most likely be informed by research evidence. Interestingly, when probed further on whether they had authority to change procedures,

chairpersons were of the view that they had the authority to implement new ideas. It may be argued that most chairpersons occupy top management positions and were more likely to have authority to influence the implementation of new ideas. This is what one of the chairpersons said:

"I strongly feel that if we could be accorded more authority than we currently have to influence policy directions, we can make our own judgements with confidence when making policy decisions. This would definitely go a long way in reducing uncertainties when responding to challenges in our society." (CSC01)

According to the above expressed sentiments, it is apparent that policymakers must be given space and freedom to exercise their authority to influence policy directions based on research evidence. By so doing, it will boost policymakers' confidence to make decisions independently when addressing policy issues.

4.7.3 Assessing and Approving Research Evidence

This section presents the perceptions of chairpersons as explored through a series of questions, which considered their technical capacity to assess and approve the quality of research evidence presented to them. It is apparent that there are certain concerns associated with an appraisal criteria and skills for policymakers to appraise the quality of the research evidence presented to them. Chairperson CSC03 expressed the view that:

"I'm very much worried about how things are currently. We don't have any set of guidelines to follow in assessing the quality of the research evidence presented to us. We are bound to be informed by research that is not trustworthy with a possibility to make our own different interpretations. HRDC Sector HRD committees should develop a standardised assessment criteria to guide members in assessing the quality of research evidence. … "I've witnessed instances where we had to recall some consultancy services due to shoddy jobs where consultants will have simply copied and pasted their previous projects. There are cases where they have gone scot free with this kind of practice, primarily because we don't have guidelines to appraise the evidence presented to us."

It is apparent from the above sentiments that there is lack of a standardised assessment criterion to guide policymakers in assessing the quality of research

evidence presented to them. This finding suggests the need for the development of a set of standards for guiding policymakers in assessing the quality of the research evidence. Most of the chairpersons interviewed were also of the view that there is no uniformity in appraising the quality of the research evidence. One chairperson had this to share:

"There is no uniformity in the manner in which we appraise the quality of research evidence presented to us. Concisely, the whole process is unsystematic to the extent that we use our own level of understanding that may be different to that of other colleagues. There is a possibility for misconceptions that may lead to wrong policy decisions; a criterion to follow is critical and long overdue. The framework should follow a standardised and systematic process for assessing and approving national and sector-specific HRD plans." (CSC04)

It is evident from the above comment that in order to avoid biasness, there is a need to develop an appraisal framework that will facilitate consistency in the manner which research evidence is appraised for quality. All chairpersons suggested skills development in appraising the quality of research evidence. The point made by one chairperson was that there was a lack of competencies and skills to appraise the quality of research evidence.

"Although we are expected to give constructive feedback to enhance the quality of the research evidence presented to us, personally, I don't think I have the skills to appraise the quality of the research evidence. At one point, we were trained in the process of developing a sector plan; however, the component on appraising the quality of research evidence was limited. We could have been accorded an opportunity for the practical application of the evaluation criteria developed, to have that hands-on experience; otherwise, it was just theoretical." (CSC08)

The chairpersons observed that empowering policymakers with relevant skills to appraise the quality of research evidence is critical to formulation of robust policies. They are of the view that a well capacitated policymaker will give concrete feedback to improve the quality of the research evidence. This view was corroborated by the comment expressed by chairperson CSC05:

"To be frank with you, in order for us to be able to assess the quality of the research evidence availed to us, we need to be empowered through timely and continuous professional development. By so doing, we'll be in a position to contribute effectively in giving feedback and thus ultimately improving the quality of the evidence. This will obviously lead to high standard policy outcomes." (CSC06)

The outcome of this finding suggests that if members of the committees are expected to be competent in appraising the quality of the research evidence, they need to possess the necessary skills and self-confidence in doing so. This can be achieved through continuous capacity-building initiatives for policymakers.

4.7.4 Strategic Interventions to Sustain Evidence-Based Policymaking

This section gives the views of chairpersons with reference to strategic interventions perceived to sustain EBP. Sustainability of managing EBP will be critical to the successful implementation of HRD plans; committees will have to be concerned with how best to ensure continued use of research evidence to inform HRD plans in order to address the issue of skills mismatch. It is evident that the chairpersons recognised lack of technical skills to use research evidence to inform policy and practice amongst policymakers. It is clear from the chairpersons' views that one of the key strategic interventions is skills development for researchers and policymakers. One of the chairpersons recognised that:

"I do recognise that for us to gain an advanced understanding of the policymaking process there is need for skills development for both researchers and policymakers. If our respective sectors can design short courses that introduce us to research methodology and data analysis, our capability in the use of research evidence to in inform policy and practice will be enhanced." (CSC04)

Similarly, chairperson CSC02 emphasised the importance of skills development for both researchers and policymakers. It is evident that there is a closer link between skills development and the use of research evidence to inform policy and practice. The chairperson said:

"Skills development is foundational; its initiatives should be geared towards the transformation of policymakers to a point where they can feel comfortable in being part of research teams. In a similar fashion, researchers should also be capacitated in

disseminating their findings in such a way that policymakers can fully use the research evidence to inform policy and practice."

The interviewees were also concerned with lack of guidelines and implementation plans that could be used to give policymakers direction in using research evidence to inform policy and practice. Chairperson CSC03 expanded on this view, providing emphasis on the development of guidelines and implementation plans:

"You'll find that in most instances, research contractual agreements do not include the development of implementation plans. Whether this is seen as extra costs, I don't know. It seems researchers lack the skills to do this; they need to be capacitated on this one, like yesterday. If we were to effectively practise evidence-based policymaking, there should be guidelines and implementation plans that give us direction to use research evidence to inform policy formulation."

Another chairperson supported this view; this is what the chairperson had to say:

"I don't know who said a research process ends with researchers handing over a report of their findings to their client. This is common here in Botswana. This misconception must be dealt with once and for all. In my view, the process should go beyond presentation of results, and include researchers guiding consumers on their findings with implementation. The research projects should plan and develop a robust dissemination plan where researchers' handhold policymakers in interpreting and breaking down the research evidence to their context. This calls for capacitating researchers to present their findings in a manner that is understandable to policymakers." (CSC06)

It is clear from the sentiments above that there is a need to also develop both dissemination and implementation plans for effective use of research evidence in informing policy and practice. According to the chairpersons, another issue that needed to be dealt with is the research gap between researchers and policymakers. Chairpersons suggested the need to strengthen the engagement of policymakers in the research process. Chairperson CSC08 pointed out the importance of building relationships between researchers and policymakers:

"I'm particularly concerned with the level of our involvement during the research process. It is apparent that we're not engaged in the conduct of the research project

but only at the end of the research project, during sharing of the findings of the research. The question is: how do we expect researchers to know our priorities as policymakers when we are not involved? Equally important, this will ensure that policymakers are given an opportunity to appreciate the research process." (CSC08)

This finding demonstrates that currently there is limited participation of policymakers in the research process. It is thus highly likely that researchers will not address the needs of policymakers. The chairpersons have called for establishing a close relationship between researchers and policymakers so that researchers can appreciate policymakers' priorities, and likewise policymakers can gain insights into the research process. Lack of communication between researchers and policymakers has also been seen to be a major challenge. The chairpersons added that communication can provide valuable feedback to both researchers and policymakers. In this way, the research evidence will be refocused and better aligned to the priorities of policymakers. Chairperson CSC01 expressed the view that:

"Most of the time, there is an issue of communication breakdown between researchers and policymakers. We generally tend to overlook the importance of effective communication between stakeholders. There are no proper communication channels; this seems to be a major bottleneck to the effective use of research evidence in informing policy formulations. As such, there is need to develop effective communication channels between researchers and policymakers."

On another note, one of the chairpersons raised the importance of incentives for policymakers to use research evidence to inform policy and practice, saying that:

"There is tremendous value in providing incentives for policymakers to embrace evidence-based policymaking. Key ingredient to successful use of research evidence to inform policy and practice is dangling the carrot since this can be deemed as [an] additional task and, as such, incentives can motivate us to use research evidence" (CSC07).

The comments above seem to suggest that incentives are a proactive approach to ensure the use of research evidence by policymakers. Effective incentive schemes are a catalyst for the applicable use of research evidence to inform policy and practice.

4.8 CHAPTER SUMMARY

This chapter presented both the quantitative and qualitative components of data for the study collected through a self-administered questionnaire from members of the HRD committees with selected response structured items and in-depth interviews with the chairpersons of the committees respectively. The data collection instruments solicited the respondents' perceptions on the primary steps of the action cycle of the KTA framework. These steps included the adaptation of research evidence, inhibiting or facilitating factors on the use of research evidence, the capacity to assess and approve HRD plans and sustainability of using research evidence. It can be deduced from the results analysis that a number of issues were raised that dictate the extent to which the committees embraced the management of EBP in the course of implementing national and sector-specific HRD plans. In a note that carries a similar understanding, most of the issues raised relate to the findings of the literature reviewed for the current study. A comprehensive discussion of the findings of the survey data and in-depth discussion is carried out in the next chapter, Chapter 5.

CHAPTER 5: DISCUSSION AND INTERPRETATION OF RESULTS
5.1 INTRODUCTION

The main objective of the study was to explore the technical capacity of members of HRDC 12 Sector HRD Committees in the management of EBP in the course of implementing the national and sector-specific HRD plans on all matters of national human resource development. This chapter converges the discussion of the findings from both the survey of members of the committees and in-depth interviews with the chairpersons of the committees on how they perceived the management of EBP in implementing the HRD plans. The discussion and interpretation of the results are based on a convergent, concurrent, parallel mixed-methods through exploratory inductive approach in addition to the deductive use of the KTA framework. The conceptual model adopted from the action cycle of the CIHR KTA Framework has been shown to be appropriate in dissecting issues related to the management of EBP.

The findings of this study were informed by the steps in the action cycle of the KTA framework adopted for this study, which are: adaptation of research evidence; inhibiting / facilitating factors; assessing and approval of research evidence; and sustainability in using research evidence. The findings of the study show some similarities and differences with regard to the views of both the members and chairpersons of the committees. Overall, the sub-constructs: adaptation of research evidence, inhibiting and facilitating factors, and assessing and approving research evidence, are significantly and positively related to research evidence informing policy and practice. This current study was an attempt to increase the scope of understanding the management and use of research evidence to inform policy and practice in the context of HRD committees.

5.2 TESTS OF ASSOCIATION

Based on the assumption that understanding and interpreting of research evidence is dependent on the level of educational qualification, the Pearson χ^2 test revealed a significant dependence between the two variables. This is related to the reason why a higher percentage of respondents with postgraduate qualifications disagreed with the statement; “I find it difficult to understand and interpret research evidence” while a higher percentage of those with degrees and below agreed with the statement. This may be attributed to respondents mostly having attained a postgraduate qualification,

which requires one to have undertaken a research module and conducted a research project. As a result, respondents may be familiar with and assertive in appreciating and interpreting the research evidence presented to them.

It can be confidently concluded that there is statistical proof that understanding and interpreting of research evidence is associated with one's level of educational qualification. Thus, this rules out the possibility that the association could be due to chance and it can therefore be concluded that association between understanding and interpreting of research evidence and one's level of educational qualification observed in the sample is highly likely to be reflected in the population. Past studies have shown that the capacity to manage EBP is associated with level of educational qualifications since highly educated policymakers with more developed skills may better able to embrace the new research evidence (Backhaus, Beerens, Van Rossum, Verbeek & Hamers 2018:636; Irvine 2019:15). This implies that the majority of the respondents in this study had the relevant educational qualifications to better manage the use of research evidence to inform policy and practice.

5.2.1 Respondents' Perceptions on the Adaptation of Research Evidence

This section discusses the views of members and Chairpersons of the HRDC Sector HRD Committees with respect to adaptation of research evidence. Overall, the sub-construct adaptation of research evidence (β=0.348, t=8.47) is significantly and positively related to research evidence informing policy and practice. Adaptation of research evidence account for 34.8% variation in research evidence informing policy and practice. Based on the aforementioned, hypothesis H_1 is supported in this empirical study. This positive relationship (H_1) is consistent with the findings of a study conducted by Gibbs, Krieger, Cutbush, Clinton-Sherrod and Miller (2016:408) that provided empirical support for the effect that making adaptations is key for an evidence-based intervention to be effective. Lengnick-Hall, Fenwick, Hurlburt, Green, Askew and Aarons (2019:266) backed this assertion in which they argued that adaptation is ideal to enhance the successful implementation of new interventions in line with policymakers' context and ensuring fit for purpose interventions. Haynes, Rowbotham, Redman, Brennan, Williamson and Moore (2018:18) further noted that research evidence presented to policymakers should be adjusted to real practice

needs, with flexibility to accommodate local adaptations and the provision of clear benefit to policymakers.

The results indicate an urgent need for researchers to package research evidence-based on policymakers' contexts. This is followed by fine-tuning the process of knowledge transfer to the types of decisions the policymakers undertake and the policymaking environments in which they operate (Escoffery & Carvalho 2012:7; Rabin & Brownson 2018:21). Kalavani et al (2018:288) indicated that the acceptance and use of research evidence is based on transferring actionable messages from a body of research knowledge, and not simply sharing results of a study through a research report. DuMont (2015:23) contended that knowing more about the potential users of research would improve the production and use of research. Considering these findings, there is need to understand effective approaches to the adaptation of research evidence in order to achieve value for money for investing in policy research.

Interestingly, the findings of this current study indicate that 67.8% of the members of the HRD committees are of the view that research evidence is clearly presented to them. This suggest that members felt that the research evidence is presented to the level of understanding and context of policymakers. In contrast, it is evident from the in-depth discussions with the chairpersons that researchers compile lengthy reports using complex research language. It is clear from the majority of the chairpersons that researchers tend to overlook the importance of making research reports appealing and easy to comprehend, as an attempt to make research validations more specific and applicable. Literature affirms that research reports are written in a format that is complex to most policymakers and usually published in academic rather than practitioner journals (Rabin & Brownson 2018:21).

Notwithstanding the positive relationship between adaptation of research evidence and research evidence informing policy and practice, a key frustration noted by the respondents was lack of understanding of the policymaking context by researchers and inversely policymakers not understanding the research process. These findings suggest that adaptation of research evidence is not central in policy and practice. This could be accounted for by lack of policymakers' exposure to and participation in research activities. The context in which the research results are presented could be a facilitator or hindrance to use of research evidence (Rabin & Brownson 2018:21).

There was a suggestion to the effect that researchers and policymakers should appreciate each other's operational context for purposes of making research evidence meaningful to the end-users (Munn et al 2018:84).

It also emerges from the findings of the current study that both the members and Chairpersons of the HRDC Sector HRD Committees reported lack of collaboration and engagement between researchers and policymakers. They contend that researchers tend to engage policymakers in the early stages of project initiation and less in the later stages of implementation. The chairpersons lamented that while it is ideal to collaborate with researchers in research projects, it has generally proven to be practically impossible. This is attributable to the fact that there is lack of functional research-policy networks. This is despite collaboration between researchers and policymakers being ideal for producing relevant research evidence that can influence policy and practice. This implies that bridging the evidence-practice gap has a significant contribution to make in enhancing policy outcomes (Williamson, Tait, El Jardali, Wolfenden, Thackway, Stewart, O'Leary & Dixon 2019:8). This conclusion is consistent with the large body of literature that interactions between researchers and policymakers increase the prospect of research findings being used to inform policy and practice (Langlois, Montekio, Young, Song, Alcalde-Rabanal & Tran 2016:3).

Cairney and Oliver (2018:7) suggested that interactions between researchers and policymakers can be enhanced through relationship-building activities necessary to facilitate the use of research evidence to inform policy and practice. Carrington et al (2016:127) supported this viewpoint where they opined that an attempt to close the research-practice gap should be based on closer collaboration between researchers and policymakers. Conversely, Oliver, Kothari and Mays (2019:10) cautioned against possible conflict between researchers and policymakers where tensions can arise due to the different contextual backgrounds of the parties involved. A cautious approach will be for the researchers and policymakers to agree on the policymaking processes and outcomes, set ground rules and identify research-policy actors to link the two groups (Cullerton, Adams, Forouhi, Francis & White 2019:1080).

Another key frustration noted by 59.3% of the members and four chairpersons of the committees was that policy implementation plans are usually not clearly articulated. Despite the fact that there is already a considerable body of literature dealing with

implementation science, both the members and chairpersons were of the view that there is lack of a systematic implementation plan. Underpinning much of this concern is the issue of continuous policy implementation failure. This finding points strongly to the fact that there is no clarity on how policymakers should use research evidence presented to them. This is despite a common belief that policies formulated based on relevant and robust research evidence are poised to address policy issues.

Haynes, Rowbotham, Redman, Brennan, Williamson and Moore (2018:1) argued that research-informed policies can help prevent harm, maximise resources, tackle the serious challenges facing contemporary society and otherwise contribute to enhanced policy outcomes. The development of a rigorous implementation plan may provide insights to policymakers to employ mechanisms aimed at influencing policies and ultimately address issues that have arisen during the implementation process (Zengele 2019:8). This study thus emphasises the importance of adaptation of research evidence to policymakers' context. It calls for HRD committees to infuse adaptation of research evidence into their management of EBP.

5.2.2 Respondents' Perceptions on Factors that may Inhibit or Facilitate the Use of Research Evidence

Most inhibitors and facilitators reported to influence the management of EBP in the current study are consistent with those reported in the extant literature (Karam-Gemael et al 2018:129; Katowa-Mukwato et al 2018:511; Newman, Cherney & Head 2016:28). This current study has established that the sub-construct inhibiting and facilitating factors (β=0.116, t=5.42) is significantly and positively related to research evidence informing policy and practice. Thus, inhibiting and facilitating factors account for 11.6% of the variation in research evidence informing policy and practice. Based on the assertion espoused above, H_2 is also supported in this empirical study. This particular finding confirms the importance of understanding the constraints and facilitators in EBP to provide appropriate measures in the use of research evidence to inform policy and practice. Identifying these factors is just the first step to enhancing HRDC Sector HRD Committee members' technical capacity to manage EBP that will ultimately lead to the successful implementation of the NHRDS 2009-2022. Shayan, Kiwanuka and Nakaye (2019:13) advanced three major categories of barriers to research use, namely, individual, research-related and organisational inhibitors. The following is the

discussion of each category of the inhibitors to EBP with possible strategies that can facilitate the use of research evidence as perceived by both members and Chairpersons of the HRDC Sector HRD Committees.

5.2.2.1 Individual inhibitors and facilitators

It is shown in Table 4.9, the factor metrics depict that some scale items such as “I understand what evidence-based policymaking to be” (FM=0.95) and “I have positive attitude towards research” (FM=0.94) have a significant impact on inhibiting or facilitating factors on the use of research evidence sub-construct. This confirms the respondents’ perceptions in relation to the scale items. This implies that members and chairpersons of the committees valued and embraced the use of research evidence to inform policy and practice. This is an indication that both members and chairpersons of the committees have a positive attitude towards EBP. This may be attributed to respondents mostly having attained a postgraduate qualification as portrayed in the demographic data for the current study. The qualification requires one to have undertaken a research module and conducted a research project; as such, respondents may be familiar with the implications of using research evidence to inform policy and practice.

The findings of this study resonate with those of a study conducted by Katowa-Mukwato et al (2018:511), who postulated that policymakers’ positive attitude towards research use will motivate them to embrace the use of research evidence to inform policy and practice. This clearly paints a positive outlook that the committee members strongly endorse and understand the significance of EBP. Despite the positive attitude to EBP, four of the eight interviewed chairpersons intimated that they were familiar with the term EBP but did not fully understand what it entailed. This could be that the chairpersons were able to express their feelings during the in-depth discussions while as members had limited options in the questionnaire to express their stance. In light of the foregoing findings, it is imperative that policymakers’ needs, and goal-oriented interests be nurtured through the availability of on-site research resources and strong motivation to promote EBP practice implications (Li et al 2018:773).

5.2.2.2 Research-related inhibitors and facilitators

As shown in Table 4.9, the factor metrics analysis (FM=0.59) for scale item “Research reports written in a complex scientific format”, indicates that 71.2% of members of the committees were of the perception that the scientific language used is complex. One chairperson (CSC08) intimated that they were overwhelmed by the complexity of the language used in the research reports. This may also explain the issue of policy implementation failure since policymakers cannot discern what is entailed in the research evidence presented to them. It is evident that there is obstruction of communication between researchers and policymakers due to complex scientific language used by researchers (Newman et al 2016:28). It could be that policymakers are not used to statistical scientific language used by researchers when interpreting and presenting their findings.

Makkar et al (2018:2) reported that the suboptimal use of research to inform policy and practice is attributable to research often not presented in a clear, user-friendly, and summarised format with clear policy implications. In a note that carries a similar understanding, Karam-Gemael et al (2018:129) confirmed that scientific publications using complex statistical language prevent research evidence from being accessible outside the academic sphere and exclude non-scientists as possible readers of publications. It is therefore incumbent upon both researchers and policymakers to develop policy briefs or summaries that can communicate complex scientific information in plain and understandable language. This effort will culminate in more concise and less jargon-filled reports (Cairney & Oliver, 2018:4). Karam-Gemael et al (2018:130) went on to suggest the training of writers of journal articles should specialise in science communication. A science-policy interface platform created with the function of translating research into a less technical language and understandable to policymakers should be established. These comments are consistent with the need for a significant investment in science communication.

5.2.2.3 Organisational inhibitors and facilitators

With respect to organisational inhibitors and facilitators, there was general consensus amongst chairpersons regarding the difficulty to access research articles, databases and journals related to their practice. Notably, there was no item in the questionnaire that solicited the views of the members of the committees related to accessibility of

research articles, databases and journal articles. By contrast, the in-depth discussions with the chairpersons allowed probing for further information. This gave the chairpersons an opportunity to explain more of their perceptions with regard to the use of research evidence to inform policy and practice. The issue of difficulty in accessing research evidence from various sources can be attributed to policymakers having to search from a wide array of search engines, which could be exhausting and time-consuming while having to respond to policy issues timeously.

This finding lends support to the findings of a study by Yahui and Swaminathan (2017:12) affirming that the process of appraising a research article was considered a demanding and time-consuming process. There seems to be confusion on the part of policymakers on where to start searching for relevant evidence. This could be that there are a number of databases, of varying scope and degree of inclusiveness. In some instances, policymakers have difficulties in performing electronic searches on the internet and generic search engines such as Google (Ellen, Lavis, Horowitz & Berglas 2018:9). These assertions could explain the need to facilitate policymakers' access to relevant databases by providing on-site research resources.

Furthermore, there is need to enhance policymakers' ability to find relevant research evidence. Policymakers' information-seeking abilities are critical for acquiring relevant research evidence to inform policy and practice (Sleutel, Bullion & Sullivan 2018:169). Yahui and Swaminathan's (2017) study further supplemented the assertion that there is limited access to search engines and journal articles. It was argued that, despite journal articles being online, some databases required a fee or membership for access. The respondents raised the importance of having knowledge management systems in place to archive and be able to retrieve research evidence. This calls for a significant investment in subscribing to relevant content-rich databases for ease of access by policymakers.

Another emergent issue established in the current study was that the majority of the chairpersons were of the perception that there is insufficient time to read and evaluate research articles, and time to implement new ideas. This finding corresponds with the perception held by 69.5% of members of the committees. One explanation may be that policymakers are overwhelmed by their respective organisational core tasks. Marshall (2018:3) affirmed this viewpoint that policymakers are time-poor

professionals in highly demanding jobs and that most do not have time to consider research evidence. There is a contention that when sufficient time is devoted for policymakers to read, analyse and evaluate research evidence, chances are very high that policies can be informed by research evidence.

The results also indicate that the majority (91.6%) of members and almost all chairpersons of the committees voiced their concern about the issue of lack of organisational support. One of the chairpersons opined that lack of support by their superiors discouraged them from suggesting possible areas of improvement to current practice by using research evidence. This finding is corroborated by a study conducted by Liyanage et al (2018:1231) which revealed a lack of peer mentoring and support for policymakers. They argued that strong support can enhance and provide incentives to policymakers to apply research evidence while developing strategic interventions. They went on to indicate that these shortcomings can be addressed through training and development initiatives, specifically training on supplementary skills to improve skills in managing research projects, peer mentoring and support. The implications of this finding are that policymakers need strong management and policy support by improving current decision-making processes that inculcate the culture of using research evidence to inform policy and practice.

The current study also highlighted respondents' perceptions with regard to having authority and decision-making power in influencing the use of research evidence to inform policy and practice. Surprisingly, the findings indicate that slightly over half (59.3%) of the members of the committees are of the view that they had the decision-making power to influence policy directions. This is despite the majority of members of the committees occupying lower positions in the hierarchical structure of their respective organisations. It could be that members are given the opportunity to contribute to decision-making processes. Similarly, and as anticipated, the chairpersons were of the view that they had the authority to implement new ideas. Unlike members of the committees, it can be argued that most chairpersons occupy top management positions and were more likely to have authority to influence the implementation of new ideas.

The findings in this study concerning having authority and decision-making power are in contrast to the findings of a study by Hall et al (2017:916) who identified a lack of

authority amongst professionals as another major barrier related to organisational setting. They posited that organisations have a complex hierarchical structure of stakeholders that often limits the professional autonomy to implement research to practice. Practitioners have little control over variables such as budget and timelines. For instance, while research evidence may show that a particular strategic intervention can address specific challenges, the final decision-makers in the organisation are management. The need for adopting a seamless organisational structure and excellence criteria for longer-term relationships is a necessity. Management of an organisation is responsible for creating a conducive institutional climate that encourages the use of research evidence since this will facilitate improved practice of EBP.

5.2.3 Respondents' Perceptions on Assessing and Approving Research Evidence

Results of this current study demonstrated that with respect to assessing and approving research evidence, (β=0.549, t=12.3) the sub-construct is significantly and positively associated with research evidence informing policy and practice. The sub-construct account for 54.9% variation in research evidence informing policy and practice. This implies that H_3 is also supported in this empirical study. This finding is consistent with the large body of literature that the many decisions being made by policymakers should be based on a systematic appraisal of high-quality scientific research evidence (Lazo 2018:1). This study has also established that members of the HRD committees felt that they had the skills (61%) to interpret the results and expertise (66.1%) to apply the results to inform policy and practice respectively. This finding substantiates the assertion that most respondents for this current study had attained a postgraduate qualification, which requires one to have undertaken research module and conducted a research project. As a result, respondents may be familiar with and confident in appreciating and interpreting the research evidence presented to them.

The majority of the members (74.5%) of the committees expressed concern about senior decision-makers usually being generalists who may lack specific policymaking skills and knowledge. Therefore, policy implementation failure may be attributed to lack of requisite policymaking skills and knowledge. This finding is supported by the

assertion of Beyers and Hanegraaff (2017:7) that many policymakers are compelled to be ‘issue-generalists’ due to the complexity and diversity of the policy agenda. Policymakers are therefore obliged to seek expert advice to cater for the lack of specialisation. Policymakers should be competent specialists on a particular policy issue or domain. In the same manner, Jann and Wegrich (2019:6) purported that specialists’ role is shaped by their responsibility for a particular policy issue and with high level of familiarity with a body of knowledge. Therefore, it is more reasonable that the larger proportion of the committees should constitute subject matter specialists to keep abreast of HRD policy issues.

It also emerged from the findings of the current study that both the members (71.2%) and the majority of the chairpersons of the committees reported lack of appraisal criteria and guidelines to appraise the quality of the research evidence presented to them. It is evident that there is no uniformity in appraising the quality of the research evidence. One of the chairpersons lamented that the process of appraising research evidence was unsystematic and subjected to different policy interpretations that may lead to wrong policy decisions. This current study arrived at a similar finding to a study conducted by Mårtensson et al (2016:595) that highlighted lack of a widely acknowledged quality standards for research practice and lack of uniformity in current assessment methods. In view of this finding, HRD committees should develop standardised assessment criteria to guide members in assessing the quality of research evidence. The development of the criteria should be based on consensus, currency, proximity, selectivity and high methodological quality (Hodgetts, Elshaug & Hiller 2014:2198; Samuel et al 2016:643).

Interestingly, there appeared to be some training conducted for the committees in assessing and approving the quality of the research evidence presented to them as perceived by 59.3% of the members of the committees. All the chairpersons supported this position but expressed concern that training is usually theoretical and lacks the aspect of practical application. Extant literature has shown that lack of technical skills by policymakers is one of the main inhibitors to policymakers’ effective use of evidence (Oliver et al 2014:6). According to Stewart et al (2018:243), policymakers should possess skills that enables them to access and make sense of various forms of research evidence to inform policy and practice. Based on the findings of the current study, there is need for a hands-on experience for policymakers through timely and

continuous professional development. Training in critical appraisal skills will empower HRD committees to be competent in appraising the quality of the research evidence presented to them (Abdullah et al 2014:287).

5.2.4 Strategic Interventions to Sustain Evidence-Based Policymaking

Results of this current study demonstrated that with regard to strategic interventions to sustain EBP, there was a consensus between the 47 members of the committees who expressed frustration that there is lack of research capacity building for researchers and policymakers. Uzochukwu et al (2016:9) argued that lack of research uptake skills and lack of understanding of research outputs and low demand for high-quality research amongst policymakers leads to poor uptake of research findings. The respondents explicitly stated that one of the key strategic interventions is skills development for both researchers and policymakers. Similarly, a study conducted by Vitale et al (2018:137) supplemented this assertion by emphasising the need for an innovative approach to increase the sustainability capacity of policymakers in developing a sustainability action-planning model and training curriculum to support evidence-based initiatives as a way of sustaining their positive impact.

Furthermore, this viewpoint concurs with that of Brownson, Royer, Ewing and McBride (2016:170) for the need to equip researchers and policymakers with better competencies in policy development, implementation, and evaluation. It is apparent that investing in skills development for both researchers and policymakers will enhance their capacity to use research evidence to inform policy and practice. Building capacity will facilitate closer connections between researchers and policymakers resulting in ownership of findings and the uptake of research evidence to inform policy and practice.

Another emerging issue that was raised in the survey data was a lack of guidelines and implementation plan. Even though there is already a considerable body of literature dealing with implementation science, both the members and chairpersons of the committees believed that there is lack of a systematic implementation plan (Alston, Nichols, and Allender, 2019:3; Højberg et al., 2018:170). Guidelines and implementation plans are essential for guiding policymakers in using research evidence to inform policy and practice. A possible explanation could be that researchers lack capacity to develop EBP guidelines and implementation plans. Both

the members and chairpersons of the committees agreed that there is need to develop guidelines and implementation plans to support the use of research evidence to inform policy and practice.

Similar to the findings of this current study, previously used guidelines and frameworks have proved to provide additional insight into the use of research evidence to inform policy and practice (Alston et al 2019:3). Furthermore, this viewpoint is supported by a previous study conducted by Højberg et al (2018:170) in which the authors argued that the development of an implementation framework demonstrates a promising approach to implementing policy interventions through active co-production between researchers and policymakers in order to fast-track KTA initiatives. The tools for the use of research evidence must make policymakers' jobs easier and must be relevant to their operational context.

The findings of this current study also demonstrated that currently there is limited participation of policymakers in the research process. The respondents called for establishing a close relationship between researchers and policymakers so that researchers can appreciate policymakers' priorities, and likewise policymakers can gain insights into the research process. Emphasis was placed on networking and collaboration between researchers and policymakers as a strategic intervention to sustain the use of research evidence to inform policy and practice. This finding is consistent with that of existing literature that improved engagement between researchers and policymakers will enhance the likelihood that the research evidence presented will focus on priority areas that meet the needs of policymakers (Carrington et al 2016:127). A closer relation between researchers and policymakers needs to be sustained through effective communication channels and dissemination plans. Researchers need to be informed of the priorities of policymakers likewise policymakers should better organise and communicate their priorities to researchers. Both groups should be involved in the conceptualisation and conduct of a research project.

One of the significant findings from the interviews in the current study was the importance of providing incentive schemes for policymakers to use research evidence to inform policy and practice. The assumption is that there is great value in providing incentives for policymakers to embrace EBP. The case in point is that policymakers

may deem the use of research evidence as an additional task for them. Therefore, the availability of incentives is more likely to increase the likelihood that policymakers would use research evidence to inform policy and practice. The extant literature shows that there has been limited focus on the issue of providing incentive schemes for policymakers to motivate them use research evidence to inform policy and practice. The issue of incentive schemes is probably an important contextual factor in the sense that incentives could be useful behaviour change tools that can motivate policymakers to embrace the use of research evidence to inform policy and practice. The chairpersons suggested that incentives would be a proactive approach to ensure the use of research evidence by policymakers. Effective incentive schemes are a catalyst to the applicable use of research evidence to inform policy and practice (Uneke, Sombie, Keita, Lokossou, Johnson & Ongolo-Zogo 2017:136).

Another noteworthy strategic intervention raised by members of the committees was the development of policy briefs as knowledge-sharing tools. The format of disseminating research evidence and effective channels of communication are key to the successful use of research evidence to inform policy and practice. Dagenais and Ridde (2018:204) defined a policy brief as a context-specific summary providing an overall picture of a problem under study. A policy brief is a tool of knowledge transfer that summarises the results of a study written in simple language to present the findings in a concise manner to policymakers. In other words, policy briefs are developed to reinforce and highlight key findings arising from a study with the view to presenting information of interest and action items to policymakers. Kitaw and Aseffa (2017:308) argued that a policy brief should be prepared well, disseminated and assessed for impact in order to provide value for money for investing in policy research. It is, therefore, critical that researchers develop policy briefs as part of disseminating the findings of their studies to policymakers.

5.3 CHAPTER SUMMARY

It is apparent there are emerging issues related to each step of the Action Cycle of the KTA Framework. Issues that emerged with respect to the perceptions of respondents to adaptation of research evidence included: packaging and presenting research evidence; lengthy reports and use of complex language; lack of understanding the policymaking context by researchers and inversely policymakers not understanding

the research process; lack of collaboration and engagement between researchers and policymakers; and lack of implementation plans. Issues that related to the perceptions of respondents on factors that may inhibit or facilitate the use of research evidence entailed positive attitudes towards EBP; development of policy briefs; difficulty in accessing research articles, databases and journals; building policymakers' ability to search for relevant research evidence; insufficient time to read and evaluate research articles; lack of organisational support; and authority and decision-making power. Concerning respondents' perceptions on assessing and approving research evidence, issues raised covered skills to interpret the research evidence; policymakers being generalists; lack of appraisal criteria and guidelines; and training on appraising research evidence that was theoretical rather than practical. As for the strategic interventions suggested to sustain EBP, respondents highlighted the need for skills development for both researchers and policymakers; participation of policymakers in the research process; and provision of incentive schemes. The next chapter presents the implications of the study, limitations and directions for future research, and conclusion of the study.

CHAPTER 6: IMPLICATIONS OF THE STUDY, LIMITATIONS, CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

6.1 INTRODUCTION

The main objective of the study was to explore the technical capacity of members of the 12 HRDC sector HRD Committees in the management of EBP in the course of implementing the national and sector-specific HRD plans on all matters of national human resource development. The conceptual model adopted from the action cycle of the CIHR KTA Framework was shown to be appropriate in dissecting issues related to the management of EBP. The KTA framework has two separate but related phases: the knowledge creation phase and the action-cycle phase, a process leading to the actual application of research evidence in informing policy and practice. The objectives of this thesis aligned with and are located at the start of the action cycle with a focus on the respondents' perceptions of the adaptation of research evidence; inhibiting or facilitating factors on the use of research evidence; the capacity to assess and approve HRD plans; and sustainability of using research evidence.

The findings of the study have several implications for incorporating and promoting the management of EBP, specifically the use of research evidence in informing policy and practice. Furthermore, the findings and implications for this study can be used to form the basis for future research. Although this study provides relevant and interesting insights with regard to the management of EBP as perceived by chairpersons and members of the HRDC Sector HRD committees, it is important to recognise the limitations associated with the study, which are discussed below.

6.2 LIMITATIONS

The limitations identified in this current study could form the basis for future research. A key limitation was that researchers were not included in the sample as they could have enhanced the understanding of the problem and provided a counterfoil for the perceptions of the members and chairpersons of committees.

6.3 CONCLUSIONS

This current study explored the technical capacity of HRDC Sector HRD committees in managing EBP. The scope of policymakers' capacity is likely to influence the uptake and use of research evidence to inform policy and practice. Generally, the findings of

the current study showed that all the sub-constructs of adaptation of research evidence, factors inhibiting or facilitating the use of research evidence, and assessing and approving the quality of research evidence are significantly and positively related to research evidence informing policy and practice. This study thus presents a number of interesting insights into the management of EBP. The identification of research-policy needs that influence the use of research evidence to inform policy and practice will assist in effecting system-wide strategic interventions to develop policies that have positive impact. Overall, the insights emerging from this current study provide conceptual tools to use research evidence to inform policy and practice.

The study sought to complement and advance the literature on the field EBP management essentially contributing to the research-policy interface in Botswana context. Botswana as an emerging economy is still grappling with understanding the dynamics of EBP management. There is still a need to initiate, develop and sustain EBP through strategic interventions. The insights gained from the current study can be used as a basis for future research. The answers provided by this current study provide a basis for suggestions to enhance the management of EBP as a pillar of the NHRDS, 2019–2022.

6.4 IMPLICATIONS OF THE STUDY FOR THEORY AND PRACTICE

The insights based on the perceptions of chairpersons and members of the HRDC Sector HRD committees in this current study have revealed the areas for possible improvement in managing EBP in the context of Botswana. The insights are critical in facilitating the use of research evidence to inform policy and practice. A better understanding of issues raised in this study forms the basis for developing targeted and effective strategic interventions that promote the use of research evidence by policymakers. Findings from this current study and extant literature have demonstrated the importance of creating a functional research-to-policy interface to support the use of research evidence in informing policy and practice. The study provides strong empirical evidence and contributes to the management of EBP literature by implementing the steps in the action cycle of the KTA Framework to facilitate the use of research evidence to inform policy and practice as perceived by the committees. To the researchers' knowledge, this is the first study to explore the technical capacity of policymakers in the management of EBP in the context of Botswana. The use of the

KTA framework in a culturally different setup and context has demonstrated and enhanced its application as a framework that facilitates the use of research evidence to inform policy and practice.

The findings showed that the majority of respondents in this study had the relevant educational qualifications to better manage the use of research evidence to inform policy and practice. The Pearson χ^2 test revealed that understanding and interpreting of research evidence is dependent on the level of educational qualifications. With reference to the views of the respondents on the adaptation of research evidence, adaptation of research evidence is significantly and positively related to research evidence informing policy and practice. The results indicate an urgent need for researchers to package research evidence based on policymakers' context. There were mixed reactions between chairpersons and members of the committees on whether researchers compiled lengthy reports using complex research language. Literature affirms that researchers tend to generate lengthy research reports using complex scientific language (Rabin & Brownson, 2018:21).

Furthermore, there was a suggestion that researchers should know how things work in the policymaking context, and conversely policymakers should appreciate how researchers generate scientific knowledge for easy of reference. The respondents further revealed the need to enhance collaboration and engagement between researchers and policymakers. Respondents emphasised the development of implementation plans to guide policymakers in using research evidence to inform policy and practice. Considering these findings, adaptation of research evidence is important in achieving value for money for investing in policy research.

With regard to respondents' perceptions on factors that may inhibit or facilitate the use of research evidence, the results show that inhibiting and facilitating factors are significantly and positively related to research evidence informing policy and practice. The findings have shown that respondents understand EBP as a process that integrate evidence into practice. However, it is evident that they fall short of knowing what it entails. Generally, the results show that chairpersons and members of the committees valued and embraced the use of research evidence to inform policy and practice. It is also apparent that there is need for a significant investment in science communication

that entails the development of policy briefs or summaries that can communicate complex scientific information in plain and understandable language.

The chairpersons further opined that there was difficulty in accessing research articles, databases and journals related to their practice. Respondents suggested a significant investment in subscribing for relevant content rich databases for ease of access by policymakers. The respondents further pronounced the importance of developing their skills in searching for relevant research evidence. Another emergent issue raised was the provision of enough time to read and evaluate research articles, and time to implement new ideas. The respondents raised the value of having knowledge management systems in place to archive and be able to retrieve research evidence. From this research, it was also evident that there is lack of organisational support. The implication of this finding is that policymakers need strong management and policy support to facilitate the use of research evidence to inform policy and practice. Surprisingly and contrary to extant literature, the findings of this current study show that chairpersons and members of the committees felt that they had authority and decision-making power in the use of research evidence to inform policy and practice. Policymakers should be given the authority to use research evidence to inform policy and practice.

The results of this current study demonstrated that assessing and approving research evidence is significantly and positively associated with research evidence informing policy and practice. Interestingly, this study has established that respondents felt that they had the skills and expertise to interpret the results of a research project. This finding substantiates the assertion that respondents with tertiary qualifications are better placed to interpret the research evidence presented to them. Furthermore, respondents expressed concern that policymakers are generalists and may lack specific policymaking skills and knowledge. Policymakers should be competent specialists specific to a policy issue or domain.

Respondents reported a lack of appraisal criteria and guidelines to appraise the quality of the research evidence. There is a need to develop a standardised assessment criterion to guide members in assessing the quality of research evidence. Respondents reported some training being conducted for the committees in assessing and approving the quality of the research evidence training. However, they expressed

concern that the training on appraising research evidence was theoretical rather than practical. Training interventions should, therefore, be practically oriented to enhance their effectiveness. As for the strategic interventions suggested to sustain EBP, respondents highlighted the need for skills development for both researchers and policymakers and participation of policymakers in the research process. It is also apparent that a more realistic approach would increase the return on investment in capacity-building initiatives for members of the committees in order to enhance their scientific literacy. One significant finding in this current study is the need to provide incentive schemes for policymakers. Effective incentive schemes are a catalyst for the applicable use of research evidence to inform policy and practice (Uneke et al 2017:136).

6.5 CONTRIBUTION OF THE STUDY

What can be deduced from the findings in this current study is that issues that emerged were consistent with that of extant literature on EBP. This current study has helped to shed some light on issues of the research-policy gap as perceived by HRDC Sector HRD committees and, by so doing, taken into consideration the needs and concerns of policymakers in promoting the management of EBP. The findings of this study have provided insights with respect to enhancing the management of EBP for effective and efficient use of research evidence to inform policy and practice. This study contributes to the growing body of literature on the management of EBP and implementation science in the context of Botswana.

6.6 RECOMMENDATIONS

- Researchers should use less technical language, and a clear, user-friendly, and summarised reporting format with clear policy implications, specifically, to make research validations more specific and applicable, and easy comprehension by policymakers.
- Researchers should take into consideration policymakers' operational contexts and inversely the policymakers should appreciate the research process.
- There is need to enhance collaboration and engagement between researchers and policymakers from the onset throughout the research project lifecycle to facilitate co-participation and knowledge exchange.

- For effective use of research evidence to inform policy and practice by policymakers, clearly articulated implementation plans designed to guide policymakers should be developed.
- Management should invest in subscriptions to research databases, search engines and journal articles of varying scope to enable policymakers to perform electronic search and timely access to relevant research evidence through the provision of on-site research resources.
- To promote the use of research evidence to inform policy and practice, sufficient time should be allowed for policymakers to read, analyse and evaluate research evidence.
- Management should create a conducive institutional climate and provide strong management and policy support to facilitate and inculcate the culture of using research evidence to inform policy and practice.
- Policymakers should be competent specialists with their role being shaped by their responsibility for a particular policy issue or domain, and a high level of familiarity with a body of knowledge in line with the policy domain.
- Management should develop standardised assessment criteria, guidelines and acknowledged quality standards for uniformity in appraising the quality of research evidence.
- Management should develop a sustainability action-planning model and training curriculum as a key strategic intervention in skills development for both researchers and policymakers. Building capacity will facilitate closer connections between researchers and policymakers resulting in ownership of findings and the uptake of research evidence to inform policy and practice.
- Management should provide incentive schemes for policymakers; the availability of incentives could be useful behaviour change tools that can motivate policymakers and would increase the likelihood that they would use research evidence to inform policy and practice.

6.5 DIRECTIONS FOR FUTURE RESEARCH

- It is recommended that further investigation could be undertaken to explore the practical case study application of the KTA framework to substantiate its

conceptual and empirical accounts, improvement and support for ongoing use in facilitating the use of research evidence to inform policy and practice.

- The current study was cross-sectional; implying it was conducted at one point in time, using a longitudinal approach offers a possible area for future research.
- There have been few studies about EBP in Botswana pertaining to a wide range of issues emerging from this current study. Future research can explore the level of acceptability and practice of EBP to add to the extant literature.
- Furthermore, this study was limited to HRDC Sector HRD committees and thus generalisability of the findings of the current study to other policymaking contexts is questionable. Future research may focus on extending the study across other sectors of the economy, be replicated in a different cultural context and national setting. This may enhance the generalisability of the findings of the study and shed more light into issues of needs for policymakers with the view to enhance the management of EBP.
- The nature of data drawn for this current study is based only on the perceptions of policymakers' context. Further research targeting researchers is essential to establish a fuller picture of imminent issues to the research-policy nexus in Botswana. This may identify additional strategic interventions to facilitate the use of research evidence to inform policy and practice. It is apparent that this current study draws on quantitative and qualitative data gathered through a survey of members of the HRDC Sector HRD committees and in-depth interview with Chairpersons of the HRDC Sector HRD Committees. In some instances, chairpersons were able to express their feelings during the in-depth discussions while members had limited options in the questionnaire to express their stance. Additionally, the survey data was collected through a self-administered questionnaire that could have led to methodological inconsistency and bias thus, influencing the results of the study. Future research could employ the use of interview approach for members of the HRDC Sector HRD committees. The questionnaires could also be strengthened by infusing issues that emerged from interviewing Chairpersons of the HRDC Sector HRD Committees. This will permit further investigation of their perceptions on the management of EBP.
- Interestingly, there appeared to be some form of training conducted for Sector HRD Committees in assessing and approving the quality of the research evidence

presented to them. Respondents of this current study expressed concern that training was mostly theoretical and lacked the aspect of practical application. A better understanding and evaluation through further research on whether these capacity-building initiatives do transmit relevant skills and knowledge to researchers and policymakers could be useful.

- Supplementary research could focus on investigating the adequacy of time allocated for policymakers to search, read, appraise the quality of research evidence and practice the use of research evidence.
- One of the striking findings of this current study is that respondents occupying lower professional positions in the hierarchical structure of their respective organisations felt that they had the decision-making power to influence policy directions. This presents an avenue for further research in view of empowering all policymakers in influencing policy directions.
- There is limited research focus on the provision of incentive schemes for policymakers; a better understanding of their effectiveness could be useful to inform measures put in place to facilitate the use of research evidence to inform policy and practice.
- There remains a fundamental need to explore the value of developing policy briefs since they were deemed critical for the uptake of research evidence by policymakers. Policy briefs should be evaluated for impact in order to provide value for money.

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APPENDICES
APPENDIX A: ETHICAL CLEARANCE

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2018/11/14

Ref: **2018/11/14/61909226/19/MC**
Name: Mr OE Nthebolang
Student: 61909226

Dear Mr Nthebolang

Decision: Ethics Approval from 2018/11/14 to 2023/11/14

Researcher(s): Name: Mr OE Nthebolang
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Supervisor(s): Name: Prof VP Mahlangu
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Title of research:

Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022

Qualification: PhD in Educational Leadership and Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2018/11/14 to 2023/11/14.

*The **low risk** application was reviewed by the Ethics Review Committee on 2018/11/14 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

Open Rubric

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2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after the expiry date **2023/11/14**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2018/11/14/61909226/19/MC** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Prof MT Gumbo
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APPENDIX B: LETTER TO THE HRDC CHIEF EXECUTIVE OFFICER SEEKING PERMISSION TO CONDUCT THE STUDY

P. O. Box 26314 Game
City

17th April 2017

The Chief Executive Officer

Human Resource Development Council

Private Bag BR 008

Gaborone

ufs: Director, Human Resources

Director, Statistics Research Development & Innovation

Dear Sir

REQUEST FOR PERMISSION TO ADMINISTER A QUESTIONNAIRE AND INTERVIEW MEMBERS OF THE HRDC 12 SECTOR HRD COMMITTEES.

I am studying for my Doctor of Philosophy in Educational Leadership and Management with the University of South Africa (UNISA). I therefore, hereby kindly request for your permission to administer a questionnaire and interview members of the HRDC 12 Sector Human Resource Development (HRD) Committees for the purposes of a research project titled "Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022".

The purpose of the survey and interviews is to gather information about the management of evidence-based policymaking. The study seeks to explore the extent to which members of HRDC 12 Sector Committees conceptualise the management of evidence-based policymaking in the course of implementing

National and Sector specific HRD Plans on all matters of national human resource development. The expected outcome will involve an increased understanding of the challenges faced in the supply and uptake of development-focused research to support evidence-based policymaking. The essence of this study is to enhance HRDC 12 Sector HRD Committee members' technical capacity to use research evidence to inform policy and practice. Data collection in this study will involve the use of questionnaire and interviews.

I wish to assure you that the information that will be obtained during the research will be used for the purpose of the study. Your cooperation and support in this matter will be highly appreciated.

Thank you.

Yours faithfully,

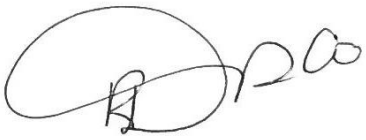
Oabona E. Nthebolang (Omang No. 177111508)

PERMISSION SIGNED

P. O. Box 26314

Game City

17th April 2017



The Chief Executive Officer

Human Resource Development Council

Private Bag BR 008

Gaborone

ufs: Director, Human Resources

Director, Statistics Research Development & Innovation

APPENDIX C: PARTICIPANT INFORMATION LETTER AND CONSENT FORM

Primary Investigator: Oabona Enock Nthebolang, University of South Africa Doctor of Philosophy Student

TITLE OF THE RESEARCH PROJECT: *Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022*

Dear Prospective Participant,

My name is Oabona Enock Nthebolang, I am studying for my Doctor of Philosophy in Educational Leadership and Management with the University of South Africa (UNISA).

I would like to invite you to participate in my study titled ***"Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022".***

You are being asked to take part in the study by virtue of your membership to HRDC Sector HRD Committee. The aim of this study is to develop a greater understanding of managing evidence-based policymaking. The study seeks to explore the extent to which members of HRDC 12 Sector HRD Committees conceptualise the management of evidence-based policymaking in the course of implementing National and Sector-specific HRD plans on all matters of national human resource development. The expected outcome will involve an increased understanding of the challenges faced in the supply and uptake of development-focused research to support evidence-based policymaking. The essence of this study is to enhance HRDC 12 Sector HRD Committee members' technical capacity to use research evidence to inform policy and practice.

This study is governed by UNISA's code of research ethics, ethical clearance was received from UNISA College of Education Postgraduate Research Ethics Committee which assessed methodological, technical and ethical soundness of the research. The study will be conducted according to accepted and applicable national and international ethical guidelines and principles.

The administration of the questionnaire and interviews will take about 45 minutes and not more than 30 minutes respectively. No information about individuals participating

in the research will be made known without their prior permission. Participants will not be identified in the reporting and in any eventual publications. The risks involved in taking part in this research are minimal. Participants are free to decline to participate without any consequences. By participating in this study, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings. There is no financial reward for taking part in this study and no costs associated with participation.

The primary researcher, Oabona Enock Nthebolang, can be contacted during office hours at onthebolang@hrdc.org.bw or +267 71690216/73551002. Should you have concerns about the way in which the research has been conducted, you may contact the chairperson of UNISA College of Education Postgraduate Research Ethics Committee.

Your cooperation and support in this matter will be highly appreciated

Statement and Signatures

I_____,the undersigned, agree to participate in the study and voluntarily sign this form. I have been given written and verbal information to consider and have been given an opportunity for clarity of any (s of concern. I understand that there is no financial reward for taking part in this study and no costs associated with participation. I will receive a copy of this form for my information.

_____ _____

(Signature of Participant) (Date)

_____ _____

(Signature of Person Obtaining Consent) (Date)

APPENDIX D: QUESTIONNAIRE FOR SECTOR COMMITTEE MEMBERS

Management of Evidence-Based Policymaking as a Pillar of the Botswana National Human Resource Development Strategy 2009-2022

Participant Reference No._____

This questionnaire is set to explore how members of the Botswana Human Resource Development Council (HRDC) HRD Sector Committees conceptualise the management of evidence-based policymaking in the course of implementing National and Sector-specific HRDPs on all matters of national human resource development. The study intend to establish how research evidence is used to inform policy and practice and how research is disseminated to and used by the Sector Committees with specific focus on **adaptation of knowledge or research evidence; inhibiting/ facilitating factors to using research evidence; assessing and approval of research evidence; and sustainability of using research evidence**.

Ethical clearance for this study was obtained from University of South Africa (UNISA) College of Education Postgraduate Research Ethics Committee. The findings of this study will be used for academic purposes only and can be shared with you upon request.

It is anonymous-do not write your name. However, do indicate your Sector Committee membership period, age, highest qualification, gender and category of position in the spaces provided below as they will be useful in the analysis of the results. This questionnaire is divided into two sections, **Section A – Socio-Demographic Data, and Section B – Assessment of evidence-based policymaking.**

The primary researcher, Oabona Enock Nthebolang, can be contacted during office hours at onthebolang@hrdc.org.bw or +267 71690216/73551002. Should you have concerns about the way in which the research has been conducted, you may contact the chairperson of UNISA College of Education Postgraduate Research Ethics Committee.

SECTION A: DEMOGRAPHIC DATA

INSTRUCTIONS: Please mark one box only with an (x) in the appropriate response.

A1. How long have you been a member of your Sector Committee?

0 -1 year	
1 – 3 years	
3 – 5 years	
5 – 7 years	

A2. What is your age?

20 -29 years	
30 – 39 years	
40 – 49 years	
50 – 59 years	
60 years & over	

A3. What is your highest qualification?

Certificate	
Diploma	
Degree	
Masters	
PhD	

A4. What is your Gender?

Male	
Female	

A5. Category of Position

Top Management Level	
Middle Management Level	
Professional Level	
Operational Level	

SECTION B: ASSESSMENT OF EVIDENCE-BASED POLICYMAKING (EBP)

INSTRUCTIONS: This is made up of four parts on general perceptions on the management of evidence-based policymaking. Please place a cross (X) in the column which most closely reflects your view about the statement. *Please answer each statement*.

1. ADAPTATION OF RESEARCH EVIDENCE

The format in which the research evidence is presented has potential to influence the use of research evidence to inform policy and practice. For each of the following statements, please indicate the extent to which you agree or disagree:

Adaptation of research evidence	**Rating Scale**			
	Strongly Agree	**Agree**	**Strongly Disagree**	**Disagree**
Research evidence is relevant to my needs and expectations				
Researchers have the capacity to present their findings in the context of policymakers' expectations				
Research evidence is valid, reliable, and trustworthy				
Researchers engage policymakers in order to plan the scope of the project				
Research evidence is clearly presented				
Research findings are made available in a timely fashion				
Research reports are readable and easy to comprehend				
Research evidence is unbiased				
Research reports provide summaries of key findings				
Researchers conduct regular formal meetings to report on the progress of the project with policymakers				
Researchers conduct formal meetings to share and discuss findings with policymakers				
Researchers have expertise in how to communicate their findings to policymakers				
Research findings have direct implications for HRD plans				
Research findings and recommendations readily applicable to implement HRD plans				
Implementation plan of research findings clearly articulated to policymakers				
Researchers understand the policymaking context				

2. INHIBITING OR FACILITATING FACTORS

HRDC's Sector HRD Committees may experience a number of factors that may facilitate or inhibit the use of research evidence to inform policy and practice. I would like you to indicate the extent to which you agree or disagree with the following statements:

Factors that may Inhibit or Facilitate the use of Research Evidence	**Rating Scale**			
	Strongly Agree	**Agree**	**Strongly Disagree**	**Disagree**
I understand what evidence-based policymaking to be				
I have positive attitude towards research				
I find it difficult to understand and interpret research evidence				
Research reports written in a complex scientific format				
There is a gap between research and policymaking				
There are different research orientations between researchers and policymakers				
Researchers don't make effort to adapt the results of their research to policymaker's context				
Researchers lack expertise in how to communicate their findings to policymakers				
There are high costs (eg. Time and resources) in translating the results of research for policymakers				
There are insufficient forums and networks available for bringing together researchers and policymakers				
Collaboration between researchers and policymakers is ineffective				
There is more time dedicated to read and interpret research reports				
Support to implement and practice evidence-based policymaking is inadequate				
Researchers don't make enough effort to disseminate their findings to policymakers				
Researchers don't make enough effort to initiate contact with policymakers				
The use of research evidence is a low priority in my Sector				

3. ASSESSING AND APPROVING RESEARCH EVIDENCE

The approval of National and Sector HRD Plans requires that HRDC Sector Committees possess the capacity to assess the validity and quality of the plans prior to approval and implementation. The Committees should be able to assess the key components of the HRD plans, the development process and research methods for determining skills needs. Please indicate the extent of your agreement with the following statements:

Assessing and Approving Research Evidence	**Rating Scale**			
	Strongly Agree	**Agree**	**Strongly Disagree**	**Disagree**
I do not have the necessary skills to interpret results from statistical analysis				
I lack expertise in how to apply the results of the HRD plans				
I lack sufficient decision-making power to ensure policy is based on research evidence				
Members of Sector Committees are not encouraged to use research evidence				
My Sector has no formal processes to translate research into policy and practice				
I have the necessary skills to collect and analyse policy-related data or information				
Sector Committees are provided with training in assessing and approving HRD plans				
Evidence-based policymaking is valued in my Sector				
Senior decision-makers are usually generalists who may lack specified policymaking skill and knowledge				
Policy decisions are based on research data and evidence about what works				
There are too many competing interests to consider when making policy-relevant decisions				

4. STRATEGIC INTERVENTIONS TO SUSTAIN EVIDENCE-BASED POLICYMAKING

INSTRUCTIONS

What strategic interventions might be considered to sustain the management of evidence-based policymaking? Give any five interventions, and rate them according to the table below. 1 being highest priority and 5 being lowest:

STRATEGIC INTERVENTION	RATING SCALE

THANK YOU VERY MUCH FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE.

APPENDIX E: INTERVIEW QUESTIONS FOR CHAIRPERSONS OF THE HRDC SECTOR HRD COMMITTEES

Thank you for providing me with an opportunity to interview you. Ethical clearance for this study was obtained from University of South Africa (UNISA) College of Education Postgraduate Research Ethics Committee.

With your permission I would like to record this interview. I will anonymise and remove all personal identifiable references in the transcript. If there is need to quote you in person, I will first contact you and ask for your explicit permission.

Check signing of consent - referring to information sheet/consent form.

I am interested in exploring how members of the Botswana HRDC 12 HRD Sector Committees conceptualise the management of evidence-based policymaking in the course of implementing National and Sector-specific HRDPs on all matters of national human resource development. The study intend to establish how research evidence is used to inform policy and practice and how research is disseminated to and used by the Sector Committees with specific focus on adaptation of knowledge or research evidence; inhibiting/ facilitating factors to using research evidence; assessing and approval of research evidence; and sustainability of using research evidence.

Having said that, I would like to know:

1. What do you understand evidence-based policymaking to be?

   Probe: In what ways can research impact on the National and Sector-specific HRD plans?

NOTE: Research evidence in the context of this study is when the Sector HRD Committees engage consultancy services to collect and collate up-to-date data on priority skills needs per sector.

2. How important do you think it is to use research evidence to inform HRD plans compared to other factors that can influence formulation of the plans (political, experience, intuition, etc.)

   Probe: Why do you think it is important or why not?

3. Is the practice of evidence-based policymaking embedded in your Sector Committee?

   Probes: Please share your experiences in the use of research evidence to inform policy and practice related to your Sector,

   Is EBP built into the research consultancy process in any way?

4. Do you find that the research evidence available to your Sector is presented in a clear and accessible way?

   Prompts - can you give some specific examples of evidence used and how accessible you find it?

   Probes: Are research reports appealing and easy to comprehend or presented in a format that is complex to you as policymakers? Please explain in terms of factors such as statistical complex language used and of the reports, do they develop policy briefs for easy of comprehension?

   Do researchers or consultants attempt to make research validations more specific and applicable to implementing National and Sector HRD Plans?

5. On a scale of 1-10 how well embedded do you think EBP is in the work of your Sector? Where 1 is not at all and 10 is fully embedded?

   Probe: reasons for rating given

6. What factors facilitate the implementation of EBP in your Sector?

   Probes: Culture; attitudes; links with researchers and consultants; links with other key stakeholders; support to implement EBP; other?

7. What factors hinder the implementation of EBP in your Sector?

   Probes: Culture; attitudes; lack of research knowledge; availability of research, accessibility of research; gap between research and practice; insufficient time to implement new ideas and read research; inadequate support to implement EBP and lack of authority; other?

8. How well equipped do you feel you and other Sector members are to assess the quality of the research evidence in your Sector?

Probes: Do you think you have the technical capacity to assess and approve the quality of the research evidence?

What count as evidence and what doesn't and for what purpose is evidence used?

What (if any) guidance is given on assessing whether members can rely on the evidence presented in research consultancy reports?

9. What policies, structures, systems or processes guide members to implement EBP?

   Probes: Leadership; professional development; sector meeting; time for members to engage with research; research advocacy; knowledge brokers; other?

10. What do you do to promote and support EBP in your Sector?

    Prompts: advocate for EBP; supporting other members?

    Probes: What appears to be more effective in implementing EBP?

    What appears to be less effective in implementing EBP?

11. How will you ensure that the research evidence in the National and Sector HRD Plans have a significant impact?

12. Does your sector evaluate the effectiveness and impact of EBP?

13. What strategic interventions can be adopted to embed and sustain EBP in your sector?

    Probe: What factors should you consider to sustain the management of EBP?

14. Any other information you wish to share?

THANK YOU FOR YOUR TIME, you will be contacted for any follow up questions that may arise and secondly, to confirm and approve the impressions transcribed from this interview.

APPENDIX F: PROOF OF REGISTRATION MR O. E. NTHEBOLANG

0644 M1RST

NTHEBOLANG O E MR STUDENT NUMBER : 6192-902-6

P O BOX 26314

GAME CITY ENQUIRIES NAME : POSTGRADUATE QUALIFICATIONS

GABORONE ENQUIRIES TEL : (012) 441-5702

BOTSWANA

DATE : 2018-02-23

Dear Student

I wish to inform you that your registration has been accepted for the academic year indicated below. Kindly activate your Unisa mylife (https://myunisa.ac.za/portal) account for future communication purposes and access to research resources. Please check the information below and kindly inform the Master's and doctoral section on mandd@unisa.ac.za on any omissions or errors.

DEGREE : PhD (EDUCATION) (90019)

TITLE : The management of evidence-based knowledge as a pillar for the 2009-2022 Botswana National Human Development Strategy

SUPERVISOR : Prof VP MAHLANGU

ACADEMIC YEAR : 2018

TYPE: THESIS

SUBJECTS REGISTERED: TFPEM01 PhD - Education (Education Management)

A statement of account will be sent to you shortly.

If you intend submitting your dissertation/thesis for examination, complete form DSAR20 (Notice of Intention to Submit) before 30 September. If this deadline is not met, you need to re-register and submit your intention for submission by 15 April and submit your dissertation by 15 June.

Your supervisor’s written consent for submission must accompany your notice of intention to submit.

Yours faithfully,
Prof QM Temane
Registrar (Acting)

APPENDIX G: TURNITIN REPORT

Submission date: 01-Sep-2020 04:05PM (UTC+0200)
Submission ID: 1377583159
File name: Thesis_-Nthebolang_Final_UNISA_Turnitin.docx (1.89M)
Word count: 50535
Character count: 293797

THESIS FINAL DRAFT - 61929026

ORIGINALITY REPORT

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APPENDIX H: DECLARATION OF PROFESSIONAL EDITING

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Fax: 086 627 7756 Email: jaybee@telkomsa.net

Website: www.jaybe9.wixsite.com/bluediamondsediting

25 August 2020

Declaration of professional edit

MANAGEMENT OF EVIDENCE-BASED POLICYMAKING AS A PILLAR OF THE BOTSWANA NATIONAL HUMAN RESOURCE DEVELOPMENT STRATEGY 2009-2022

By

OABONA ENOCK NTHEBOLANG

I declare that I have edited and proofread this thesis. My involvement was restricted to language usage and spelling, completeness and consistency, referencing style and formatting of headings, captions and Tables of Contents. I did no structural re-writing of the content.

I am qualified to have done such editing, being in possession of a Bachelor's degree with a major in English, having taught English to matriculation, and having a Certificate in Copy Editing from the University of Cape Town. I have edited more than 200 Masters and Doctoral theses, as well as articles, books and reports.

As the copy editor, I am not responsible for detecting, or removing, passages in the document that closely resemble other texts and could thus be viewed as plagiarism. I am not accountable for any changes made to this document by the author or any other party subsequent to the date of this declaration.

Sincerely,

UNISA: D. Ed. Education Management
University of Cape Town: Certificate in Copy Editing
University of Cape Town: Certificate in Corporate Coaching

Professional EDITORS Guild

Jacqui Baumgardt
Full Member

Membership number: BAU001
Membership year: March 2020 to February 2021

084 487 9285
jaybee@telkomsa.net
https://jaybe9.wixsite.com/bluediamondsediting

www.editors.org.za

Member: Prolingua
