

Unveiling the Challenges and Solutions in Achieving Goals of the Education and Training Sector Strategic Plan in Botswana

Mbiganyi Moremi¹, Som Pal Baliyan²

¹Lecturer, Department of Academic Literacy, Botswana International University of Science and Technology, Botswana

²Professor, Department of Educational Leadership and Management, University of South Africa, South Africa

Abstract

The study investigated the challenges and the solutions in the implementation of the Education and Training Sector Strategic Plan (ETSSP) in the Colleges of Education in Botswana. The study adopted a mixed method approach and a convergent parallel research design. Semi-structured interview and survey were used to collect qualitative and quantitative data, respectively. A total of twenty-two (n=22) members of the Senior Management Teams (SMTs) were purposively sampled for qualitative data collection and seventy-two (72) members for quantitative data collection. Lack of autonomy of colleges and knowledge about the ETSSP implementation frameworks and limited financial resources were some of the challenges SMTs felt hampered them from implementing the ETSSP in their institutions. Quantitative data was analysed using SPSS version 29 and one sample t-test revealed that SMTs faced several challenges in the implementation of the ETSSP and there were solutions to those challenges. The independent t-test showed no significant differences in the challenges SMTs faced in the implementation of the ETSSP. A one-way ANOVA test was employed to determine the challenges as predictors of the solutions in the implementation of the ETSSP by SMTs. The findings revealed that the challenges SMTs face in the ETSSP implementation do not predict the solutions they adopt to address these challenges. Multiple regression analysis revealed overall the challenges as predictors of the solutions in the implementation of the ETSSP. The study recommends the development of an operational framework to guide the ETSSP implementation, such as the 7-C protocol of policy implementation. Furthermore, a comparative study to be carried out on the challenges as predictors of the solutions considering the SMTs as policy implementers and MoESD officials as policy makers.

Keywords: challenges, solutions, themes, implementation, strategy, policy, framework

1. Introduction

Botswana's 1977 National Policy on Education set the tone and provided a platform for educational reforms and planning in the country. The policy's major aim was to propose an alternative education system to the British colonial education which restricted access to quality education except for a few privileged individuals (Jotia, et al 2016). The policy aimed to a) increase universal access to education at primary level, b) develop educated human resource to meet the needs of society at large and c) increase

expenditure at primary level of education (Bagwasi, 2019; Boitumelo *et al*, 2020). The human resource development was the driving force behind this policy. From 1977 to 1992 there was growing concerns on the status of education in the country (Makwinja, 2017). One of the concerns was that the education system in the country was under resourced leading to poor quality education provision and infrastructure. This led to the development of Botswana's second national policy on education, the Revised National Policy on Education (RNPE) of 1994 (Republic of Botswana, 1994). The implementation of the RNPE goals were divided into short, medium and long-term goals (Republic of Botswana, 1994). One of the short-term recommendations of the RNPE led to the establishment of the Tertiary Education Council (TEC) and its major role was to co-ordinate the development of the tertiary education sector in the country. There were challenges that TEC faced and some of the challenges were lack of efficient and effective functioning of tertiary education institutions and the institutions were not performing at their full potential (Tabulawa, 2009). Therefore, there was a need for a strong delivery system that will ensure that policies were implemented and capacity for monitoring and evaluation strengthened. The result was the development of the Education and Training Sector Strategic Plan (ETSSP) of 2015, a policy and strategic framework whose overall goal was to develop a modern, sustainable, knowledge-based economy which supports inclusiveness and diversity (Republic of Botswana, 2015). This policy and strategic framework catered for all levels of education in Botswana, from primary to tertiary level. At tertiary level, SMTs in the Colleges of Education in Botswana faced some challenges in the implementation of the ETSSP and there were solutions they could adopt to address the challenges they faced.

2. Aim of the Study

This study aims to analyse the implementation of the ETSSP in Botswana, focusing on the challenges and the solutions.

The following objectives were formulated to achieve the aim of the study.

2.1 Research Objectives

1. To identify challenges the Senior Management Teams face in the implementation of the ETSSP.
2. To explore solutions the Senior Management Teams adopt to address the challenges they face in the implementation of the ETSSP.
3. To determine the differences in the challenges the Senior Management Teams face in the implementation of the ETSSP based on their background variables.
4. To determine the challenges that predict the solutions the Senior Management Teams adopt in the implementation of the ETSSP.

To answer the objectives of the study, the following research questions were developed.

2.2 Research Questions

1. What challenges do Senior Management Teams face in the implementation of the ETSSP?
2. How do Senior Management Teams address the challenges they face in the implementation of the ETSSP?
3. Are there any differences in the challenges the Senior Management Teams face in the implementation of the ETSSP based on their background variables.
4. Do the challenges predict the solutions the Senior Management Teams adopt in the implementation of the ETSSP?

3. Literature Review

3.1 Theoretical Framework

A theoretical framework refers to the structure that could hold or support a theory of a research study and has different characteristics which guide a particular research study (Swanson (2013; Adom et al, 2018). The theoretical framework summarises concepts and theories, which a researcher develops from previously tested and published knowledge to help in data interpretation and analysis (Kivunja, 2018). In this study, transformational and distributed leadership theories and the 7-C protocol of policy implementation are the theoretical foundations that underpin the study. These theories explain the attributes of SMTs in the Colleges of Education as they address the challenges they face and the solutions they adopt in the implementation of the ETSSP. According to Burns (1978:24), “transformational leadership is a process where leaders and followers help each other to advance to a higher level of morale and motivation”. The transforming leader brings positive changes to individuals and organisations. The visionary aspect of transformational leadership is communicating effectively so that the vision is understandable, engaging and appealing. The leader communicates positive images that promote a bright future for the organisation (Bass & Avolio 1994). The leaders also create opportunities for subordinates to learn on the job so that they become future leaders. In summary, a leader with transformational leadership attributes is effective in implementing policies and overcoming the challenges encountered. Distributed Leadership (DL) theory is about assembling a complete systematic process that collectively encourages the creation of innovative leaders that can lead different transformation initiatives within the organisational boundaries (H Al-Ghanem *et al*, 2020). The theory has been widely embraced by leadership and management practitioners as it advocates for a shift in focus from “attributes and behaviours of individual leaders to leadership as a collective endeavour” (Bolden 2011:252). Distributed leadership does not mean organisations do not have a top leader, but it identifies different leaders from different organisational layers with different expertise and skills carrying out formal & informal leadership roles that are needed in different stages of the organisational change initiative boundaries (H Al-Ghanem *et al*, 2020). The theory argues that the challenges experienced in the implementation of the ETSSP should be the responsibility of everyone in the Colleges of Education including finding solutions, as a collective, to those challenges.

The 7-C protocol of policy implementation serves as another theoretical framework that supported this study. There are variables that are important for policy implementation and these are a) the form and content of the policy itself, b) the capacity of the organisation and c) the qualifications of the people in charge of the operations (Skhosana, 2019). (Najam, 1995) identified five variables which are crucial for policy implementation and these are known as the 5-C protocol of policy implementation. These 5-C are the content, context, commitment, capacity and support for coalitions and clients. (Brynard, 2005) added communication as the sixth C for policy implementation. A clear communication ensures transparency for those who are key stakeholders in the education policy implementation such as the ETSSP. (Burger, 2015) argued for the inclusion of coordination as an important aspect of policy implementation because without coordination the desired results cannot be achieved hence the 7-C protocol of policy implementation (Cloete et al, 2018). The 7-C protocol advocates for effective coordination of the policy implementation process so that all key players are involved in overcoming the hurdles in the implementation process (Kamuzinzi, 2019).

3.2 Higher Education Policy in Botswana

The government of Botswana established the Tertiary Education Council (TEC) as one of the short-term

recommendations of the RNPE. TEC major function was to co-ordinate the development of the tertiary education sector in the country (Molokwane, 2018). According to Bailey & Chirwa (2014), the Tertiary Education Act established TEC in 1999, even though it became operational in 2002, with the mandate to coordinate the National Human Resource Development Strategy (NHRDS), implement quality assurance and funding of tertiary education. TEC coordinated the NHRDS until 2013 when its name was changed to Human Resource Development Council (HRDC) with expanded mandate (Republic of Botswana, 2009). The HRDC expanded mandate included the development of the national human resource in the country (Samboma, 2017). One of its major functions was also to advise Higher Education Institutions on educational management and institutional capacity building initiatives that could be implemented to realise the goals of education the country desired to achieve. Prior to the establishment of the HRDC, the government commissioned two policy and strategy reports to address the challenges facing the higher education sector in the country, these were (a) Towards a Knowledge Society: Tertiary Education Policy (TEP) (2008) and (b) the National Human Resource Development Strategy (2009-2022): Realising our Potentials (Ministry of Education and Skills Development, 2009). TEP addressed poor governance and quality management in tertiary institutions. It proposed putting in place a restructured tertiary education system with improved strategic leadership capacity at both governance and management levels (Ministry of Education and Skills Development 2008). NHRDS was an initiative that provided a strategic link to enable the successful attainment of the vision 2016 pillars, a key component of Botswana's transformation and diversification agenda (Republic of Botswana, 2009). The challenges underscored by these policies and strategy reports were lack of efficient and effective functioning of tertiary education institutions and the institutions were not performing at their full potential. Therefore, there was a need for a strong delivery system that ensure that policies were implemented, monitored and evaluated effectively. The ETSSP was formulated in response to the challenges that besieged education in the country.

3.3 The ETSSP Implementation Challenges and Solutions

In 2012, the government of Botswana through the Ministry of Education and Skills Development (MoESD) conducted a broad situational analysis which focused on the shortcomings that were identified in the country's education system, especially on the quality and relevance of education. The analysis resulted in the development of the ETSSP which was adopted by the government of Botswana in 2015. The implementation of the ETSSP required "transformation of the entire education system in the country and the scope of implementation was geared towards organisational restructuring and leadership development, comprehensive human capacity building and development among others" (Republic of Botswana, 2015:7). The situational analysis identified challenges in the country's education system that needed urgent attention (Makwinja 2017). Some of the challenges were poor management of teacher training and professional development and lack of leadership and management competencies. Notable issues with leadership competencies and development were that some leaders have not had any training for more than 5 years and others have not even been orientated for the new responsibilities (Republic of Botswana, 2015). The ETSSP proposed programmes that addressed challenges inherent in Teacher Education and Professional Development (TEPD) and one of the programmes suggested the "development of a national policy and strategy for education sector leadership and management" (Republic of Botswana 2015:78). It also outlined the goal of the programme, its outcomes, milestones which were divided into short, medium and long term and activities that drove the implementation plan (Republic of Botswana 2015).

3.4 Differences in the Challenges in the Implementation of ETSSP

Demographic variables of the respondents have a bearing on the challenges experienced in the implementation of an educational policy such as the ETSSP. Gender, mode of appointment to a position and qualifications can influence differences in the challenges the SMTs face in the implementation of the ETSSP. Several many scholars have raised the importance of updating the demographic questions on gender and the reasons why researchers must include gender as a variable and its connection to the research questions Lindqvist et al (2020). Verloo & Roggeband (2003) stated that it has been proven that gender differentials are not recognized in regular policies, and that assumptions include biases in favour of the existing unequal gender relations. On qualifications, Bekker & Heyningen (2011) argued that holding the right qualifications is very important and one way to enhance the appointment of competent employees is to ensure that the job analysis reflects the skills and knowledge required to execute tasks. Leaders who hold the right qualifications can analyse the challenges faced in the ETSSP implementation and propose practical solutions to overcome those challenges. Jacob & Samuel (2020) reported that one of the factors responsible for poor implementation of policies in Nigerian education sector was that implementers lack the technicality and methodologies and approaches adopted in developing the educational policies. The implementation of such educational policies is very difficult since implementers are out of the plan actions. The technical know how requires a certain level of education to understand the challenges experienced in policy implementation.

3.5 Challenges as the Predictors of Solutions in the Implementation of ETSSP

Challenges in policy implementation in Africa could link to improper planning, political instability, and bureaucratic bottleneck, the deliberate imposition of policy, complete alteration to the plan if it is not favourable to the implementers (Ajulor, 2015; Seopetsa, 2020). The background variables such age, gender and mode of appointment can determine the challenges as predictors to the solutions the SMTs adopt in the implementation of the ETSSP. One of the challenges of policy implementation is the inability to involve the target beneficiaries in policy process (Dialoke, Ukah, & Maduagwuna 2017). According to Selepe (2023), failure of policymakers to take into consideration the social, political, economic, and administrative environment when analysing policy implementation often results in policy failure. There are mechanisms and solutions for successful implementation of an educational policy like the ETSSP. (Tezera, 2019) outlines four factors for successful policy implementation, which are policy design, stakeholders and their involvement, institution and the context of the implementation strategy. The challenges experienced in the ETSSP implementation can motivate the SMTs to think about practical solutions they could apply in the implementation of the ETSSP.

4. Methodology

4.1 Research Approach and Design

The study adopted a mixed methods approach as the quantitative and qualitative data provide a better understanding of the research problem (Creswell & Plano-Clark, 2018). This approach allowed for contextual interpretations, and flexibility in choosing the best strategy to address the research questions (Maree, 2016). Further, a convergent parallel mixed methods design was used to develop a better understanding of the phenomenon of interest (Maree, 2016).

4.2 Population and Sample

The study population comprised seventy-two (n=72) members of the Senior Management Teams (SMTs) in the four Colleges of Education in Botswana. These members included the Principal, Deputy Principal

(Academic), Deputy Principal (Administration) and Heads of various academic departments (HoDs) based on the organisational structure of the Colleges of Education. All the seventy-two (72) SMT members were treated as a sample size for quantitative data collection.

The purposively sampled participants for the qualitative data comprised two (n=2) College Principals, two (n=2) Deputy Principals, and eighteen (n=18) HoDs in the Colleges of Education who provided data through in-depth interviews.

4.3 Data Collection Instruments

Instrument used was a semi-structured interview schedule prepared for qualitative data collection which comprised of three (3) sections: participants' demographic information, challenges SMTs faced in the ETSSP implementation and, solutions adopted to address the challenges in the implementation of the ETSSP. The interview questions in the first and second part of the instrument addressed the research objectives and questions of the study. The questions were validated by the experts in policy planning and management in higher education.

Quantitative data was collected using a questionnaire. The instrument had three parts. The first part sort demographic information of the SMTs. The second part sort data on the challenges SMTs faced in the implementation of the ETSSP and the third part focused on the solutions SMTs adopted to address the challenges they faced in the ETSSP implementation. The items in the second and third part of the questionnaire were measured on a four-point Likert scale a) Strongly Disagree, b) Disagree, c) Agree and d) Strongly Agree. The reliability of the instrument was measured using Cronbach's alpha coefficient. The supervisor provided the expert review of the data collection instrument by giving feedback on it before it was pilot tested. The pilot study for this research was carried out on the researcher's colleagues in the workplace. They responded to the questions and gave feedback on the instrument which the researcher incorporated into the final survey for data collection.

4.4 Data Collection and Analysis

Qualitative data collection process involved the researcher travelling to the Colleges of Education to introduce himself and the purpose of the visit. The research permit and ethical clearance to conduct the study were shared with the research coordinators in the Colleges of Education and appointments were made to conduct the interviews. The sampled SMT members were interviewed individually in their offices within the colleges' premises. They also read, understood and signed the consent forms to participate in the study. The participants also consented to the interview sessions being recorded and the recording was done using a voice recorder. Thematic analysis was used to analyse qualitative data and themes from the data were identified. Coding the themes emanating from the data was also done and this was followed by identifying, analysing and reporting patterns within the data (Braun & Clarke, 2006; Jnanathapaswi, 2021). Categories in the data, patterns and relationships were also identified and the views, thoughts and perceptions of the participants were interpreted.

Quantitative data collection was carried out by administering the questionnaire. The questionnaires were given to the research coordinators in each College of Education to distribute amongst SMTs. The researcher collected the completed questionnaire from the research coordinators in the Colleges of Education on the dates agreed with the coordinators. The quantitative data was analysed using SPSS version 29 software. Cronbach's alpha Coefficient was calculated to measure its reliability of the data collected. The research questions were answered by testing the null hypothesis employing statistical tests of one sample t-test, independent t-test, one-way analysis of variance (ANOVA) and multiple regression analysis.

5. Findings

5.1 Qualitative Findings

Thematic analysis of the qualitative findings produced two themes: a) Challenges SMTs face in the implementation of the ETSSP and b) Solutions to mitigate the challenges in the implementation of the ETSSP.

5.1.1 Theme 1: Challenges that Senior Management Teams face in the Implementation of the ETSSP

SMTs in the Colleges of Education outlined the challenges they faced in the implementation of the ETSSP. They expressed concern that the MoESD never established a dedicated office to coordinate the implementation of the ETSSP in the Colleges of Education and there were no proper guidelines and policies to guide the implementation of the ETSSP at tertiary level. They mentioned that the country developed good education policies, but the problem was lack of implementation. The SMT members also indicated that some of the challenges they experienced in the implementation of the ETSSP bordered on lack of autonomy for the Colleges of Education to make independent decisions in running their affairs. The lack of autonomy means that the Colleges of Education cannot not raise their own funds or be innovative enough to compete and respond to global changes timeously in the education sphere. The Colleges are government funded and cannot not undertake major decisions without involving the government through the MoESD. This delayed progress and response to issues timeously because of bureaucratic bottle necks within the MoESD processes. In addition, the Colleges of Education are affiliated to the University of Botswana (UB) which provide quality assurance to their academic programmes and UB was never taken on board regarding the ETSSP implementation in the Colleges of Education. The SMTs decried limited financial resources to implement the ETSSP as an impediment to realise the objectives of the plan. The plan was not adequately budgeted for by the government of Botswana. In addition, some of the colleges management team members were not keen to implement the tasks associated with ETSSP because they either lacked knowledge about its implementation frameworks or were not keen to drive its implementation due to lack of interest.

5.1.2 Theme 2: Solutions to mitigate the Challenges in the Implementation of the ETSSP

On solutions to the challenges, the Principals and Deputy Principals suggested that the supervisory Department Director, TT&TE should revisit the ETSSP and revive it in the Colleges of Education. They further said the plan needed more resources and monitoring during its implementation phase. They called for the Colleges of Education to be autonomous so that they run their programmes without interference from the government and University of Botswana. This means that service delivery can be enhanced if the Colleges of Education are autonomous as decision making will be expedited. The Principals and Deputy Principals also emphasised the importance of training the human resource for the implementation of the ETSSP. One Deputy Principal added that priority areas should have been identified in the ETSSP document to make the implementation more organised. They suggested that the college management and lecturers should attend workshops to appreciate the value of the plan in the country's education system. They added that the plan needed lots of financial support from the government to be fully implemented. The Heads of departments suggested that the ETSSP implementation should be part of the college yearly strategic plan. The Colleges must include the ETSSP milestones as part of the objectives to be achieved when they develop their strategic plans for the performance year. These milestones can be cascaded from the supervisory department so that monitoring can be done consistently. The HoDs also emphasised that those who are tasked with the implementation of the ETSSP must be trained on policy implementation, and they believe that if the government can draw a schedule and avail resources towards this policy

implementation then the objectives geared towards improved education sector performance will be realised through effective implementation of the ETSSP.

5.2 Quantitative Findings

Data collected through the questionnaire was analysed using SPSS version 29 software and Cronbach's Alpha coefficient was calculated for both the variables as measure of internal consistency. Table 1 shows that the instrument was reliable as the coefficients are greater than 0.70 (Taber, 2018).

Table 1: Cronbach's Reliability Coefficient on the questionnaire

Variables	No. of Items	Reliability coefficient
Challenges in the ETSSP implementation	14	.801
Solutions to the challenges in the ETSSP implementation	10	.846

The research questions were answered by formulating the hypothesis which were tested in their null form using a one sample t-test.

5.2.1 SMTs Challenges on the ETSSP Implementation

To explore the challenges SMTs faced in the implementation of the ETSSP in the Colleges of Education, a research hypothesis was formulated aligned with the research question. The research hypothesis associated with the research question stated that; H_1 : *There are some challenges which Senior Management Teams face in the implementation of the ETSSP*, and a null hypothesis was crafted and labelled H_{03} : *There are no challenges Senior Management Teams face in the implementation of the ETSSP*. Table 2 presents the results of the one sample t-test which shows that the null hypothesis was rejected ($p < .001$). It means that there are challenges that SMTs face in the implementation of the ETSSP.

Table 2: Identification of the challenges SMTs face in the ETSSP implementation

Items on challenges	M	SD	t	MD	p
1 Limited funding for	3.69	.503	18.02	1.19	.001
2 Colleges lack of autonomy for college to implement ETSSP	3.66	.579	15.20	.690	.001
3 The ETSSP implementation is not effectively monitored	3.52	.569	13.61	1.02	.001
4 Resources allocated to the MoESD that are geared towards the ETSSP goals implementation are not enough	3.47	.799	9.20	.966	.001
5 There are leadership development challenges in the colleges of education	3.44	.712	6.82	.638	.001
6 Capacity-building initiatives for leadership and management are limited in the colleges	3.36	.583	11.26	.862	.001
7 Colleges lack a talent management strategy	3.19	.661	7.94	.690	.001
8 Colleges lack succession plans in leadership positions	3.16	.670	7.45	.655	.001

9	The quality and impact of teacher education are not well monitored	3.00	.725	5.25	.500	.001
10	Training and orientation for new management leadership roles are never done	2.98	.848	4.34	.483	.001
11	Colleges lack the capacity to implement the ETSSP	2.84	1.11	2.38	.345	.010
12	Organisational structures in the colleges of education create management problems	2.83	.841	2.97	.328	.002
13	There is poor management of teacher training and professional development	2.74	.870	2.11	.241	.019
14	There is lack of leadership and management competencies in the college	2.60	.877	.898	.103	.186
Overall challenges		44.17	5.58	12.51	9.17	.001

The findings indicate that the mean for all the statements on the challenges the SMTs face in the implementation of the ETSSP is above the test value of 2.5, therefore suggesting that the respondents rejected the null hypotheses as indicated above and hold strong views about these challenges. The challenges are likely to have occurred by chance. Furthermore, the challenges are statistically significant except for the following: Colleges lack the capacity to implement the ETSSP ($p=.010$), There is poor management of teacher training and professional development ($p=.019$) and there is lack of leadership and management competencies in the college ($p=.186$).

5.2.2 Solutions to the Challenges in the Implementation of the ETSSP Goals

The solutions to the challenges faced by SMTs in the implementation of the ETSSP were determined by formulating a research hypothesis H_2 : *There are several ways Senior Management Teams address the challenges they face in the implementation of the ETSSP*. To test the hypothesis, a null hypothesis was used H_{02} : *There are no ways adopted by Senior Management Teams to address the challenges they face in the implementation of the ETSSP*. A one sample t-test was conducted, and the overall results show that the null hypothesis was rejected (Table 3). This implied that there were solutions to the challenges SMTs faced in the implementation of the ETSSP.

Table 3: Solutions to the challenges faced in the ETSSP goals implementation.

Solutions		M	SD	t	MD	p
1	Availability of Government funding for the implementation of the ETSSP goals	3.78	.421	23.10	1.28	.001
2	Implementation of Quality assurance system	3.72	.451	20.68	1.23	.001
3	Introduction of capacity-building initiatives for SMTs	3.72	.451	20.68	1.23	.001
4	Review of the organisational structures of colleges to allow autonomy	3.71	.459	20.02	1.21	.001
5	Implementation of a monitoring and evaluation system	3.69	.467	19.41	1.19	.001
6	Develop a leadership and management policy	3.62	.489	17.44	1.12	.001
7	Allow Department of TT&TE leading role	3.60	.620	13.56	1.10	.001

8	Implement leadership/management standards	3.55	.535	14.96	1.05	.001
9	Implement talent management strategy	3.55	.535	14.96	1.05	.001
10	Implement a competency-based framework	3.53	.503	15.66	1.03	.001
	Overall solutions	36.47	4.43	16.35	9.41	.001

The findings show that the mean values for all the statements are significantly higher than the test value of 2.5 and the highest being (M=3.78) and the lowest (M=3.53). This indicates that the test value is more than two and a half times larger than the standard error of the mean. This is a large difference, indicating that the observed effect is unlikely to be due to random chance. The p-value ($p < .001$) from the solutions about government funding, quality assurance system, capacity building, organisational structures, management standards and implementing competency-based frameworks are also significantly lower than .05 which further confirms that this difference is statistically significant and justifies the rejection of the null hypothesis in favour of the alternative hypothesis. The four most important solutions that the respondents rated highly are: government should avail funding for the implementation of the ETSSP goals, a quality assurance system should be in place to guide the implementation of the ETSSP goals, introduce more capacity-building initiatives and review the organisational structures of colleges to allow autonomy to implement the ETSSP initiatives.

5.2.3 Differences in the Challenges in the Implementation of ETSSP

In order to determine the differences in the challenges SMTs faced in the implementation of the ETSSP, the null hypothesis was stated as: there are no significant differences in the challenges SMTs face in ETSSP implementation. An independent t-test was employed to test this null hypothesis.

Table 4: Gender and mode of appointment differences in the challenges (df=56)

Challenges	Variables	n	M	SD	SE	t	p
	Gender						
	Male	36	44.83	5.08	.848	1.16	.252
	Female	22	43.09	6.29	1.34	1.10	.279
	Mode of appointment						
	Direct	7	44.14	7.01	2.65	.015	.988
	Promotion	51	44.18	5.44	.762	.012	.991

The findings of the independent t-test in Table 4 show that there is no significant gender difference in the challenges SMTs face in the implementation of the ETSSP between males [$t(56)=1.16$, $p=.252$] and females [$t(56)=1.10$, $p=.279$] implying that the null hypothesis is accepted. There is also no significant difference in the mode used to appoint SMTs in their current positions which determined that the null hypothesis was accepted [$t(56)=.015$, $p=.988$] and [$t(56)=.012$, $p=.991$] respectively. These findings reveal that SMTs perceive the challenges they face in the implementation of the ETSSP in similar ways irrespective of their gender and mode of appointments.

5.2.4 Challenges as the Predictors of Solutions in the Implementation of ETSSP

Regression analysis was used to determine the challenges as predictors of the solutions in the implementation of the ETSSP by SMTs. The null hypothesis, which was tested stated, there are no signif-

ificant differences in the challenges as predictors of solutions in the ETSSP implementation.

Table 5: Analysis of Variance results on challenges as predictors of solutions in the ETSSP implementation

Variable		SS	df	MS	F	Sig.
Challenges	Between	47.572	1	47.572	1.541	.220
	Within	17728.704	56	30.870		
	Total	1776.276	57			

Table 5 presented the findings of the regression analysis which determined significant differences in the challenges as predictors of solutions in the implementation of the ETSSP. The ANOVA test determined the differences in continuous outcome variables across SMT members by their qualifications. The variation was not large between them compared to variations within them. This indicates less differences in the SMT members means in terms of the highest qualifications. The findings reveal that the challenges as predictors of solutions in the ETSSP implementation were not statistically significant [$F(1, 56)=1.541$, $p=.220$]. Therefore, the challenges SMTs face in the ETSSP implementation do not predict the solutions they adopt to address these challenges.

Table 6: Regression coefficients of challenges

Model	SS	df	MS	F	Sig.
Regression	306.814	14	21.915	3.496	.001
Residual	269.531	43	6.268		
Total	576.345	57			

The results of the multiple regression analysis are presented in Table 6 which reveal that all the fourteen challenges are statistically significant ($F=3.496$, $p=.001$). This implies that the challenges are significant predictors of solutions in the implementation of the ETSSP.

Table 7 presents regression coefficient and significance of the challenges as predictors of the solutions in the implementation of the ETSSP. These three predictors of independence variables are; Resources allocated to the MoESD that are geared towards the ETSSP goals implementation are not enough ($t=6.590$, $p=.000$), Colleges lack talent management strategy ($t=3.058$, $p=.004$) and there is limited funding to implement the ETSSP goals ($t=2.983$, $p=.005$). Based on Beta coefficient, the challenges are arranged in terms of their significance in the implementation of the ETSSP. The most significance being Colleges lack the autonomy to implement policies such as the ETSSP ($\beta=.146$), Colleges lack capacity to implement the ETSSP ($\beta=.133$), Capacity building initiatives for leadership and management are limited in the colleges ($\beta=.112$), there are leadership development challenges in the colleges of education ($\beta=.108$) and the least significant challenge is organisational structures in the colleges of education create management problems ($\beta=.46$). Table 7 presents the results of regression coefficient and significance of the challenges as predictors of solutions in the ETSSP implementation.

Table 7: Regression coefficient and significance of challenges as predictors in the ETSSP implementation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	21.401	3.247		6.590	.000
	Resources allocated to the MoESD that are geared towards the ETSSP goals implementation are not enough.	-1.275	.505	-.321	-2.524	.015
	Organisational structures in the colleges of education create management problems.	.173	.472	.046	.366	.716
	There are leadership development challenges in the colleges of education.	.482	.584	.108	.827	.413
	Capacity-building initiatives for leadership and management are limited in the colleges.	.611	.926	.112	.659	.513
	There is poor management of teacher training and professional development.	-.452	.634	-.124	-.713	.480
	The quality and impact of teacher education are not well monitored.	-.039	.726	-.009	-.054	.957
	There is lack of leadership and management competencies in the college.	-.710	.595	-.196	-1.195	.239
	Training and orientation for new management leadership roles are never done.	-.510	.518	-.136	-.985	.330
	Colleges lack succession plans in leadership positions.	-.113	.829	-.024	-.137	.892

Colleges lack a talent management strategy.	2.453	.802	.510	3.058	.004
Colleges lack the autonomy to implement policies such as the ETSSP.	.802	.780	.146	1.029	.309
Colleges lack the capacity to implement the ETSSP.	.382	.380	.133	1.005	.320
There is limited funding to implement the ETSSP goals	2.683	.899	.424	2.983	.005
The ETSSP implementation is not effectively monitored.	-.324	.728	-.058	-.446	.658
a. Dependent Variable: SOLUTIONS					

6. Discussion

Qualitative data was analysed and two themes were identified which include, challenges and solutions in the implementation of the ETSSP. Policy implementation has always been problematic in Botswana (Botlhale, 2017; Metla & Wotela, 2021). Lack of coordination and establishment of a dedicated office to drive the implementation of the ETSSP are some of the challenges experienced in the Colleges of Education. Burger (2015) reported that one of the theoretical frameworks that underpin this study, the 7-C protocol of policy implementation emphasise the importance of coordination in policy implementation. Kamuzinzi (2019) stated that coordination in policy implementation was crucial as it involved key players who execute the plan and they put in place frameworks and motivation strategies. It can be concluded that the challenges articulated by SMTs borders on lack of financial resources and autonomy from bureaucratic government approval processes to implement the ETSSP. The Colleges of Education are government institutions and cannot make independent decisions on how they run their affairs. These challenges are recurring problems that SMTs are concerned about it in the implementation of the ETSSP in their institutions.

On solutions to mitigate the challenges faced in the implementation of the ETSSP, the findings reveal that the SMTs in the colleges of education acknowledge the importance of the ETSSP in improving education in the country. Education is one of the greatest tools which influences the socio-economic growth and development of a country (Baliyan & Moorad, 2018). The SMTs view the ETSSP as a useful document that needs to be revisited for effective implementation. Tereza (2019) outlines four factors that are instrumental for successful policy implementation, a) policy design, b) stakeholders and their engagement, c) institutional and societal context and d) implementation strategy. These factors can help revive the ETSSP implementation in the Colleges of Education provided the implementation frameworks are in place. The ETSSP document suggest some initiatives such as capacity building measures and quality assurance systems (Republic of Botswana, 2015) that SMTs can exploit to implement the ETSSP in their institutions. It is therefore critical for SMTs in the Colleges of Education to be conversant with the content of the ETSSP so that its implementation in the Colleges of Education can be interrogated thoroughly and successfully implemented.

The study also determined the differences in the challenges the SMTs face in the implementation of the ETSSP based on their background variables. The findings reveal that there were no significant differences in the challenges as predictors of solutions in the ETSSP implementation. The findings reveal that there were no differences in the challenges and mode of appointment between male and female members of the SMTs in the Colleges of Education. These findings yield valid results as a number of assumptions have been fulfilled such as utilising a relevant inferential statistical tool to check the mean of the two populations (Akpan & Clark, 2023). Some of the challenges SMTs faced include ineffective management of education service delivery, lack of change management culture and limited capacity building initiatives (Republic of Botswana, 2015). These challenges are viewed and experienced in similar ways by SMTs as the findings reveal.

In order to determine challenges as predictors of the solutions in the implementation of the ETSSP a relevant inferential statistical tool was performed to discover if there were significant differences in the challenges as predictors of solutions in the ETSSP implementation by SMTs in the Colleges of Education. Ajulor (2015) stated that the challenges linked to policy implementation could be attributed to improper planning, bureaucratic bottlenecks and alterations to the plan. The fact that there were significant differences on the challenges as predictors in the ETSSP implementation suggest that there were challenges which were more significant than others. Regression analysis was performed to determine the mean differences on the challenges SMTs faced as predictors of the solutions in the implementation of the ETSSP. The results show that the differences in mean were statistically significant. Tezera (2019) reported that policy design, stakeholders and their involvement, institution and the context of the implementation strategy are factors crucial for successful policy implementation. The challenges experienced in the ETSSP implementation can motivate the SMTs to think about practical solutions they could apply in the implementation of the plan.

7. Conclusion and Recommendations

The study investigated the challenges SMTs in the Colleges of Education in Botswana face in the implementation of the ETSSP and the solutions they adopt to address the challenges they face in the ETSSP implementation. It was found that the ETSSP was never implemented in the Colleges of Education and the SMTs outlined the challenges they faced. Some of the challenges include lack of autonomy, limited human and financial resources. The rejection of the null hypothesis also confirms that there are challenges that the SMTs faced in the implementation of the ETSSP in the Colleges of Education. The findings indicate that the SMTs appreciate the ETSSP as a welcome development that is meant to improve the education sector performance in the country. They suggest that an effective ETSSP implementation plan should be revived in the Colleges of Education. The rejection of the null hypothesis on the solutions confirms that there are solutions that can be effected to address the challenges experienced in the implementation of the ETSSP. The findings of the independent t-test show that there is no significant gender and mode of appointment difference in the challenges SMTs face in the implementation of the ETSSP. ANOVA was employed to determine the challenges as predictors of the solutions in the implementation of the ETSSP by SMTs and the findings revealed no significant differences in the challenges as predictors of solutions in the ETSSP implementation. The results of the multiple regression analysis indicated that all the fourteen challenges were statistically significant and indicated the predictors of independent variables that are significant and were closely related to the dependent variables.

The study recommends the development of an operational framework to guide the ETSSP implementation in the Colleges of Education, such as the 7-C protocol of policy implementation. The ETSSP should be funded by the government of Botswana, and its implementation milestones monitored and evaluated at certain intervals to ensure compliance. Since there is no significant difference in the challenges and mode of appointment to the current positions held by SMTs, the study recommends further research on how other staff members in the Colleges of Education view the challenges experienced in the ETSSP implementation. The study also recommends a comparative study to be carried out on the significance of the challenges as predictors of the solutions in the implementation of the ETSSP between SMTs as policy implementers and officials from the MoESD as policy formulators.

8. Implications of the findings

The findings of this study have implications for SMTs in the Colleges of Education and policy makers.

8.1 Implications for SMTs

The findings of this study have practical implications for SMTs in the Colleges of Education. The policy guidelines must be developed and aligned to the policy itself for effective implementation by the SMTs. The findings of this study have implications for human resource personal tasked with the implementation of the ETSSP. The personal must be trained and equipped with the skills to drive policy implementation initiatives. The practical implications of the findings also means that there was no deliberate plan to implement the ETSSP in the Colleges of Education. The ETSSP was a document that did not receive due attention as far as implementation was concerned in the Colleges of Education. This calls for a revisit and alignment of the ETSSP so that its aims and objectives are effectively and consistently implemented across the Colleges of Education.

8.2 Implications for Policy Makers

The findings also have implications for policy makers. Policy makers should put in place mechanisms of cascading the policy intentions and objectives to the implementers. The implementers are the SMTs in the Colleges of Education. The policy makers should also be conversant with change management techniques so that they deal effectively with those who resist or shun the new policy. The SMTs indicated that lack of financial resources is one of the challenges that hampered them from implementing the ETSSP. The policy makers should ensure that the ETSSP is funded, and a breakdown of its budget will guide implementers to exercise prudence in managing these financial resources to avoid unnecessary wastage. The implementation of the ETTSP requires careful planning by the policy makers and implementers as the benefits that will be accrued outweigh the challenges discussed in this study.

9. References

1. Adom, D., Joe, A.A., & Hussein, E.K. (2018). Theoretical Conceptual Framework: Mandatory Ingredients of a Quality Research. *International Journal- of Scientific Research*, 7(1): 438-441.
2. Ajulor O. V. (2015). A policy analysis model of participation and change management. *Journal of Creativity and Innovations for Sustainable Development, Research and Development Institute*. 15 (2), 31-38.
3. Akpan, E.E. & Clark, J.L. (2023). Independent t-test statistics: Its relevance in Educational Research. *International Journal of Eminent Scholars*, 10 (10):79-88.
4. Bagwasi, M.M. (2019). The major educational policies, models and ideas that have influenced Botswana's education system. *Policy Futures in Education*, 17(3):370-382.

5. Baliyan, S.P. & Moorad, F.R. (2018). Teaching Effectiveness in Private Higher Education Institutions in Botswana: Analysis of Students' Perceptions. *International Journal of Higher Education*, 7(3): 143-155. <https://doi.org/10.5430/ijhe.v7n3p143>.
6. Bailey, T. & Chirwa, D. (2014). *The Role and Functions of Higher Education Councils and Commissions in Africa: A case study of Botswana Tertiary Education Council*. Wynberg: Centre for Higher Education Transformation (CHET).
7. Bekker, J.C.O. & Heyningen, H. Van. (2011). A Strategic Leadership Model for Policy Implementation. *African Journal of Public Affairs* 4(1), June 2011.
8. Bass, B.M. & Avolio, B.J. (1994). *Improving Organisational Effectiveness Through Transformational Leadership*. Thousand Oaks: Sage Publications.
9. Boitumelo, M., Kuyini, A. B., & Major, T. E. (2020). Experiences of general secondary education teachers in inclusive classrooms: Implications for sustaining inclusive education in Botswana. *International Journal of Whole Schooling*, 16(1), 1-34.
10. Bolden, R.(2011). Distributed Leadership in Organizations: A Review of Theory and Research. *International Journal of Management Reviews*, 13, 251-269.
11. Botlhale, E. (2017). Enhancing public project implementation in Botswana during the NDP 11 period. *Africa's Public Service Delivery and Performance Review*, 5(1): 1–9.
12. Brynard, P. (2005). Policy Implementation: lessons for service delivery. Paper presented at the 27th AAPAM Annual Roundtable Conference, Livingstone, Zambia.
13. Burger, R.W. (2015). *Integrated Metropolitan Environmental Policy of the City of Cape Town: An Implementation Evaluation*. Master's Thesis. Stellenbosch: University of Stellenbosch.
14. Burns, J.M. (1978). *Leadership*. New York: Harper & Row Publishers.
15. Cloete, F., de Coning, C., Wissink, H. & Rabie, B. (2018). *Improving Public policy Good governance*. (4th ed). Pretoria: Van Schaik Publishers.
16. Creswell, J.W & Plano-Clark, V.L. (2018). *Designing and Conducting Mixed Methods Research*. (3rd ed.). London: SAGE.
17. Daher, W. (2009). Age and Experience: how do they correlate? *The International Journal of Knowledge Culture and Change Management Annual Review*, 9(9):1-10.
18. Dialoke, I. Ukah, F.O. & Maduagwuna I.V. (2017). Policy formulation and implementation in Nigeria: the bane of underdevelopment. *International Journal of Capacity Building in Education and Management* (ICBM), 3(2): 22-27.
19. H Al-Ghanem, N., Braganza, A., & Aldhean, E. (2020). Distributed Leadership in Transformation Initiatives: The Emergence of Network Leadership. *International Journal of Accounting & Finance Review*, 5(1), 51-65. <https://doi.org/10.46281/ijafr.v5i1.524>.
20. Jacob, N.O. & Samuel, A. (2020). Educational policy in Nigerian: Challenges of Implementation and Ways Forward. *Middle European Scientific Bulletin*, 4:1-9 DOI: 10.47494/mesb.2020.4.30.
21. Jnanathapaswi, S.G. (2021). Thematic Analysis & Coding: An Overview of the Qualitative Paradigm. In book: *An Introduction to Social Science Research*, Publisher: APH Publishing Corporation, New Delhi. DOI: 10.6084/m9.figshare.17159249.
22. Jotia, A.L., Sithole, B.M. & Gritter, K. (2016). Pragmatizing democratic education in Botswana through business education: Countering the scourge of the diploma disease. *Cogent Education*, 3(1): DOI: 10.1080/2331186X.2016.1189482.

23. Kamuzinzi, M. (2019). When traditional principles bring coherence in complex networks management: the case of “Imihingo” in Public Policy Implementation. [online]. <https://doi.org/10.1080/01442872.2019.1577374>.
24. Kivunja, C. (2018). Distinguishing between Theory, Theoretical Framework, and Conceptual Framework: A systematic Review of Lessons from the Field. *International Journal of Higher Education*, 7(6): 44-53.
25. Lindqvist, A., Sendén, M. G., & Renström, E. A. (2020). What is gender, anyway: a review of the options for operationalising gender. *Psychology & Sexuality*, 12(4), 332–344. <https://doi.org/10.1080/19419899.2020.1729844>.
26. Makwinja, V. M. (2017). Rethinking Education In Botswana: A Need To Overhaul The Botswana Education System. *Journal of International Education Research*, 13(2): 45-57.
27. Maree, K. (ed.). (2016). *First Steps in research*. (2nd ed.). Pretoria: van Schaik Publishers.
28. Metla, N.N. & Wotela, K. (2021). Challenges of Government Policy Implementation, Monitoring and Evaluation: Conceptualising Research for Botswana Ministry of Youth Empowerment, Sport and Culture Development. *Journal of Public Administration and Development Alternatives*, 6(2), 1–15. <https://doi.org/10.55190/qnoh8494>.
29. Ministry of Education and Skills Development. (2008). *Towards a Knowledge Society: Tertiary Education Policy- Government White Paper Number 37*. Gaborone: Government Printer.
30. Ministry of Education and Skills Development. (2009). *National Human Resources Development Strategy: Realising our Potential*. Gaborone: Government Printer.
31. Molokwane, T. (2019). New Public Management in Botswana: Contemporary Issues and Lessons. *African Journal of Public Affairs*, 11(1):48-62.
32. Najam, A. (1995). Learning From The Literature on Policy Implementation: A Synthesis Perspective. Working Paper (16 July 1995). Austria: International Institute for Applied Systems Analysis (IIASA) Pramono M. Setyo, dkk, Buletin Penelitian Sistem Kesehatan–Vol. 15 No. 1 Januari 2012: 38–46.
33. Republic of Botswana, (1994). *The Revised National Policy on Education April 1994*. Gaborone: Government Printer.
34. Republic of Botswana. (2009). National Human Resource Development Strategy (2009-2022): Realising Our Potential, Ministry of Education and Skills Development. 2nd edition. Gaborone: Government Printer.
35. Republic of Botswana. (2015). *Education & Training Sector Strategic Plan (ETSSP 2015-2020)*. Gaborone: Government Printer.
36. Samboma, T. A. (2017). Regulation of Tertiary Education Institutions in Botswana: Issues and Options. *Advances in Social Sciences Research Journal*, 4(6): 115-123.
37. Seopetsa, T. (2020). Challenges facing the implementation of public policies in South Africa since the dawn of democracy. *Educor Multidisciplinary Journal*, 4 (1): 141-175.
38. Selepe, M. M. (2023). The evaluation of public policy implementation failures and possible solutions. *EUREKA: Social and Humanities*, (1), 43-53. <https://doi.org/10.21303/2504-5571.2023.002736>.
39. Skhosana, J.S. (2019). *Applying the 7-C Protocol to assess the implementation of immigration policies in the Department of Home Affairs: A case study*. Master’s thesis. Stellenbosch: Stellenbosch University.

40. Swanson, R.A. (2013). Theory building in applied disciplines. San Francisco, CA: Berrett-Koehler.
41. Taylor J.S., Machado, M. & Peterson, M.W. (2008). Leadership and Strategic management: keys to institutional priorities and planning. *European Journal of Education* 43(3):369-386.
42. Taber, K.S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>.
43. Tabulawa, R. T. (2009). Education reform in Botswana: Reflections on policy contradictions and paradoxes. *Comparative Education*, 45(1), 87-107.
44. Tezera, D. (2019). Factors for the Successful Implementation of Policies. *Merit Research Journal of Education and Review*, 7(8):92–95. doi: <https://doi.org/10.5281/zenodo.3382780>.
45. Verloo, M. & Roggeband, C. (2003). Gender Impact Assessment. The Development of a New Instrument in the Netherlands. *Impact Assessment*, Vol.14. London, Pluto Publishers.