

**THE BOTSWANA NATIONAL MUSEUM AS AN EDUCATIONAL RESOURCE
IN PUBLIC SCHOOL CLASSROOMS**

by

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DECLARATION

I declare that **THE BOTSWANA NATIONAL MUSEUM AS AN EDUCATIONAL RESOURCE IN PUBLIC SCHOOL CLASSROOMS** is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

.....

SIGNATURE

(Mr. Thatayamodimo Sparks Rammapudi)

.....

DATE

DEDICATION

This piece of research is dedicated to my three sons Tumie, Tefo and Tlamelo with my love. The perseverance they had to endure through “o *fetsa leng*” has paid off. To my kindest mother in particular who has always believed in each of my endeavours since my first ever cry.

ACKNOWLEDGEMENTS

Anything we do in science is built on the work of thousands who have gone before us. Both from their successes and failures we learn and thus advance. I am deeply indebted to the many who have struggled to see educational theories come alive, and upon whose work I have built mine.

As much as any other scholarly structures have financial foundations, this thesis is no exception. My family has provided me with finance, a valuable forum and has been a constant source of stimulation. To them I owe my greatest debt.

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SUMMARY

Museums and schools evolved as the definition of the concept of education to describe a lifelong process of developing knowledge, skills, values and attitudes that take place not only in the classroom, but also in a variety of formal and informal contexts and settings. In order to fulfil and extend the potential of the partnership, museum educators and school teachers should be assisted to develop a comprehensive understanding of the nature of the museum-school collaboration. They should learn the difference between museums and classrooms.

When the Botswana National Museum was established in 1968, the Botswana government aspired to avail information relating to Botswana customs, indigenous knowledge system and values to Botswana's future citizens, with the hope that the information and artefacts collected at the time would retell the story of Botswana to learners and the public alike. The Botswana National Museum, through its educational programmes, has the capability to help educate learners; make teaching and learning an exciting undertaking; and provide the opportunities for hands-on activities and interaction with real objects.

In order to address the research question posed for this study, the researcher conducted open-ended interviews with a sample comprising 40 participants: 10 teachers, 10 learners, 10 museum employees and 10 curriculum developers. The data collected from the interviews were decoded and presented in narrative form. The responses were presented using three identified categories: the curriculum development process in

Botswana; the typical learner activities in the classroom and in the Botswana National Museum; and collaboration between the Botswana National Museum and schools.

The data analysis revealed that the curriculum development process in Botswana was exclusively done by curriculum developers. Learners, teachers and museum employees were not involved. The Botswana National Museum's education programmes are not familiar to all role-players. All role-players were positive regarding a possible collaboration with the Botswana National Museum. Generic and specific recommendations were put forward to this end.

KEY TERMS:

Activity-based learning, Botswana National Museum, collaboration, curriculum development, education activities, educational resource, Indigenous Knowledge Systems, Mobile Museum Service, Museum-in-a-Box, museum education, Revised National Policy on Education, role-players.

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CHAPTER 1

PROBLEM FORMULATION, MOTIVATION FOR THE STUDY, AIMS OF THE STUDY, CLARIFICATION OF CONCEPTS, RESEARCH METHODOLOGY AND WORK PROGRAMME

1. INTRODUCTION

In the four decades since most African countries attained political independence from the major European colonial powers, education has been seen as playing a central role in promoting the socio-economic development of the region (Mugomba & Nyaggah 1980:21). According to Johnson (2002:3), as the political transformation of Africa took place at the beginning of the 1960s, the leaders of the newly independent countries viewed the colonial education policies as an obstacle in their socio-economic development, especially given the relatively low levels of education in most of the African countries at the time, and the relatively small numbers of secondary and higher education graduates that were being produced.

According to the UNESCO (2000:2-4) “Education for All Assessment Country Report”, since independence was attained in Botswana in 1966, education has largely been guided by two policy documents, the National Policy on Education (NPE) of 1977 and the Revised National Policy on Education (RNPE) of 1994. According to the Eighth National Development Plan (Botswana Government 1997a:343), the NPE (1977) stimulated the expansion of education, particularly at the primary school level, while the RNPE (1994) continued with the advocacy of the expansion of education, extending it to the secondary school level. The NPE (1977) was a result of the first review of the post-independent education system in Botswana by the National Commission on Education. The NPE

(1977) set the agenda for education developments until the early 1990s (Botswana Government 1993:1).

A review Commission, the Kedikilwe Commission was tasked in 1993 to formulate a philosophy of education for Botswana, and set goals for the future development of education and training in Botswana (Botswana Government 1993:1). In setting up the Commission in 1993, the Botswana government contended that:

Considering the time that had elapsed since the last Commission, the Government thought it appropriate to conduct another review of the entire education system with a view to developing a system that would see the country into the 21st Century (Botswana Government 1993:i)

Marope (1996:157-171) and Tabulawa (Botswana Gazette 2007b:14), hold a different opinion regarding the appointment of the Commission. They contend that it was not the time factor that necessitated the review of the education system, but that the education system was failing the Botswana nation. According to Tabulawa (Botswana Gazette 2007b:14), the Botswana government was under political pressure to change the system of education. Tabulawa (Botswana Gazette 2007b:14) explains:

Public policy-making never takes place in a sociological vacuum. There is always a context, and that context may be social, political, economic, or a combination of all these. When governments find themselves in tight situations politically, they tend to turn to public policy as a way of legitimating themselves. This is very common in the so-called liberal democracies where governments have periodically to reaffirm their legitimacy at the ballot box. The setting up of the Kedikilwe Commission [Second National Commission on Education] in 1992 may be understood as a legitimization device.

According to Tabulawa (Botswana Gazette 2007b:14), politicians argued that the economy was in good shape. It was the education system that was failing to produce citizens with the requisite skills to take up available job opportunities in the labour

market. The Revised National Policy on Education of 1994 (Botswana Government 1994b:3) confirms that “in the past decade rapid economic growth and resulting changes in the structure of the economy have resulted in shortages of skilled personnel. However, the education system was not structured to respond to the demand”.

The generic terms of reference of the Kedikilwe Commission (1993) prescribed a broad ranging review of the entire education system, with particular emphasis on universal access to basic education, vocational education and training, preparation and orientation towards the world of work, collaboration between the different levels of the education system, and a re-examination of the structure of the education system (Botswana Government 1993:ii). The specific terms of reference of the Commission were:

- To review the current education system and its relevance as prescribed by the policy of 1977, and identify problems and strategies for further development in the context of Botswana's changing and complex economy.
- To re-examine the structure of the education system, and recommend a system that would guarantee universal access to basic education, whilst consolidating and vocationalising the curriculum content at this level.
- To advise on an education system that is sensitive and responsive to the aspirations of the people and the manpower requirements of the country.
- To study the various possible methods of student streaming into vocational and academic groups at senior secondary level.
- To study how the secondary structure at senior secondary level might relate to the University of Botswana degree programmes, and how the two programmes might best be reconciled.

- To advise on the organisation and diversification of secondary school curricula in order to prepare adequately and effectively those who are unable to proceed to higher education.
- To make recommendations to government on the best and most cost effective methods of implementation of the final recommendations (Botswana Government 1994b:1).

The Commission developed a strategy “for the development of education and training over the next twenty five years intended to address the problems in today’s system and provide a way forward to the future” (Botswana Government 1993:vi; Botswana Government 1994a:2). According to the Report of the Commission, also known as the Second National Commission on Education (1993), the strategy was based on the fundamental assumption that the nation’s major resource is its people and that investment in their education and training is a necessary condition of national development (Botswana Government 1993:vi). The recommendations of the Commission culminated in the RNPE (1994). The RNPE aimed to:

- increase access and equity.
- improve general education so as to prepare learners more effectively for life, citizenship and the world of work.
- develop training so that it is more responsive to the changing needs of economic development.
- improve and maintain quality at all education levels.
- enhance the status and performance of the teaching profession.
- ensure effective management through the system and maximise community and parental involvement.

- increase cost-effectiveness and cost-sharing in the financing of education and training (Botswana Government 1994a:2-4).

The resultant policy, known as “Education for Social Harmony or Education for Kagisano” sought to promote and reconfirm the four cardinal national principles as set out in the country’s Third National Development Plan of 1973 to 1978, namely democracy, development, self-reliance and unity. In a bid to promote the above policy, priority was given to quantitative and qualitative improvements in primary education; the provision of nine years of basic education; a re-orientation of the curriculum to embody the four cardinal national principles; and the acquisition of basic knowledge and skills needed for national development (Botswana Government 1993:i).

According to the RNPE (Botswana Government 1994a:44-50) the fifth aim, the teaching profession (see above of the page), has the responsibility for the care of generations of school children. Besides the home, the school is an important and influential role-player in the education of future citizens. The policy acknowledged that the success of any education system depends largely on its teachers. The RNPE (1994) put teachers on the spot for their role in the teaching and learning in school, whilst it leaves out other role-players such as the Botswana National Museum. According to Booth (2004:247-266) “when dropout rates and repetition rates are high, educators have historically looked to the schools to investigate the causes within the school system for those failures”. Other role-players, for instance museums, the family, communities are ignored. Georgiou (1994:102-107) argues that school achievement is affected by factors that are both internal and external to the individual learner. The microsystems of which the individual

learner is a member might influence positively or negatively her or his chances of success.

According to the Namibia Government (1993:7), the learner brings to school, the wealth of knowledge and social experience gained from the family, the community and interaction with the environment. According to Wolfendale (1999:169), parents and schools might be the most crucial influences on children (learners), but they are not the only ones, museums may also be part of this model of cooperation. Museums, for example, the Botswana National Museum, have information in enmasse; that it could avail to schools, and which could improve general education to prepare learners more effectively for life, citizenship and the world of work. Education at all levels could also be improved. Mathewson (2001:8) argues that good communication (collaboration) between teachers and museum professionals is vital as it creates a common bond of interdependence and mutual interest among interlocking contributors. The schools should make the effort to provide information to museums about the curriculum, administration, facilities, and day-to-day running of the schools. The schools should also create time for museum professionals to hold formal and informal dialogues with museum employees.

According to Mestry (2004:126-127) there should be mutual communication between schools and their museum partners to counteract miscommunication. Communication is an essential condition for an effective collaboration, and implies joint decision-making between the two stakeholders. Appropriate decisions could be taken only if everyone has sufficient information at their disposal. Therefore, the principal or school management has to communicate the vital information to the museum for the collaboration between schools and museums to be worthwhile for both partners.

According to Bastiani (1995:8), it is both an educational and a professional “non-sense” for schools (or individuals within them) to operate in ignorance of and isolation from the communities they serve and the neighbourhoods in which they have been located, including museums. A learner’s environment comprises her or his peers, parents, members of the school staff, community and the prevailing local and national culture as represented in museums (Bastiani 1995:8).

In 1997 the government set up a Presidential Task Force Group to investigate and make proposals regarding a long-term vision for Botswana. The Task Force Group acknowledged the RNPE (1994) as “an important step in the realisation of the vision of the kind of society Botswana should be by the year 2016” (Botswana Government 1997b:5). The Task Force Group also carried out a series of consultations; and the citizens of Botswana were invited to make submissions on their aspirations for the future (Botswana Government 1997a:5). The year 2016 which was used as a point of reference, was important to Botswana in that the country will have been independent for 50 years. The Presidential Task Force Group has since produced a report entitled "Long-term Vision 2016: Towards Prosperity for All" (also known as the Long-term Vision 2016 document). The document included the following important aspirations: the education of its citizens should be prominent aspect of shaping and preparing the latter to “own the future”. The Batswana (people of Botswana) should anticipate a future where all citizens should have moved beyond basic education to be an educated and informed nation, and to become best producers of services and goods (Botswana Government 1997b:2). Knowledge should be the most important resource and ingredient for socio-economic development. It should be acknowledged that investment in human development could reduce poverty and enhance the economic well-being of the nation (Botswana Government 1997a:18).

According to the Long-term Vision 2016 document, the accomplishment of its aspirations in the area of education depends on collective effort, commitment, and productivity of the key role-players involved in education, especially the teachers, learners, community and the Botswana National Museum (Botswana Government 1997b:19). The Botswana National Museum should also extend its services to public school classrooms and contribute to fulfil the aspirations as envisaged for 2016 (Botswana Government 1997b:19).

Against the above introductory remarks, the origin and nature of the problem, statement of the problem, motivation for the study, and aims of the study will subsequently be discussed.

2. ORIGIN AND NATURE OF THE PROBLEM

According to the Report of the Commission on Museums for a New Century (2004:68), in the United States of America the practice of uniting the forces of schools and museums to form school-museum collaborations had since the 1980s gained increasing popularity. Since then schools at all levels started collaborations with cultural arts institutions to design and implement educational programmes. These collaborations had goals that include among others activity-based learning, discovery learning, hands-on learning, problem-solving activities and the enhancement of cultural intelligence. According to the Report of the Commission on Museums for a New Century (2004:67), the unique domain knowledge and expert performance techniques that cultural arts professionals brought to the collaborative ventures would energized school curricula, enhanced teacher professionalism, engaged learners in imaginative hands-on learning and changed the way

in which instructional delivery was conceptualized. Museums and schools are thus institutions that could have a positive and mutually beneficial relationship.

Cochran (1986:1) similarly points out that museums and schools have long worked together towards common educational goals, and the partnership evolved as the definition of the concept of education, to describe a lifelong process of developing knowledge, skills, values and attitudes that take place not just in the classroom, but also in a variety of formal and informal contexts and settings. According to the Report of the Commission on Museums for a New Century (2004:68), in order to fulfil and extend the potential of the partnership, museum educators and school teachers should be assisted to develop a comprehensive understanding of the nature of the museum as teaching-learning environment. They should learn how museums differ from classrooms, and how the two settings could be complementary.

At the time the Botswana National Museum was established, in 1968, public education was one of its principal envisaged roles (Zebras Voice 1986:8). Through the Botswana National Museum, the Botswana government aspired to avail information relating to Botswana customs, indigenous knowledge system, and values to Botswana's future citizens, with the hope that the information and artefacts collected at the time would retell the story of Botswana to learners and the public alike. They would see and learn from the evidence of what the economic, cultural, social and political life of the Batswana (people of Botswana) prior to the colonial period was like. It was part of the Botswana National Museum's mandate to continuously avail all collections to learners in school.

To strengthen its mandate to educate, the Botswana National Museum has endeavoured to do the following: to build up a national collection of ethnographic, historic and plant material; acquire permanent and temporary displays; create a mobile exhibition unit; protect the national monuments, and conduct applicable research (Zebras Voice 1986:3). According to Munjeri (2001:101), in 2001 the Botswana National Museum had substantive physical facilities that included proper galleries, storage facilities, a comprehensive library and a staff complement of 254, of which 39 were trained museum professionals. The qualifications of the museum professionals included doctoral degrees, master's degrees and bachelor degrees. In addition, they also obtained Museum Studies Certificates and Diplomas. The 2007 records showed a staff complement of 180 officers, over three-quarters of whom have a minimum diploma qualification (Botswana Government 2007:326-333).

Notwithstanding the resources and expertise the Botswana National Museum struggled and is still struggling to fulfil its educational function. For example, since its inception in 1980, and for decades thereafter, the Mobile Museum Service had its own budget; today (2009) however, it has ceased to exist. The Botswana National Museum has shifted its emphasis to monument protection projects (Phorano 2006: International Museum Day speech).

According to Mathuba and Macleod (2003:6), the Botswana curriculum, from primary to secondary school, is controlled by government through the Ministry of Education and Skills Development (MoESD). According to a UNESCO (2005b:34) study of the quality of learning in the content areas in Botswana secondary schools:

Botswana has a history of high stakes assessment tied to academic orientation, performance of learners which is

coupled with an emphasis on the use of preset standardized tests to judge the quality of education in schools. The end result, as confirmed by teachers and government personnel, is that “testing drives instruction”; the government’s tests shape the nature of the curriculum delivery and what counts as learning, narrowing the indicators of school success. As the curriculum developers, head teachers and teacher educators stated, assessment oftentimes has “too much” of an impact on teaching and limits student-centered learning.

According to the Botswana Guardian (2007:13), the current education system, and curriculum, of Botswana do not live up to the envisaged outcomes of an informed and educated nation:

Within the present education system in Botswana, there is paucity in linkages between pre-tertiary education and tertiary education that should provide the foundation for lifelong learning necessary for Botswana to play a contributing role in the global information society: the fact that government decants a large percentage of the national budget into the education system but receives worrisome outcomes shows that there is need to revamp the education system.

Tsheko (2006:1) is of the view that the current Botswana curriculum requires a shift from being content-based to a skills-based, learner-centred curriculum which promotes skills and the ability to apply, analyze, interpret and use information for decision-making. The Botswana Guardian (2007:13) argues that Botswana is still clung to the traditional education system. The driving force behind the traditional education system is the mastery of prescribed knowledge: a set body of information (subject-related content), basic skills and procedures. The Botswana Guardian (2007:13), terms this as an input curriculum, and further argues that the input curriculum leans heavily on traditional behaviourist paradigms of teaching and learning that see the teacher as the bastion of knowledge to be acquired by the learners. A skills-based, learner-centred curriculum on the other hand, shifts the responsibility of teaching and learning to the learner and the community from which the learner draws her or his experience. As opposed to the

traditional education system, the latter approach propagates the importance of life-long learning rather than simply acquiring textbook knowledge only (Botswana Guardian 2007:13).

According to Spady (1994:18), learning is not significant unless the outcomes reflect the complexities of real-life and give prominence to the life-roles that learners will face after they have finished their formal education. This is contrary to what the Botswana curriculum envisaged in a learner. According to the Botswana Guardian (2007:13), it has been proven over the years that the Botswana youth are unable to apply knowledge acquired at school across the disciplines or make use of it outside the classroom.

A new skills-based, learner-centred curriculum is according to the Botswana Guardian (2007:13) important for the future of Botswana. According to the 2002 Curriculum Blueprint for Ten-Year Basic Education (Botswana Government 2002:2), the aim of basic education in the 21st century is as follows:

Basic education in Botswana aims to promote the all-round development of the individual; foster intellectual growth and creativity; enable every citizen to achieve his/her full potential; develop moral, ethical and social values, cultural identity, self-esteem and good citizenship; prepare citizens to participate actively to further develop our democracy and prepare citizens for life in the 21st Century. It incorporates a sound prevocational preparation by imparting comprehensive knowledge and selected practical experience of the world of work also known as experiential learning; provide a foundation that enables individuals to cultivate manipulative ability, positive work attitudes, and make optimum choices for future career.

The philosophy of the RNPE (Botswana Government 1994:5) and the aim of the Curriculum Blueprint for Ten-Year Basic Education (2002:2) emphasise investment in human resources, formal development, and the development of moral and social values,

cultural identity, self-esteem, good citizenship and desirable work ethics. Among the key issues identified for successful educational development in Botswana is the improvement and maintenance of the quality of education at all levels.

This is in line with the UNICEF (United Nations Children’s Fund) Report’s (1989:176) definition of the concept basic education, namely basic education is “primary education for children, literacy linked to life skills for adults, the empowerment of individuals (between the ages 6 to 14) and to obtain and use knowledge to protect their families.” The UNICEF Report (1989:176), goes on to state that for Botswana, successful basic education is the achievement of the following three goals: education for life for all citizens; goals related to functionality in the work and community environment; and the empowerment of individuals to meet their development needs and properly care for their children. The UNICEF Report (1989:176) further argues that basic education goals can be reached through formal schooling, non-formal education and other mobilising forces such as the media, creative arts, and museums. The definition of the concept basic education used in the UNICEF Report (1989:176) recognises the educational potential of “other mobilising forces”. This recognition makes the “mobilising forces” inevitable role-players in the country’s curriculum.

The RNPE (Botswana Government 1994a:5) and the Curriculum Blueprint for Ten-Year Basic Education (Botswana Government 2002:2) also set aspirations that require every Motswana (singular for Batswana – the people of Botswana) to explore various environments that might assist in the all-round development of every citizen – the school as well as other related institutions. According to the Ministry of Finance and Development Planning (Botswana Government 1997b:337-368), the principal objective

of the envisaged curriculum reform is to develop a curriculum with a prevocational focus to instil in the young people of Botswana skills and attitudes that are conducive to their gaining employment in the formal and informal sectors, the latter with specific reference to self-employment. Therefore, learning as envisaged by the Long-term Vision 2016 document cannot occur where institutions such as the Botswana National Museum are marginalised. According to the RNPE and the Curriculum Blueprint for Ten-Year Basic Education (Botswana Government 1994a:5; Botswana Government 2002:2) teaching and learning should be grounded in a context familiar to the learner. A linkage between new learning and what the learner already knows is pedagogically sound. According to Stewart, Jones and Pope (1999:ED 428 403) many teachers tend to teach in a style that reflects their own learning preferences, even though that style may not be effective for all the learners in the class; as a result they disregard the educational value of a collaboration with institutions such as the Botswana National Museum.

Teachers tend to ignore institutions such as the Botswana National Museum as an educational resource because of the distinctiveness of the learning in the school and in the museum. According to scholars such as Cochran (1986:32-39), Hein (1998:43) and Mathewson (2001:5), a lack of familiarity with the museum context significantly affects the capacity of teachers to participate in the school-museum educational relationship during a museum visit. This view is supported by research findings that have shown that many teachers lack the confidence and competence to participate in the museum context (Mathewson 2001:5; Walsh-Piper 1989:94-203). Consequently, “teachers participate at a clear disadvantage, which often leads them to choose not to enter or to withdraw. If they do enter they generally are cautious, responding to action undertaken by museum professionals, rather than initiating actions” (Walsh-Piper 1989:94-203). According to

Mathewson (2001:5), some teachers tend to inappropriately impose classroom teaching strategies and methods on the museum environment. This could be viewed as teachers attempting to transfer the environment they are familiar with, the school, to the museum environment.

The above issues need to be addressed, because according to Gardner (1991:203), museums provide engaging methods and materials for learning and understanding during all stages of schooling. Gardner (1991:203) sees learning in a museum environment as an apprenticeship from childhood to adult masters. Many people visit museums as children and keep coming back to museums throughout their lives because of the fascinating discoveries they make during each visit. According to Viadero (1998:26-27), such field trips would expose learners to information in an interdisciplinary manner, and the museum experience often touches an emotional or intellectual nerve within the visitors. Viadero (1998:26-27) cites findings of a study in which 95% of college and elementary school learners were asked to recall a field trip to a museum. They could relate exactly what they saw, what they did, and who they were with. Such vivid recollections illustrate the potential educational value of such experiences. Field trips also give museum educators a chance to add their particular perspectives and expertise to the themes learners study in school.

According to Akinpelu (1981:175):

The child learns in many different ways; in whole group activities, in small group situations, in one-to-one exchange with the teacher and other children and as an individual. The child is always exploring his/her social material environment. Through communication with others, playing, experimenting, experiencing things, and by reflecting on them, the child learns. A fundamental aspect of a supportive classroom is that the teacher attempts to monitor learners in

all of these learning situations and attempts to offer support that meets the diverse needs of each learner.

According to Snyder, Chapman and Fuller (1992:141-156) learners have an immense capacity for activity, extensive enthusiasm, and wide-ranging curiosity. When subjected to a classroom context, however, these dynamic attributes frequently appear stifled rather than developed, and misdirected rather than focused on productive enterprises.

Seepe (in Higgs, Vakalisa, Mda & Assie-Lumumba 2000:118-138), contends that children in an African setting have a stronger connection with an identity rooted in the immediate community. He asserts further that most children in Africa, particularly those that still have rural connections experience a stronger adult and older peer network around their upbringing and are carefully brought up (through assignments on various family chores) to take on an increasingly active role in the community through learning. These children learn by observing tasks and activities and are given tasks to do according to what they are ready to try out and can manage. As they show increasing competence and maturity, they are given accordingly more responsibility in the home and community (Seepe in Higgs et al 2000:118-138). Therefore, the primary role of the museum and other social institutions, in co-educating the children in Botswana cannot be ignored. It is for this reason that the Revised National Policy on Education (RNPE) of 1994 recommends through Recommendation 118 [paragraph 11.6.3], a partnership, primarily with local communities (Botswana Government 1994a:52).

The above recommendation, however, ignores the educational role of “mobilising forces” such as museums, in fact, the whole RNPE (1994) is silent on the partnership between schools and museums. Opening a workshop for headteachers entitled “The Museum: An

important resource for teachers” in 1998, Nleya (1998:1), a Teacher Training and Development Officer, declared that:

we are always informed that there is shortage of teaching resources for our schools and your participation here, will therefore through the objectives and content make you realise that there is a lot of resources for teachers which may be utilised in enriching our classroom activities in various subjects.

The whole education system is implemented by teachers who depend wholly on the RNPE of 1994; consequently, as long as the RNPE (1994) does not officially declare the Botswana National Museum an educational resource, teachers would not consider it as such. Nleya (1998:1) urged the Botswana National Museum to demonstrate to teachers its potential to educate and to enhance teaching and learning in the classroom. He urged the Botswana National Museum also to compile and present promotion programmes that could convince, and articulate to, the teaching fraternity in Botswana that it has the wherewithal to educate the nation. According to Hooper-Greenhill (1994:1) museum collections of all sorts can be linked to many of the questions that arise in the pursuit of making sense of the world learners live in, as such the museum provides the basis for research for both the learners and their teachers. The Botswana National Museum, through collections it holds, has the capability to help educate learners; make teaching and learning an exciting undertaking; and provide the opportunities for hands-on activities and interaction with real objects.

According to the Daily News (Botswana Government 2006:4), the Botswana National Museum plays an important role as a repository of information on the country’s natural and cultural heritage for research purposes. Through the Botswana National Museum outreach programmes as well as the reference library, learners are able to research, and

learn about the heritage of their country and more about themselves, who they are, where they come from and where they are heading in future as members of different ethnic groups. Most importantly, they have the opportunity to learn their intangible cultural heritage. According to the UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (1972:2) intangible cultural heritage means “the practices, representations, expressions, knowledge, skills as well as the instruments, objects, artefacts and cultural spaces associated therewith that communities, groups and, in some cases, individuals recognize as part of their cultural heritage”. It identifies five major forms of “intangible cultural heritage”: oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional craftsmanship.

The Botswana National Museum can according to Mazonde (1988:10), play a decisive part in the promotion of Botswana’s intangible cultural heritage through its display services. Its educational programmes, notably its Mobile Museum Service which visits rural schools on a regular basis, have played a major role in creating cross-cultural awareness among the Batswana.

In the light of the above discussion regarding the origin and nature of the problem of the study, the value of the Botswana National Museum as an educational resource in public school classrooms is regarded as the main issue of this study. Having emphasised those areas which have contributed to the nature and origin of the problem, it is now possible to state the problem of the thesis.

3. STATEMENT OF THE PROBLEM

Having identified the major problem areas subsumed within the nature and origin of the main problem, the question which the study poses at the very onset is: **HOW CAN THE BOTSWANA NATIONAL MUSEUM EXTEND ITS SERVICES TO BECOME AN EDUCATIONAL RESOURCE AND PARTNER IN PUBLIC SCHOOL CLASSROOMS TO IMPROVE THE QUALITY OF EDUCATION, PROMOTE THE INDIGENOUS KNOWLEDGE SYSTEMS OF BOTSWANA AND DEVELOP THE CORE COMPETENCIES OF BOTSWANA'S CITIZENS?**

Closer scrutiny of the main problem reveals the existence of a number of sub-problems. The sub-problems will be discussed in greater detail in the paragraphs that follow.

3.1 SUB-PROBLEM 1: THE CURRICULUM DEVELOPMENT PROCESS IN BOTSWANA

The development, design and implementation of a curriculum is a complex, and time consuming undertaking. It includes everyone in society, and is also influenced by the past, present, and the future of a particular society. Deriving from Tyler's curriculum model, Posner (1994:1329) outlines the issues that are to be considered when planning a curriculum as follows:

- Planners are to decide what educational purposes or objectives the school seeks to attain. Specialists derive these 'objectives' from systematic studies of the learners, from studies of contemporary life in society, and from analyses of the subject matter. These three sources of objectives are then 'screened' through the educational philosophy and through the knowledge available about the psychology of learning.

- Planners are to determine what educational experiences can be provided. This entails investigating educational experiences that can add value to the national economy.
- Planners are to find ways that these educational experiences can be effectively organized.
- Planners are to determine whether the educational purposes are being attained.

The government gave the Kedikilwe Commission (Botswana Government 1994b:ii) the mandate to investigate and propose a programme of studies (curriculum) which would enable the learners to adapt more easily to productive employment or self-employment; which is learner-centred using a variety of learning and teaching strategies; and which acknowledges the diversity of needs among the individual learners and the communities. With this in mind, the curriculum planners in Botswana should have, according to the Kedikilwe Commission, consider among others the following issues: Will the youth who leave school

- be able to participate in the emerging Botswana spirit of enterprise?
 - be informed and responsible citizens?
 - have skills and capabilities to sustain a satisfactory quality of life?
 - be able to use their analytical skills to find a productive niche in the future of the country?
 - be adequately prepared to proceed with their education or training and personal development obtained via the citizen development and classroom culture?
- (Botswana Government 1994:ii)

The curriculum development process can be either of a technical approach or a critical approach (Maruatona 2004:53-65). In the technical approach, curriculum planners assume that educational development is an objective process and can be made by experts with specialised knowledge. In the critical approach, curriculum planners negotiate the educational development with various stakeholders with different power relations in society. Pratt (1980:82) lists the stakeholders that need to be consulted as:

- People who have a right to be consulted, parents and taxpayers. The aspirations they maintain for their children have an authenticity that demands respect.
- People whom it is politically expedient to consult, politically influential individuals and pressure groups. They may be in a position to affect the implementation of any curriculum.
- People who have special insight or expertise, teachers by training, interest and occupation. They have special knowledge of the educational needs of learners and are well placed to observe the reaction of learners to different instructional content. Including teachers at this stage would also help to reduce teachers' anxiety about impending curricula changes.

Proponents of this approach are scholars such as Freire (1972:114-116) for whom “ the curriculum planning and development process is not viewed as a technical matter, but instead as a political and ideological one, the end product is not a learning outcome, but critical reflection and action upon reality” (Posner 1994:1328-1334). Planners in this context, strive to represent the interests of diverse learners in order to forge a link between learning and development; and to consider issues such as ethnicity and the cultural identities of teachers and learners in a given context.

The curriculum development process in Botswana occurred according to the technical approach. Maruatona (2002:736-745) argues that curriculum development is never a purely technical matter. According to Maruatona (2002:736-745) in most cases, even in democratic countries, there is an intervention of political authorities in that process. The extent of curriculum reform is often decided mainly by political leaders because of the differences in political perspectives of the political groupings. Various stakeholders' opinions and pedagogical considerations, such as the harmonious growth of the learner's personality and learning in the sense of the acquisition of knowledge and know-how, are no longer taken into consideration in planning the curriculum reform. Greater emphasis is being put on the development of specific competencies of future citizens and attitudes such as devotion to national goals or developing desirable characteristics.

As Botswana followed the technical approach to the curriculum development process, the Curriculum Development Division in the MoESD (Ministry of Education and Skills Development) planned and developed the curriculum with little or no input from practising teachers or other role-players (Maruatona 1998:88). Maruatona (1998:88) contends that the Curriculum Development Division decided on the range of subjects and their syllabi for each year of schooling, leaving little flexibility in terms of among others, choice of knowledge focus areas for teaching and learning. At school level, where the implementation of official programmes takes place, the functions of school heads is limited to managing and stimulating the hidden or informal curricula and ethos of the school. The teachers' role is to accept and implement curriculum policy developed by bureaucrats (Botswana Gazette 2006:13; Mathuba & Macleod 2003:5). The curriculum in Botswana, still prescribes measurable behavioural objectives in the syllabi, teacher talk, the lecture and textbook methods (Botswana Guardian 2007:13).

The limitation of a technical and centrally-produced curriculum with among others, limited authentic learning-teaching support materials (LTSMs) in a classroom, is the inability of learners to be able to contextualise knowledge, skills, values and attitudes beyond the lower levels of Bloom's taxonomy of the cognitive domain in authentic contexts. According to the University of Leicester (2007:8), the importance of developing a locally-based curriculum cannot be underestimated. Flashy presentations of textbooks often hide the fact that equally good learning-teaching support materials could be produced locally by teachers in a cluster, circuit or region, given the necessary training. The University of Leicester (2007:8) further argues that where museum visits are among others integrated into the curriculum, learners are able to draw on authentic experiences for their classroom work, with the museum's collections and rich, often unusual, environments providing "raw material" for the imagination. Museums also assist learners to produce their own learning-teaching support materials, and where learners do so, the level of learning is often much higher than any single learner could otherwise attain, provided that they have the appropriate challenge and support. According to Hein (1998:15), this is the basis of a critical approach to curriculum planning and learner-centred approach to education to develop each learner's ability to construct her or his own understanding.

The Namibia Government (1993:60) in its document "Education for All" argues that the teacher is the key to learner-centred education. Accordingly, a competent and reflexive teacher can take a behaviourist-oriented curriculum and related syllabi, with the resulting learning-teaching support materials (LTSMs), and teach it according to a social constructivist mode (a variety of cognitive constructivism that emphasizes the collaborative nature of much learning), and produce desired and improved outcomes. Similarly, the teacher can twist a

wrought learner-centred curriculum and related syllabi, with its LTSMs into a behaviourist-oriented mode. To a very large extent, it depends on whether the teacher understands the curriculum principles and pedagogy; and, is able and willing to put learner-centred principles into practice (Namibia Government 1993:60).

Wright (1995:5) confirmed that the curriculum development process in Botswana is weak; and that the “different sections” technical approach and the RNPE’s (1994) traditional approach have not been synthesized into an efficient and well-coordinated machinery that could address the challenges as posed by Botswana’s new vision outlined in the RNPE document of 1994 and Long-term Vision 2016 document of 1997. The Botswana Education Broadcasting Division, for instance, whilst it does good work in producing and broadcasting model lessons in line with its mandate:

- does not consult with those role-players who develop the curriculum prior to deciding which subjects and what topics or units to deal within their schools broadcast lessons.
- broadcasts are also out of touch with the schools’ schedules and as such some programmes are broadcast long after teachers have covered topics or units, or even before the topics and units were dealt with in the classrooms (Wright 1995:5).

There is also, according to Wright (1995:5), the issue regarding collaboration of role-players in the curriculum development process. The suspicion within education departments and divisions is that collaboration would imply one section being accountable to another – a top down approach. There is also a fear of infringement into another department’s domain, and as a result most of the linkages and collaboration

between departments and divisions involved in the curriculum development process take place through panels and task forces. These panels and task forces are considered non-threatening and temporary phenomena that will not impinge on existing hierarchies.

The Curriculum Development Guidelines of 1996 (Botswana Government 1996:5) prescribe the curriculum development process in Botswana as follows:

- Subject panels should assist the MoESD to develop an effective and continuous curriculum for the basic education (primary to junior secondary) programme to ensure that the senior secondary school curriculum is articulated with the curriculum of the lower levels.
- Each national panel is to be advisory to the MoESD and work under the direction and supervision of the Department of Curriculum Development and Evaluation. The membership is limited to not more than 20 people. Membership is by appointment by the Permanent Secretary of the MoESD.
- Under each national subject, standing committees for the different levels of education should be formed. Membership of these standing committees should include the following: ten practicing teachers at a specific level; one education officer (field) from the teacher's level of each inspectorial region; one teacher from each of the other levels; a maximum of five members co-opted from organisations, parents, employers and special education. The standing committees should ensure that the subject syllabus at a particular level covers all essential components within the subject area and relates to the other levels (Botswana 1996:5).

From the above it is clear that during the curriculum development process only a few teachers are chosen to represent subject panels. They may only put forward suggestions regarding the syllabus, learning and teaching support materials, teaching strategies, assessment procedures, etc. They may not initiate innovation when and where necessary (Mafela 1994:87-94; Mathuba & Macloed 2003:2).

Aronowitz and Giroux (1993:33) indicated that in the above curriculum development process, the intelligence, judgement and experience that role-players might bring to bear on curriculum issues are ignored. Louis and Miles (1990:330) warn that curriculum planning, development and change designed by small teams, panels and taskforces runs the risk of creating an in-group of believers and out-group of resisters. Davies (in Mathuba & MacLeod 2003:3) quotes one headteacher who is doubtful about the fact that few teachers are being selected to the curriculum development panels, "I do not know how much thought teachers give to it at this stage ... only if very conscientious".

In order to avoid the problem of resistance in this regard, the MoESD has tasked the Educational Publications Division of the Department of Curriculum Development and Evaluation in the MoESD to produce relevant supplementary materials to reinforce the school curricula, and provide an in-service training programme for teachers in primary and secondary schools. Teaching and learning support materials were also to be developed and produced on a mass scale for the teachers (Botswana Government 1997b:358).

According to Nleya (1998:1), the MoESD did not invite other role-players such as the Botswana National Museum to collaborate in the provision and production of teaching

and learning support materials. The Botswana National Museum did not seize this opportunity either. According to Hooper-Greenhill (1994:142) museums should provide travelling exhibitions, classroom displays, publications, loan services and strengthen mobile museum service to schools to enhance teaching and learning in the classroom.

The curriculum has been and is still focused on product (examination results, grades) rather than process. The emphasis on education processes, such as the skills and activities necessary to reach a specific outcome, enables a more in-depth exploration of authentic experiences, potential for creative side-tracking and opportunities for redefining the outcome as part of the process (Hooper-Greenhill 1994:142). Thinking of education in terms of processes, facilitates the idea of education as a way of life, as being desirable to negotiate life-events and a problem-solving way of approaching the world. In the museum there is a natural emphasis on processes; outcomes are far less important. Educational activities are exploratory, broad and experiential (Hooper-Greenhill 1994:142).

Considering the importance of museums, Nleya (1998:2) adds that:

I have been reliably informed that over the years the Botswana National Museum's educational programmes for school have concentrated on school children without much teacher involvement. When the Mobile Museum Education service was introduced in 1978 (sic), to serve the rural Botswana the thrust was still primarily the school child. In addition to this child targeted museum education, no attempt was made by the Museum Education Division to take into consideration the formal school curriculum in designing museum education programmes meant for school.

The Botswana National Museum has never been invited to be involved in the curriculum development process. Recently, the researcher was invited to a Social Studies curriculum

development committee. The participants in the committee were from the start warned that the Social Studies subject panel could over rule all their contributions.

According to Marope (1996:157-171) more attention is given to the design and physical infrastructure of reform than is given to the ways in which to implement the reforms in schools. By ignoring teacher involvement the teaching strategies in the classroom are limited to the lecture and question and answer teaching strategy. Teaching strategies such as discovery learning used in museums have the inherent potential to contribute to learners' self-reliance, to make effective decisions, resolve problems, think strategically about issues and obtain knowledge and skills.

Teachers do not explore the information and content within their local communities. Classroom activities are dominated by guesswork even on issues that the local community might have comprehensive knowledge. The Botswana National Museum plays an insignificant role in teaching and learning of indigenous knowledge lessons. The majority of Batswana live in rural areas and can handle most undocumented areas of the school curriculum such as cultural issues. However, where the Batswana are lacking information, and the teachers are requiring documented information, the Botswana National Museum is the answer. The accounts of information that the Botswana National Museum holds, include among others subsistence agriculture practices, hunting, tool making, food gathering and the knowledge, skills and values of the Batswana through the ages.

The Botswana National Museum is in possession of artefacts, audiocassettes and associated documentation that showcase the cultural heritage of Botswana; and, yet, the

teachers do not make use of the above material. The Botswana National Museum on the other hand, is not proactive to adequately avail this information to the schools to complement the mainstream curriculum so as to drive the Botswana to among others self-sustenance (Rammapudi 2007:Personal experience).

According to Brown and MacIntyre (1982:36), the way teachers make sense of innovative ideas and actually use them in the classroom depends not only on the nature and quality of the information and support they are offered by outsiders, but also on their own ideas about how their subject should be taught and on the constraints which exist in the day-to-day work. It has been argued that teachers sometimes resist change because they are unconvinced of the benefits of the extra work they are expected to put in by adopting the innovation in order for it to be successful.

According to Jensen (1994:300-324) there is also another growing discontent amongst the teaching cadre in Botswana. Beyond being neglected, it could be dawning upon these teachers that they have lost touch with their information base, the local communities. Teachers are yearning for such a relationship, so as to find explanations to some of the concepts that confront them in the classroom; yet, they might be doubtful of the information and content obtained from their local communities. Teachers could be searching for an academic explanation of an aspect and prescribed textbooks may be lacking in this respect. However, they might be oblivious of the Botswana National Museum and the information and content it holds. The Botswana National Museum is a major resource outside of the formal schooling system. Rather than competing with the formal schooling system, the museum provides a complementary resource for both formal and informal learning. For example, many museum visitors are groups of learners

who are visiting the museum as part of their formal schooling programme. Furthermore, many museum visitors are families; parents aiming to allow their children to encounter areas of informal learning that they might not otherwise experience (Jensen 1994:300-324).

3.2 SUB-PROBLEM 2: TYPICAL LEARNER ACTIVITIES IN PUBLIC SCHOOL CLASSROOMS AND THE BOTSWANA NATIONAL MUSEUM

3.2.1 Typical learner activities in the classroom

The Kedilwe Commission of 1992 was tasked with the review of the education system and its relevance in terms of the education policy of 1977, and to identify problems and strategies for further development in the context of Botswana's changing and complex economy (Botswana Government 1994b:1). Tabulawa (1997b:202) points out that a striking feature of the review was pedagogical renewal in Botswana. The latter has to do with attempts to switch to a learner-centered, activity-oriented pedagogy, away from the teacher-dominated instructional practices of the past. The following tenets have among others been identified to be central to a learner-centred pedagogy:

- The starting point should be the learner's existing knowledge, skills, interests and understandings, derived from previous experiences in and outside the school.
- The natural curiosity and eagerness of all young people to learn, to investigate and to make sense of a widening world should be nourished and encouraged by challenging and meaningful tasks.
- Learners should be empowered to think and take responsibility not only for their own, but also for one another's learning and total development.
- Learners should be involved as "partners in" rather than "receivers of" educational growth (Namibia Government 1993:60).

Prophet and Rowell (1990:9), describe the typical learner activities in Botswana public schools as “a teacher talking to the whole class and pupils working silently”. The principal form of oral exchange in the classroom is a question and answer exchange. Learners are required to provide very brief answers to teachers’ questions based on the recall of topics encountered in the previous lesson (Prophet & Rowell 1990:9). According to Prophet and Rowell (1990:9), the teacher rarely probes for learner thinking following an incomplete or incorrect response, it being more usual to pass on the question to the other learners until the correct response, as designated by the teacher, is provided. These exchanges are routine at the beginning of lessons but may also occur at the conclusion of a lesson (Prophet & Rowell 1990:9).

Common activities in Mathematics and English grammar lessons are the completing of exercises by learners to provide practice in computing and writing skills respectively. Copying notes from the blackboard is a common activity in Agriculture, Social Studies, and Home Economics. The teachers’ explanation for the use of the above methodology is among others that there is no adequate text for her or his subject, and that it is necessary for learners to have a complete set of notes in preparation for the examination (Nleya 1998:1; Prophet & Rowell 1990:11). Fuller and Snyder (1990:57) confirm Prophet and Rowell’s (1990:20) earlier findings that teachers tend to stand before the class talking to pupils, encouraging few questions, little manipulation of ideas, and even infrequent application of textbooks and basic instructional materials. Prophet and Rowell (1990:21) argue that the pedagogical principles behind the teachers’ actions are based on rote-learning and most probably reflect the way that teachers themselves were taught. This teaching style seemed according to Prophet and Rowell (1990:21) so widespread in Botswana and so much taken for granted as “what happens in classrooms” that it is

tempting to say there is no deeper meaning to the interactions that are taking place. Schön (1987:17) warns that if teachers believe that what they are doing already satisfies the demands of the national curriculum, then there will be no need for change, and no change will take place. Teachers may be more concerned with maintaining the system, than changing it, particularly when faced with a society for the future.

According to Mannathoko (1995:270), in Botswana the classroom situation comprises verbalisation, abstraction and theory. Practical activities incorporated in the Botswana classroom situation is, however, artificial and limited, and cannot be used by learners after completing school. Teaching in Botswana classrooms is invariably still traditional and authoritarian, with little or no recognition of the learner's potential to actively construct classroom knowledge (Prophet & Rowell 1990:127-140). Apart from the teacher lecturing from behind a podium and the learners listening passively and silently, the teacher is also asking questions and learners are giving the answers. Accordingly, classroom teaching is book-centred and a one-way process, that is from the teacher to the learners. In this way, little critical thinking and creativity are fostered in the learners (Tabulawa 1998:10).

This is the dominant approach to teaching and learning in most of the schools in Africa. Kanu (1996:173-184) observes the following regarding schools in among others Sierra Leone:

teaching and learning traffic was one way, and followed the pattern of, teacher asking the learners to read sections of the prescribed textbook; teacher engaging in a monologue to explain what has been read to ensure that all the essentials (usually factual details) have been covered; and teacher testing the learners to see how well they can recall the material contained in the reading.

Kanu (1996:173-184) believes that a major contributory factor to this trend is government prescribed textbooks that are often filled with factual knowledge learners are required to remember. Jessop and Penny's (1998:393) study of teacher voice and vision in the narratives of rural South African and Gambian primary school teachers also reveal teachers as possessing authoritarian values about teaching premised on the notion of knowledge as objective, and to be transmitted from teachers to learners. In particular, Gambian teachers showed "a lack of discrimination and judgment over what may be appropriate in any one teaching and learning situation" (Jessop & Penny 1998:397). It may be that under-qualified or untrained teachers in Africa lack a certain level of sophistication in reflection on practice because of deficits in their professional knowledge base and therefore require "coaching" to be more reflective in their practice (Jessop & Penny 1998:398).

Prophet and Rowell (1993:204) have also undertaken studies in Botswana to determine if the learner activities in the classroom are a correct reflection of the syllabus requirements. During interviews with teachers, reasons cited by teachers for not employing active, learner-centred teaching methods were: large classes; large teaching loads; lack of adequately trained assistants; lack of exemplary teaching materials; inappropriate textbooks; absence of relevant teaching and learning aids; lack of understanding of the breath and extent of the topics; lack of incentives and rewards for teaching the new syllabi statements; feeling grieved for being inadequately consulted during the design and development of the new syllabi; fears and misunderstanding expressed by learners on the implications for sitting for "core alone" or "core plus extension" for the final examination in Form 5; inadequate preparation to teach the new syllabi; inadequate preparation to

carry out continuous assessment; and insufficient orientation to appropriate teaching methods.

Tabulawa (1998:10) confirmed that “teachers dominated in classroom activities with little learner participation, except in question and answer discourse and during demonstration”. Most teachers did not prepare lesson plans, lesson notes, or a scheme of work though they were required to do so. A variety of prescribed teaching methods, such as inquiry, demonstration, or practical work, were not being used on a regular basis and learners were not exposed to practical applications in everyday life.

According to Tabulawa (1997a:200-201) the view of schooling as vocational preparation coupled with an examination culture that filters learners towards paid jobs in the labour market has given life and sustenance to pedagogical classroom practices founded on behaviourism. The role of teachers and learners in classrooms are clearly defined and mutually respected. Tabulawa (1997a:200-201) points out that, it is learners’ understanding of doing school work as receiving the teachers’ knowledge that helps them to define their own as well as the teachers’ roles and responsibilities in class. Parents share this view, they believe that learners acquire school knowledge in school by listening and carrying out orders from the teacher and by studying hard.

According to Tabulawa (1998:10), prescriptive instructional behaviour has become so deeply entrenched in the professional culture that progressive teaching methods, such as child-centred, reflective practice and approaches stand little chance of gaining ground in classroom practice. There are several clues as to why this may be so: Firstly, school textbooks and curriculum documents are written mostly in a deterministic style that

corresponds with and validates the prescriptive and authoritarian structure of teaching and learning. Secondly, many teachers do not have access to other reference materials apart from government prescribed textbooks which then become the only definitive source for the content and process of teaching. Thirdly, textbook availability and supply has come to occupy such a vital part of improving basic education in developing countries, and for good reason – textbook-to-pupil ratios can be as low as one to eight. This is a good reason for adopting a more multi-faceted approach to addressing the problem that might also help teachers to become less restricted in their choice of source material for teaching.

According to Bonner (1985:288-293) the learner activities in public schools in Botswana aim to relay knowledge from a subject (teacher) to the objects or receptacles of the information (learners). Learners in the classroom receive information from teachers, and even when they do produce information, they expend a great proportion of their energies on recitation for, and transaction with, teachers who are testing their ability to approximate to models and formulae already established by the teacher. This is encouraged by using primarily the question and answer teaching-learning method in Botswana public schools. This rote-learning approach to teaching and learning considers learners to be passive and teachers to be active who have pre-selected knowledge to be deposited in their minds (Boomer 1984:31). Boomer (1984:31) and Freire (1972:36) describe this approach to be a so-called banking system of education which considers knowledge a commodity to be poured into empty vessels, and the more the better. Boggs (2001:Internet) calls this “received” knowledge:

learners absorb information, facts and theories, which have already been discovered or created by others, in the belief that if they can just absorb enough of this knowledge, they will qualify as educated. This means that they view education as a thing which is stored up somewhere. All they

have to do is open the Pandoras Box, get a good look at its contents, and they are educated.

Scholars such as Freire (1972:114-116) and Boggs (2001:Internet) argue, however, that the learner does not come to school like an empty bucket ready to be filled with information. She or he has many experiences and has already learned. The learner activities in public school classrooms which do not build on that experience and learning will limit the learner's development of critical reflection. The learner will not see the connection between the world outside the school and what is taught and learnt in school. Education in school therefore is not an enriching experience. As Thomas and Harri-Augstein (1995:61) puts it "meanings that emerge are not personal and significant in some part of the learner's life".

According to Swarts, Dahlstrom and Zeichner (2001:248-256) although the rhetoric of learner-centred teaching seems straightforward and coherent, curriculum interpretation shows a more fractured picture. At least three interpretations of learner-centred teaching exist side by side. The first interpretation of learner-centred teaching focuses on the nature of the selected curriculum content and the degree to which it matches the learners' interest and experience. It emphasizes the need to use learners' existing knowledge and skills, and to include learners' everyday experiences in topics to be taught. These everyday experiences may be used to introduce a topic, or as illustrations after presenting theoretical content. The second interpretation of learner-centred teaching focuses on involving learners in classroom activities (Dahlstrom 1995:273-288). This strand is exemplified by teaching strategies involving learners in question and answer sequences. It also coincides with the tradition of active learning, with an emphasis on various forms of group work as desirable learning activities. The third interpretation of learner-centred

teaching focuses on allowing learners to share responsibility for their own learning. Here the keyword is empowerment, and the criterion is making-meaning (Swarts et al 2001:248-256). It is against the above description as criterion, that the current classroom activities in Botswana public schools would have to be assessed. The assessment would also shed light on where and how the Botswana National Museum could be used as a teaching resource in the classroom. The museum activities are learner-centred, and have been learner-centred for a long-time. In the museum real objects are used and handled by visitors (Hein 1998:43).

3.2.2 The Botswana National Museum activities

According to Motswakae (1990:6) the government of Botswana since the National Commission on Education Report (1977), became aware of the need to review and transform the education system in order to ensure among other things relevance and appropriateness to the needs of the learners and the country. Botswana had prior to the implementation of the RNPE (1994) been experiencing a high rate of youth unemployment due to the low quality of education. The school system had as a result come under public attack from parents whose children could not be absorbed in the employment market, and from employers whose employees could not deliver to their expectations. The RNPE (1994) and its relationship with other institutions of learning in Botswana has therefore become a crucial issue in improving the quality of education.

The philosophy of the Long-term Vision 2016 document is that institutions such as the Botswana National Museum could extend its services and become a partner and an educational resource in the classroom to improve the quality of education. The Botswana National Museum could contribute to fostering intellectual growth and creativity; enabling every citizen of Botswana to achieve her or his full potential; developing the

necessary moral, ethical and social values; and inculcating the Botswana cultural identity, self-esteem and good citizenship as per aspirations of the Revised National Policy on Education (1994). According to Eisner (1998:205):

... today we need people who can use their minds nimbly and who can respond to rapidly changing contexts. We need individuals who can think within the possibilities of the materials with which they work and who can pursue ends that are not prescribed by others, but, rather, formed through their own personal vision.

In addition to teaching ways of critical thinking, the Botswana National Museum has an important role to play in fostering individual creativity and understanding the creativity of others. The school for its part provides vital tools in defining, understanding and preserving societies, explaining cultural traditions, and informing the experts or “gatekeepers” who define, sustain and imbed those traditions in society. Together, museums and schools can therefore offer important knowledge, skills, values and attitudes critical to cultural advancement and global competitiveness (Eisner 1998: 205).

According to Bonner (1985:288-293) museums can be utilised as a teaching resource by incorporating exhibits and specimens into the prescribed curriculum. Museums can also provide an ideal setting for learner-teacher internships and training programmes that could benefit learners, museums and schools alike. Bonner (1985:288-293) points out that there is an overwhelming commonality of purpose between museums and schools, making cooperative ventures both beneficial and mutually rewarding. All museums, be they art, history, or science museums, ultimately may be defined in the same way: they are permanent, public, educational institutions that provide systematic care for collections (Burcaw 1975:9). In terms of common goals, museums and schools share commitment to education (Bonner 1985:288-293).

Van Dorn (in Bonner 1985:288) explains that the educational aspect of the museum's services has increased dramatically in recent years, bringing the respective roles of museums and schools even closer together. In schools to a large degree, current debates over ever-changing education and reforms were defined decades ago. They continue to shift, however, keeping up with the demands of recent opinions. Teachers continue trying to find the best ways to make learners' learning more meaningful. Reform organisations such as the World Declaration on Education for All (1990) and the Dakar Framework for Action (2000), now focus on hands-on, authentic, and active group interactions that tap into learners' intrinsic curiosity and eagerness to learn (UNESCO 2005a:29).

3.3 SUB-PROBLEM 3: THE LACK OF COLLABORATION BETWEEN PUBLIC SCHOOLS AND THE BOTSWANA NATIONAL MUSEUM

According to Screven (in Jacobson 1999:131-192), in recent years it has been possible to design features into public environments that could facilitate the voluntary learning of a variety of cognitive skills such as divergent thinking, critical analysis, better understanding of the past and the complexity of the natural world and critical environment issues. Experientially rich public environments like museums, zoos, parks, art galleries, science and technology centers, aquariums and even corporate centers offer unique opportunities not only for studying during leisure time activities but also for offering alternatives to formal educational settings. Museums primarily function as a source of leisure and entertainment. Museums are one of the central provisions for entertainment which are widely accessible to the general public. According to Falk and Dierking (2000:225) museums aim to provide entertainment that is simultaneously informative and educational. Increasingly, museums look to utilise interactive exhibits to fulfil this aim.

According to Mathewson (2001:5) museums are a largely underutilized education resource with a vast potential to revitalize education. Forming partnerships with museums has become one response to the demand for stronger interaction between schools and communities. According to Pule (2000:Internet) the Botswana National Museum, although created after independence in 1966, was among the first to realize that its prime role was educational: “even though we started from scratch when we built our own museum, we realized that we could be doing much more to let people know that we existed. And we wanted to catch people at an early age, in primary school”.

According to Fraser (1999:56-59) “museums are educational institutions and yet have difficulty in demonstrating educational effectiveness”. In 2001, the researcher embarked on a three-month impact assessment project for two education programmes – the Mobile Museum Service and the Teacher Workshop Programme. The outcomes were as follows: The Mobile Museum Service started in 1979 as an education programme in which the Botswana National Museum visits public schools to introduce learners to some of the artefacts and programmes the Botswana National Museum has. It is one of the longest running outreach programmes in Africa. Officials from the Botswana National Museum set out once a school term (a school term in Botswana lasts four months) with a van filled with artifacts to organize day-long exhibits in rural schools, along with talks, slideshows and movies on the country’s environment and cultural heritage. Besides bringing the museum to the village, the programme exposes children to traditional crafts (baskets, wooden spoons, etc.) and traditional customs (hunting rites, initiation and marriage practices) from different parts of Botswana, fostering a sense of national pride. During these visits educators from the Botswana National Museum present lectures, show films and facilitate artefact handling sessions.

The Teacher Workshop Programme started in 1996. Through the Teacher Workshop Programme the Botswana National Museum seeks to sell itself to teachers in an organised in-service workshop format that entails lectures and artefacts handling training sessions. The impact assessment project involved 38 public schools across the country. The impact assessment project provided meaningful feedback to the Museum on the benefits and shortcomings of the Botswana National Museum education programmes.

Some of the most important findings were: that the teachers wanted to be equal partners in the concept development of the Museum's education programmes; that the teachers wanted to be involved in the planning of content and the organisation of each of the programmes; and that the teachers did not teach post-visit lessons after each of the museum's visits to a school. The latter are some of the reasons why the teachers do not view the Museum's programmes as an integral part of the school curriculum (Rammapudi 2004:36-39).

The syllabi for the practical school subjects Design and Technology, Art and Design, and Home Economics require that learners should carry out practical hands-on activities in cookery, sewing, technical drawing, etc. Applied in a practical sense, these subjects fall within and are in line with government's current education policy, philosophy and framework, namely that learning in the classroom must be learner-centred and experiential. The reality is that the practical work opportunities prescribed for these subjects are limited. Schools lack the basic resources and teacher expertise to engage learners in practical work-based activities (Nleya 1998:1). The current syllabus utilises primarily a product-oriented approach at the expense of a process-oriented approach to teaching and learning (see sub-problem 2). In other words, due to the shortage of

resources, and equipment and expertise in schools, the current so-called “practical subject curricula” does not teach learners the “how” but focuses on the “what” only. The learners do not get the chance to carry out practical exercises in the classroom as per the subject description and requirements (Botswana Gazette 2007a:14).

Mathewson (2001:5) confirms that there is a lack of collaboration between schools, the local communities, and other equally important educational partners such as museums. Consequently, classroom teaching and learning is confined to the knowledge and expertise of the teachers and textbooks. Classroom activities are often dominated by guesswork on the part of the learners and teachers, sometimes on issues that the local communities may have expert knowledge of (for instance, local handicraft making). The classroom is dominated by rote-learning, and the question-and-answer method, even where authentic teaching and learning support materials are available. The Botswana National Museum as an education information centre plays no role in the teaching and learning of the practical subjects of which it might be well vested in, such as the making of local handicrafts. For example, the Annual National Basket and Craft exhibition that promotes diverse talents reveals various authentic skills in the making of baskets, pottery, textiles, tapestry, woodcarving, ceramics and beadwork. For a week or two during the exhibition, visitors (learners) have the opportunity to interact with Botswana’s best, and learn and watch their artistic skills through *ad hoc* workshops and hands-on activities facilitated by the artists. The Mobile Museum Service also provides the opportunity for a day’s artefact handling session during school visits. This abundance of Botswana’s indigenous knowledge is treated in public schools as tacit knowledge or personal theories (Tshireletso 1997:173-188).

The Botswana National Museum provides a unique environment for teaching and learning all related school subjects. According to Munjeri (2001:102), the Botswana National Museum is in the possession of artefacts, audio-cassettes and associated documentation that showcase the cultural heritage of Botswana, and yet, teachers do not make use of the latter. The Botswana National Museum is also not proactive to adequately avail this information to complement the mainstream curricula.

According to Mathewson (2001:5), current museum utilization by teachers as educational resource is characterized by:

- a minimal investment of effort. Teachers do not consider a field trip to the museum as an important undertaking. The manner in which they use these visits is not specifically tailored to curricular needs.
- an inability to integrate museum experiences into classroom learning. After the museum visit, teachers do not reflect on the experiences learners might have had during the visit.
- ill-defined educational objectives. Teachers do not plan and communicate to museum educators the objectives of their visit and as such incidental learning occurs.
- a minimal investment of effort. No prior research by teachers is conducted about what the learners will encounter while visiting the museum.
- general use that is not specifically tailored to curricular needs. There is an inability by schools to integrate museum experiences into classroom learning after the field trip.

- a concentration on enrichment and social interaction. There is a tendency by schools to arrange for highlight visits to museums for the sake of undertaking a school trip only.
- incidental learning. Learning is not directed, learners learn what they stumble on.
- a ‘consumer like’ stance. The focus is on the acquisition of information – the learning is not selective.

In the light of the above discussion, this study adopts the position that utilizing the Botswana National Museum as an educational resource in public school classrooms has to be fully embraced by teachers, curriculum developers, learners and museum workers to enhance the quality of Botswana education, promote the IKS of Botswana and develop the core competencies of Botswana citizens.

4. MOTIVATION FOR THE STUDY

Having worked in museums in Botswana since 1995, and being involved in museum education activities, the researcher, through research, workshops and evaluation of the museum’s education programmes, came to an in-depth knowledge of the shortcomings of museum education in Botswana. The researcher has also been part of research projects on the RNPE (1994) and public expectations resulting from its implementation. Against the above involvement, the researcher’s motivation for doing this study is to be a catalyst and changing agent in making positive changes to the way in which the RNPE (1994) is implemented in schools.

The researcher envisages for the MoESD to review and evaluate its current approach to the curriculum and education using among others the results of this thesis. The researcher

believes that the research outcomes of this study will result in the Botswana National Museum being used as a resource in public school classrooms en route to a learner-centred, authentic pedagogy utilizing among others museum collections and related information (Rammapudi 2006a:20-28).

Furthermore, it is hoped that this research will serve as an eye-opener for the Botswana National Museum employees and public school teachers to recognise their common responsibilities; the pros and cons of collaboration versus exclusion; and that neither can accomplish their educative task alone. The researcher is motivated to the above by the notion that the learning is a collective and collaborative effort. The findings of this research it is hoped, will also serve as a guideline to teachers and museum employees alike regarding the strategies which could possibly best suit public schools to become involved in museum education programmes and *vice versa*. This would ultimately lead to provision of quality education in Botswana, and eventually, result in national development and engaged citizens.

5. AIMS OF STUDY

To utilise the Botswana National Museum as an educational resource in public school classrooms, the study aims to:

- examine the perceptions or understanding of quality education and its relationship to curriculum planning and design and the national development of Botswana.
- investigate the possible role of the Botswana National Museum in the above.
- examine the nature of the learning activities in public school classrooms.

- examine the pros and cons of collaboration between public schools and the Botswana National Museum.

To this end, the researcher will:

- review the literature regarding a collaboration between museums and schools.
- collect data for, and report the outcomes of, an empirical research project on the opinions of a sample of in-service teachers (n=10), curriculum developers (n=10), museum employees (n=10), and learners (n=10) on what factors contribute to the lack of collaboration between the Botswana National Museum and public schools, and how to improve the collaboration.
- sensitise role-players to the value of a partnership between the Botswana National Museum and public schools to improve the quality of education in Botswana.
- reinvent the Botswana National Museum as an educational resource in public school classrooms.
- contribute to the scholarly knowledge of museums as an educational resource in public school classrooms.
- encourage teachers to recognise the relevance of Indigenous Knowledge Systems (IKS) in the shaping of Botswana's future citizens.
- encourage the Botswana National Museum employees to revisit their educational agenda.

6. CLARIFICATION OF CONCEPTS

The explanations of the relevant concepts in this section, are intended to serve as a clarification of the concepts used throughout the study. The main concepts contained in

the topic of this study are: Botswana National Museum, educational resource and public schools. An elaboration of all relevant concepts follows.

6.1 MUSEUM AND BOTSWANA NATIONAL MUSEUM

According to Kavannagh (1994:4) the concept museum is difficult to define, and subject to considerable variety. Ambrose and Paine (in Kavannagh 1994:15) stated that the concept is in a continuous state of development: “it is modified by the politics of the museum situation, the content of its collections and the audiences it aims to serve”. Ambrose and Paine (in Kavanagh 1994:15) concede that the definitions provided by countries, individuals and organisations are working definitions. According to the Museums and Galleries Commission (1988:3) “museums are institutions that collect, safeguard and make accessible artefacts and specimens for inspiration, learning and enjoyment”. According to the American Association of Museums:

museums are institutions that collect, safeguard and make access, not existing primarily for the purpose of conducting temporary exhibitions, exempt from federal and state income taxes, open to the public and administered in the public interest, for the purpose of conserving and preserving, studying, interpreting, assembling, and exhibiting to the public for its instruction and enjoyment objects and specimens of educational and cultural value, including artistic, scientific (whether animate or inanimate), historical and technological material. The definition of museums includes botanical gardens, zoological parks, aquaria, planetaria, historical societies, and historic houses and sites (Kavanagh 1994:15).

In South Korea the legal definition of the concept museum is included in their Promotion

Law of Museums and Art Museums of 30 November 1991 and read as follows:

A museum is an institution which collects, conserves, and exhibits materials for mankind, history, archaeology, ethnic customs, arts, animal life, plant life, mineral, science, technology, and industry, thus probes and researches these for purposes of being contributive to the development of

culture, arts, and studies, and to the social education of the general public (Kavanagh 1994:15).

The Museums Australia (2002:2) defines a museum as an institution with the following characteristics:

A museum helps people understand the world by using objects and ideas to interpret the past and present and explore the future. A museum preserves and researches collections, and makes objects and information accessible in actual and virtual environments

Talboys (2000:17) defines the concept museum as an:

organic institution or dedicated, open to all wherein a genuine artefact or a collection of genuine artefacts of aesthetic, archaeological, cultural, historical, social, or spiritual importance and interest from any place or time is preserved, conserved and displayed in a manner in keeping with intrinsic and endowed worth. As such it is an informative means of storing national, cultural memories, where people explore, interact, contemplate, be inspired by, learn about and enjoy their own and other's cultural heritage.

Botswana as a member of the International Council of Museums (ICOM) subscribes to the ICOM definition. Kavanagh (1994:15) also cites the ICOM Statutes of 2001, Article 2 that defines the concept of museum as follows:

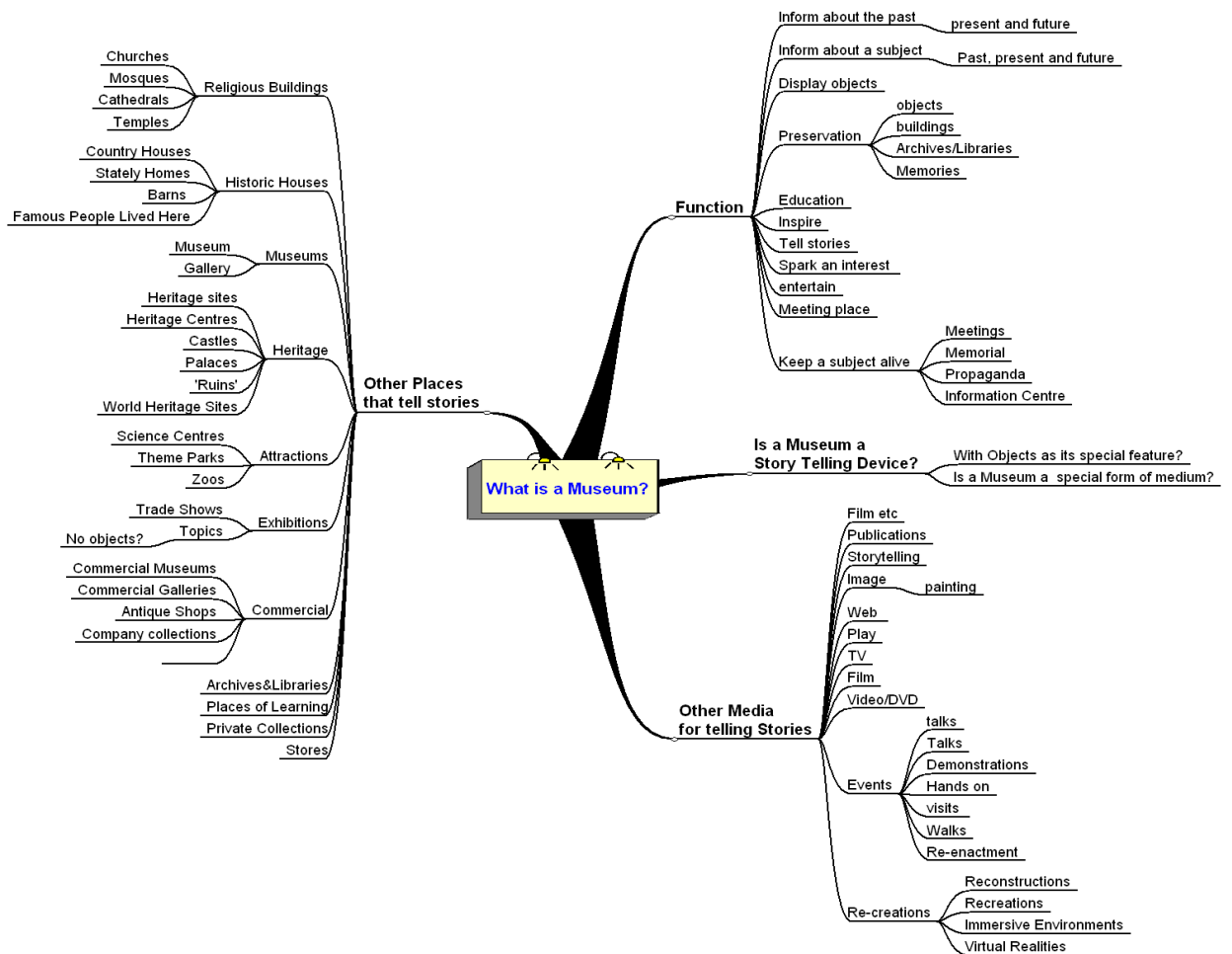
A museum is a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment.

Talboys (2000:33) concludes that museums for all that they are, are places primarily concerned with the collection, preservation and display of genuine artefacts of aesthetic, archaeological, cultural, historical, social or spiritual importance and interest from any place or time. They are places of learning. All museums are thus educational institutions and therefore have a relationship with the general public whether they are privately-owned

or owned by government – regional and/or local government authorities. Even though there may exist great variation from one museum as institution to another, some understanding about the relationship and the role of each one can be gleaned from their mission statements (also see figure below), (Rammapudi 2008:personal experience).

The figure below illustrates the identity, functions and management of museums as per the different definitions outlined in this section.

Figure 1: Museum meaning



Fluke (2006:Internet)

There are two types of museums in Botswana, the government-owned Botswana National Museum established by the National Museum and Art Gallery Act (Cap 59:01 of the Laws

of Botswana) situated in the capital city of the country (Gaborone), and which strives to constitute a national entity; and, the non-governmental museums that have been established with the support of international donor agencies from Norway, Sweden and Denmark situated in Mochudi (the Phuthadikobo Museum), Molepolole (the Kgosi Sechele I Museum), Serowe (the Khama III Memorial Museum), Francistown (the SupaNgwao Museum), Maun (the Nhabe Museum), Kanye (the Kgosi Bathoen II Museum) and Gantsi (the Kuru Museum). The non-governmental museums are regulated by an appointed Board of Trustees and receive subvention towards their running costs from government through the Botswana National Museum (Botswana Government 2001a:21). These non-governmental museums provide a vital service in their communities and complement the work of the Botswana National Museum.

According to the Museums and Galleries Commission (1988:3), with regard to the nature of the Botswana National Museum the following:

collections are of the highest international importance, unrivalled in their range and diversity, as in their quality; charting the extent of human knowledge and achievement in every branch of art and science, with specimens and artefacts and works of art from every corner of the world. They reflect the nation's place in the history of civilisation. They are part of the nation's patrimony, to be used and enjoyed and built upon now and to be sustained for future the following characteristics: their collections are of national importance; they are vested in trustees on the nations behalf; they are wholly/mainly funded directly by government; government is able to call on their staff from time to time for such expert advice in the fields as it may require.

The Botswana National Museum was established in 1967. The birth of the Botswana National Museum was a result of a coalition between a senior game warden, Mr. Alec Campbell and Kgosi (Chief) Bathoen II. The duty of Kgosi Bathoen II was to mobilise

the collections, while Campbell took charge of the Botswana National Museum as its director. The Batswana actively participated in contributing artefacts; however, the idea of a museum remained alien to them. Together Campbell and Kgosi Bathoen II formed a committee comprising of Mrs. D. Nteta and Mr. G. Kwerepe that helped to draw up the National Museum and Art Gallery Bill in 1966, which included an art gallery as well. The Bill was enacted by parliament into the National Museum and Art Gallery Act (Cap 59:01, see Appendix 1), and saw the establishment of the Botswana National Museum (Nteta 1979:55; Zebras Voice 1986:3).

Since its inception in 1968, the Botswana National Museum has changed from being a privately-run institution in 1968 to a government department in 1976. The Botswana National Museum has sought to place itself in the context of the country's development, and to be the symbol of national unity and identity. In 1967 it set out to build a National Museum and Art Gallery, which would not only take its place among the museums of the world, but also provide a centre for research. The statement of mandate read as follows:

A repository for the preservation of cultural material and an institution of cultural education for both child and adult, an educational and cultural institution providing a visual record of man's achievements and his effects on the natural environment in Botswana (Botswana Government 1967:1).

This statement of mandate of the Botswana National Museum does not only underscore the aim of this study, but is also central to the provision of basic education in Botswana. In the above statement, the Botswana National Museum confirms among other things the abundance of information in its collections on Botswana customs, indigenous knowledge and values. The statement is also emphatic of the educational role the Botswana National Museum could play in complementing the official school curriculum.

By the 1980s, the Botswana National Museum started to emphasise its research mandate. The intention was to build up a national collection of ethnographic, historic and plant material; to establish permanent and temporary displays; to establish a mobile exhibit; to protect the national monuments and to conduct research (Zebras Voice 1986:3).

Today (2009) the Botswana National Museum possesses major collections in the Archaeology, Natural History, Art and Ethnology departments. The 2007 Botswana National Museum (2007:23) Annual Report records a total of 12,000 objects accessioned in the ethnology section, classified as ethnographic (musical instruments, baskets, traditional house-hold utensils and crafts), historic (guns, bicycles) and audio-visual (oral history and cultural events). The oral traditions and oral history collections reflect the diversity and richness of the Botswana culture. The archaeology section holds 20,000 artefacts covering the period from the Early Stone Age through to the Late Iron Age. The range of collections includes stone tools, potsherds, ostrich eggshells, beads – all testimony to the rich time, depth and variety of Botswana's archaeological records. The art section collects works of art and crafts of importance to the nation of Botswana and the international community. The natural history section has a variety of entomology, geology and herbarium specimens (Botswana National Museum 2007:24).

6.2 BOTSWANA

Botswana is a multi-ethnic country, consisting of Setswana language speakers and non-Setswana language speakers; nevertheless, the term Batswana is an all-embracing term to refer to all citizens of the country (Nyathi-Ramahobo 1998:48). The Setswana groups belong to the Sotho-Tswana language group, including the Bangwato, Bakwena, Bangwaketse, Batawana, Bakgatla, Barolong, Balete and Batlokwa. The non-Setswana

speaking groups include the Basarwa, Basubiya, Bayei, Babirwa, Bakgalagadi, Bakgothu, Banoka, Balala, Batswaping and Bakalanga. In the term Batswana are also included groups of Asian origin and European heritage (Botswana Institute Development Policy Analysis and United Nations Economic Commission for Africa 2006:61). According to Lekorwe and Somolekae (1998:186-198) all Batswana have been found to share similar customs, norms and traditions.

Botswana, known as Bechuanaland prior to its independence from Great Britain in 1966, is a landlocked country in Southern Africa that shares its borders with South Africa, Zambia, Namibia and Zimbabwe. Even though two-thirds of the country is made up of sandy desert soil inadequate for crop production, the country's population of 1.8 million people has been largely dependent on cattle farming (Tshireletso 1997:3). The British declared Botswana a British protectorate in 1885 in order to prevent the Boers that lived in the neighbouring South Africa and the Germans who occupied South West Africa (Namibia) since 1884, from interfering with the British dream of establishing the route from the Cape Colony to the territories of central Africa (Holm & Molutsi 1989:49). Notwithstanding more than eighty years of British rule, at independence Botswana was listed as one of the world's poorest countries (Tshireletso 1997:3). The British considered the territory to be a desert with no major economic value, and they would therefore not want to spend much money on it. Consequently, it was administered from South Africa and governed by the British High Commissioner to the Cape Colony (Sillery 1965:45).

Over the 25 year period from 1965 to 1990, Botswana's economy was the fastest growing in the world, with GDP growing at an average annual rate of 14% (Botswana Government 1995:6). Botswana experienced dramatic economic growth due to mining

revenue after independence; and has been using its high mineral revenues to build up stocks of physical, human and financial capital. Also raising the level of formal sector employment, which actually grew from 30,000 in 1965 to 229,000 in 1991. The government built both social and physical infrastructure to facilitate the participation of the private sector in economic development and to raise the quality of life for its entire people. 80% of the population is now within 15 km of a health facility, many households have potable water in their compounds, and electric power supply has been expanded. The road system has been greatly improved, and more schools have been built. The literacy level of the nation has risen significantly, although productive skills are badly lacking (Mazonde 1998:87).

Although average income has been rising rapidly, inequitable distribution of wealth remains Botswana's greatest problem. Most of the country's wealth and development are found in urban centres; whilst rural settlements, where the majority of the population still resides, remain underdeveloped with little or no wealth creation activities except for farming (Harvey & Lewis 1990:99; Holm & Molutsi 1989:122; Tshireletso 1997:3). At the time of independence in 1966, 4% of the population lived in urban areas, whereas by the early 1990s the proportion of urban dwellers had risen to 30%. Whilst there has undoubtedly been rapid economic growth since independence, this has not been commensurate with the growth in the labour force (World Bank 1993: Internet).

Unemployment remains acute amongst the youth, who constitute 60% of the population. Be that as it may, a stable government and an expanding economy have made a steady growth in the education system a reality. Since the main strength of the economy is based on the non-renewable mining commodities, the government has since the implementation

of the First Development Plan (1968-1973) sought to use education to create in the shortest possible time, with such financial means as might be available, a stock of trained manpower capable of serving the country's economy. As a result schools have been viewed as the key to the country's future development (Hitchcock & Smith 1982:38).

Since independence in 1966, the schooling system in Botswana has gone through several curriculum innovation periods. These innovations had implications for the content, scope and sequence of the curriculum. The 1970s witnessed the emergence of a national debate on the relevance of the education provided in public schools. There was general concern that the education was not meeting the human resources needs of the country (Tabulawa 2002:105). According to Kanjii-Murangi (1995:5), from 1979 to 1985 the government set up a strategy to improve primary education and teacher education through the in-service training of non-qualified teachers (NQT). The NPE (1977) was used as a blue-print for education until 1994, and resulted in a massive expansion of junior secondary education provision. The RNPE (1994) and the Long-term Vision 2016 document guide the current education system.

6.3 EDUCATIONAL RESOURCE(S)

An educational resource is anything which can aid teaching and learning in the classroom, and can be used as instructional materials. Schoeman (2004:105) makes a distinction between instructional aids and learning aids. According to Schoeman (2004:105), instructional aids are the aids employed by the teacher in order to emphasise the function of instruction. Learning aids, on the other hand, are those aids which are placed at the disposal of the learners in order to facilitate learning. Learning aids are

instructional materials and devices through which teaching and learning are done in schools.

Mtunda and Safuli (1986:123) categorises educational resources into visual aids, audio-aids and audio-visual aids. The visual aids are materials which help learners to learn through seeing, for instance pictures, charts, etc. The audio-aids are materials which produce sound, and therefore help learners learn through hearing, for example, whistles, drums, record players, field trips, etc. Audio-visual aids are materials which help learners learn by both the senses of sight and hearing, for example a television.

According to Mtunda and Safuli (1986:122) teaching and learning aids are material which a teacher uses in a lesson in order to help her or him to teach more effectively. These aids also help learners to understand what they are being taught more easily. Therefore, they help both the teacher and the learner in the process of teaching and learning. There are many different types of aids. Some examples of teaching-learning aids are the chalkboard, actual specimens, models, charts, pictures, televisions, radios, videos, advertisements, magazines, posters, postcards, etc. Learners are thus able to relate to the classroom activities better if they can use all of the senses (hearing, seeing, feeling, etc.) that they normally use in their encounters with the media (Schoeman 2004:105).

Mtunda and Sefali (1986:130) go on to list specimens and models as teaching and learning aids. They define specimens as real objects which a teacher may use in her or his lesson delivery. These can include maize cobs, tins, leaves, flowers, etc. Mtunda and Safuli (1986:130) discuss three categories of specimens: live specimens; dead plants; and

animals and inanimate objects. Models are recognizable imitations of the real thing. They comprise working and non-working models. The above-listed teaching and learning aids are restricted to the four walls of the classroom.

The Northern College lecture notes (2004:1) list the white board; the flip chart; and the overhead projector and transparencies as the main teaching and learning resources, and to these they add handouts. The handouts are of two basic types: information handouts which give an overview or summary of a topic, reproduce carefully selected passages from books or articles, contain full transcripts of a session or a reading, and provide factual or graphical data. Worksheet handouts which contain questions or activities that learners are asked to complete. Other learning aids and resources used by teachers are according to Northern College's lecture notes (2004:1) audio aids (such as pre-recorded audio-cassettes played through a tape recorder); visual aids (such as a collection of film slides displayed through a slide projector); audio-visual aids (such as a pre-recorded video-cassette played through a video recorder); multi-media aids (such as a PowerPoint presentation prepared on a computer and displayed through a multi-media projector); additional knowledge and clarified information acquired previously; field trips and educational visits which help to bridge the gap between abstract ideas and the real world.

According to Kitao and Kitao (1997:Internet) teaching and learning resources include among others textbooks, audio-videotapes, computer software, and visual aids. Technology, such as overhead projectors, slides, audio-video/tape recorders, video cameras, and computers support the teaching-learning process. Similarly, Nordoff (2001:Internet) lists teaching and learning aids such as flat surface visual aids; the blackboard; the white board; flip charts; maps; the overhead projector; the epidiascope;

the slide projector; 3D visual aids; plant and animal displays; sound aids; the loudspeaker system; the CD recorder; and the player (record player; multimedia projector; film projector; video and television; and computer). Learning aids and resources, especially the visual ones, are according to Nordoff (2001:Internet) more effective when they are simple, straightforward, brief to the point, relevant and focused (related to the learning outcomes). In general, learning aids and resources constitute an extremely useful aspect of the teacher's teaching repertoire. They arouse and sustain learners' interest in the topics raised; help learners reinforce their understanding; retain information; provide variety in learning; allow for a more effective use of class contact time; facilitate and improve communication skills; and enhance the achievement of learning outcomes.

Mtunda and Sefali (1986:117) argue that real learning occurs when learners are given first-hand experiences, through field trips and educational visits. A field trip is a teaching-learning activity which is conducted outside the classroom. On the other hand, an educational visit is an outing planned and organised for learners to consolidate a previous lesson or a programme of study. Using the museum as learning and teaching support material (LTSM) takes the shape of a field trip or an educational visit. Some of the advantages of field trips and educational visits include: they provide learners with firsthand experiences and thus help them to learn more effectively; and through seeing, hearing and feeling the learners acquire authentic and new experiences.

6.4 PUBLIC SCHOOLS IN BOTSWANA

The first schools in present-day Botswana were established by the missionaries in around the year 1840. The Roman Catholic Church has an illustrious record in education in Botswana. According to Abosi and Kandji-Murangi (1995:19), the Roman Catholic

Church was the first to establish secondary schools – St. Joseph’s College in Gaborone in 1949 and Materspei College in Francistown in 1963. Abosi and Kandji-Murangi (1995:19) add that the missionary endeavour to build schools was complemented by efforts of the local communities. The founding of Moeng College in GammaNgwato, Seepapitso Secondary School in Ngwaketse, Kgari Sechele Secondary School in Kweneng and Isang Secondary School in Kgatleng projected the spirit of self-reliance by local communities in the 1950s. It was under the same arrangement, and the instruction of the dikgosi that communities constructed schools, some of which are still in use today. A number of mud and grass thatched structures to serve as primary schools were built by the local communities to provide better places for teaching than the shades of trees. This community spirit was later extended to the secondary schools. People donated livestock and cash, and volunteered their labour and skills towards the building of these schools (Mogapi 1984:187-190). Communities, in building these schools, were responding to a need for secondary education for the children who could not find a place in the limited number of government and church schools. At the time, there were only nine government and church schools. The community schools were wholly financed by the communities themselves and each school was run by a Board of Governors (Mogapi 1984:87-190).

The Education Act (Cap 58:01), (Botswana Government 1967:3-4) distinguishes between

- government-aided schools – such as private schools maintained wholly or partially by way of a recurrent grant out of public funds or the funds of any local council;
- government schools or public schools – maintained out of public funds and managed by the department of education;

- local government schools – maintained entirely or partially out of local government funds and managed by a local education authority; and
- private schools – which is owned by private enterprise and funded by the latter.

Legally, education in Botswana is the responsibility of the MoESD guided by the Education Act (Cap 58:01) of 1967 “to provide for the proper development of education and for matters incidental thereto or connected therewith” (Botswana Government 1967:6). This task is further emphasized in Section 3(1) of the Education Act (Cap 58:01) of 1967 which unequivocally states that: “It shall be the duty of the Minister of Education and Skills Development to promote primary and post-primary education, educational research, and the progressive development of schools, consistently with the powers of direction and control vested in him by this Act”. However, primary education is the dual responsibility of the MoESD and the Ministry of Local Government in the Botswana government; the latter responsible for the development of the physical facilities, the former responsible for the professional development of the primary sector. The Ministry of Local Government is also responsible for the “efficient provision of infrastructure, equipment and supplies among others” (Botswana Government 1967:16).

The First National Commission Report of 1976 revealed that there were fewer schools than expected, that fewer children had access to education and that the curriculum was irrelevant to the country’s needs. As a result of these discrepancies, the Commission recommended quantitative expansion in terms of schools and enrolment, leading to universal basic education – the first ten years of schooling. Beyond the quantitative expansion, Botswana has also attempted to address the qualitative provisions of the school curriculum. Major curriculum reviews were undertaken across all levels of schooling aiming at an education system which would inculcate values which could

contribute to the development of a new social and economic order, and to offer an education that does not divorce learners from the Botswana society (Garegae & Chakalisa 2005:2). The 156 recommendations of the National Policy on Education (1977) were implemented through four National Development Plans spanning twenty years (1977 to 1996), (Botswana Government 1999:19). Among the significant reforms that revolutionised the education system were:

- The introduction of the National Service Scheme (“Tirelo Sechaba”) where high school leavers have to spend one year in the field to gain out-of-school experience in the many sectors of the public service before proceeding to tertiary level education.
- Preparing teachers to cope with the structure.
- Making primary education accessible to all – which was later modified to become nine years of basic education.
- Abolition of school fees (1980) to accomplish universal access to basic education.
- Developing a curriculum which would prepare students for life out of school.
- Taking over and providing assistance to private and unaided schools.
- Involving the communities in running the primary and junior secondary schools.
- Establishing the National Literacy and Adult Education Programmes (Botswana Government 1999:19).

The Revised National Policy on Education (RNPE) of 1994 was published in response to considerable changes in the country’s socio-economic position since the inception of the 1977 policy. For instance, the 1977 policy came into effect only 12 years after independence when most of the country’s workforce still lacked basic skills; however, in

the mid-1990s, Botswana found itself in a rapidly changing global economy and social order (Botswana Government 1997a:1).

The RNPE of 1994 expanded and improved the quality of schooling at all levels, in line with the ever changing social and economic factors. Four primary teacher education colleges and two new secondary teacher education colleges were founded. In addition to universal access to basic school education, the RNPE of 1994 also devised other strategies through which universal access to education would be achieved, both for children and for adults. These among others included out-of-school education and education for the poor and the disadvantaged such as the distance education learning programmes through the Botswana College of Distance and Open Learning (BOCODOL). These programmes were designed to afford people the opportunity to learn as they continue with the other aspects of their lives (including their current jobs). Other RNPE (1994) strategies for the disadvantaged included among others a facility for the identification and referral of children with special needs; the increased enrolment of children with special needs; the establishment of a Braille Production Unit; and university programmes in Special Education. Emphasis was also placed on educating disadvantaged communities such as the Remote Area Dwellers (RADS) – the Kgalagadi San, the rural destitute and the pregnant girls who drop out of school (Botswana Government 1999:20).

While the Long-term Vision 2016 document is the guiding spirit behind Botswana's education developments today, it was the Revised National Policy on Education (RNPE) of 1994 that shaped the 2016 Vision document.

7. RESEARCH METHODOLOGY AND DEMARCATION OF THE FIELD OF STUDY

The research methodology section defines what the research activity entails, how to proceed with the research process, how to measure the research progress, and what constitutes success in the research process. Every empirical research project has implicit, if not explicit, a research design. In the most elementary sense, the research design is a logical sequence that connects empirical data to a study's initial research questions, and ultimately, to its conclusions. In a sense, the research design is a blueprint of the research process, dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyze the results (Yin 1994:106). It is much more than a work-plan because the main purpose is to help to avoid a situation in which the evidence does not address the initial research questions. Hence, the research design deals with a logical problem and not a logistical problem, and also specifies how the researcher will address the two critical issues of representation and legitimization. Furthermore, a research design describes a flexible set of guidelines that connects theoretical paradigms to strategies of inquiry and methods for collecting empirical data. It situates the researcher in the empirical world and connects her or him to specific sites, persons, groups, institutions, and bodies of relevant interpretive material, including documents and archives (Denzin & Lincoln 2000:22). An elaboration of each of the steps in the research process follows.

7.1 CHOICE OF A SUITABLE TOPIC

The topic, **The Botswana National Museum as an educational resource in public school classrooms** was chosen after the researcher, as a Principal Curator of Education in the Botswana National Museum and responsible for development of and implementation of museum education programmes in schools, was involved in running a series of

workshops for primary schools bearing the same theme. The workshop initiative was an endeavour by the Botswana National Museum to sensitise teachers to the educational value of museums. A preliminary project was carried out during the above-mentioned workshops. Prior to the workshops, the Botswana National Museum employees had a growing concern that the schools were not effectively using the Botswana National Museum as an educational resource. No prior research was done regarding this issue and the workshops were tailored to start an investigation of the issue, to address the Botswana National Museum's concern. During the workshops the researcher also became aware of the acute lack of education resources in public school classrooms. The researcher therefore volunteered to carry out a scientifically-sound study of this problem and other related problems. The availability of primary and secondary sources to assist researching the topic was also taken into account.

7.2 PRELIMINARY STUDY

Having decided on the topic, the next step was to familiarize himself with the literature, a move which enabled him to formulate the main problem (see p. 19) and its sub-problems (see pp. 19-30) for a more sufficiently focused research process

7.3 RESEARCH QUESTIONS

In order to guide the research process, the researcher formulated the following research questions:

- How could the curriculum development process in Botswana be revamped to accommodate the Botswana National Museum's education programmes to improve the quality of education, promote the IKS of Botswana and develop the core competencies of future citizens?

- How could the Botswana National Museum extend its services to become an educational resource and partner in public school classrooms?
- How best teachers could be prepared and empowered to utilise the Botswana National Museum activities to enhance the learner activities in public school classrooms?

7.4 INVESTIGATION OF THE PROBLEM

In order to address the research questions, the researcher engaged in the study of the stated problem (see pp. 26-54). The primary and secondary sources, which had a direct or indirect bearing on the stated problem, were consulted. Primary sources provided first-hand testimony or direct evidence concerning the topic under investigation, namely **The Botswana National Museum as an educational resource in public school classrooms**. The primary documents studied included acts of law, reports of museum employees, policy documents, minutes of meetings and official correspondences. Secondary sources used included journals, dissertations, the Internet, newspapers and textbooks.

The qualitative research design was chosen because the research project is about human behaviour. Slavin (1992:66) asserts that human behaviour is significantly influenced by the natural setting in which it occurs. A qualitative research design uses the natural setting as the direct source of data. Sprinthall (1990:100) also points out that qualitative research methods such as interviews are used systematically to gather data, which is purely descriptive and not numerical. On the same note, Slavin (1992:65) confirms that the product of a qualitative study is a thick description, not a report with tables and figures. By using these methods, the researcher acknowledges that he might not produce “objective” empirical findings, as it is often claimed that qualitative research lacks

objectivity since it has inherent interaction with the subject. However, according to Kvale (1996:70), a qualitative interview cannot be characterized as either an objective or a subjective method. The representation of numbers of the subjects is not an indicator of the accuracy of the results; researching a sample can yield more accurate results than using the complete population. According to Kvale (1996:103), the quality of the interview should be emphasized rather than the quantity of the subjects.

The type of research design used in this study was mainly descriptive in nature because a qualitative research design was used. The researcher conducted open-ended interviews with teachers and learners in selected public schools, Botswana National Museum employees and curriculum developers. The sample was 40 participants; 10 teachers from selected public schools, 10 learners from selected public schools, 10 museum employees and 10 curriculum developers. According to Patton (1990:169) five to ten interviews are common for a qualitative study on this level. Having this in mind, and considering the availability and accessibility of possible participants, the researcher limited the number to the minimum required. A specific criterion has been set in choosing the possible participants such as that she or he must be a museum employee or a teacher involved in implementing the recommendations of the RNPE of 1994. Purposive sampling has been used to select the participants of this study. According to Patton (1990:169):

The purpose of purposive sampling is to select information-rich cases whose study will illuminate the questions under study The logic and power of purposive sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposive sampling.

The selection of the participants was therefore based on determining which participants were most likely to provide significant knowledge and insights about the topic under study.

Given that the MoESD centrally controls the curriculum development, design and implementation in all public schools and that all these schools are “identical” and offer similar programmes, it does not matter which schools are being chosen as sample. At the schools selected, the researcher focused on teachers responsible for practical subjects such as design and technology, home economics and art in a junior secondary school setting (Forms 2 and 3). The government of Botswana stresses the policy of equitable distribution of educational resources; consequently, all the public schools are well-resourced in this regard. Only the people in the schools and the schools’ ethos are different. The data collection method, open-ended questions in one-to-one interviews was used and applied in a similar manner to all role-players.

7.5 CRITICAL EVALUATION AND INTERPRETATION OF DATA

A critical evaluation and analysis of the data was conducted throughout the data generating process. This included transcribing, reviewing, and summarizing the data, as well as studying the relevant literature. Following each interview session, the interview tape was given a code name to assure the interviewee of anonymity. The code name was not referred to in any further mention of the interview. The code was recorded on the interview sheet, which was filed with the transcribed tape of the interview.

7.6 WRITING OF THE RESEARCH REPORT

In light of the data collected, the researcher, in writing the report, outlined the curriculum development in Botswana – past and present; reviewed scholars' views on museums as educational resource; planned and conducted interviews; analysed the results of the interviews; and finally, findings, conclusion(s) and recommendations were put forward.

8. WORK PROGRAMME

The sequence of the work programme to be followed in this study is as follows:

CHAPTER 2: This chapter outlines an historical survey of curriculum development in Botswana. The curriculum development process is discussed in the context of innovations in the education system, past and present – from traditional education to progressive education. Special reference will be made to learner activities in the classroom and the Botswana National Museum. The views of international scholars on museums as an educational resource are also outlined. This chapter forms part of the literature review of the study.

CHAPTER 3: Chapter 3 is concerned with the research design of the empirical study. This will involve the planning and conducting of the unstructured one-to-one interviews.

CHAPTER 4: Chapter 4 comprises an analysis of the research results. It presents an introduction to the critical analysis of the responses, the discussion of the critical analysis of the responses and reference to related research.

CHAPTER 5: In this chapter the findings, conclusion(s) and recommendations are put forward. The findings of the thesis are summarised, and the conclusion(s) in relation to

the perceived significance of the findings are drawn. Recommendations (generic and specific) for teaching and learning in relation to the results of the study will be made. Finally, suggestions for subsequent research will be listed.

CHAPTER 2

CURRICULUM DEVELOPMENT IN BOTSWANA WITH SPECIAL REFERENCE TO MUSEUMS

1. INTRODUCTION

Since 1994, the Botswana government has through its national education system strived to prepare the Botswana for a transition from a traditional agro-based economy to an industrial economy (Botswana Government 1994a:9). The objectives of the national education system were among others to:

raise education standards at all levels; to emphasise science and technology in the education system; to make further education and training more relevant; and available to larger numbers of people; to implement broader and balanced curricula geared towards developing qualities and skills needed for the world of work; to emphasise prevocational education; and to improve response to the needs of different ethnic groups in the society. Specifically, the objective of secondary schooling has been to provide an educated populace capable of both entering further education and/or joining the labour force as workers sufficiently qualified as to benefit from further training on the job (Botswana Government 1994a:5; Wright 1995:20).

The Long-term Vision 2016 document of 1997 confirmed the above and warns:

Botswana has achieved a marked improvement in the quantity of educational facilities provided to its citizens, but the pace of educational change has lagged behind the pace of national development. The challenge is now to improve the quality of education (Botswana Government 1997b:18).

Following the above conclusion, the Ninth National Development Plan (NDP9), covering the years 2003 to 2009, confirmed the role of education in the national development of Botswana. The NDP9 articulated a development process that should lead to the creation of an educated, informed and prosperous nation: productive, innovative, compassionate and caring (Botswana Government 2003:269-303). A whole chapter of the NDP9 was

devoted to education, and it identified lifelong learning as a critical component of a national human resource development strategy. It gave an overview of the national education policy framework, and promulgated and identified projects (such as the Botswana national museum) to be implemented and utilised within the Plan's development period to improve the quality of education in Botswana.

Against the above introductory remarks, in this chapter a historical survey of the curriculum development in Botswana is put forward. The current, and future, innovations in the education system is to be viewed within the context of the past curriculum development process – from traditional education to progressive education. The chapter also reviews scholars' research findings regarding the role of the museum in the classroom.

2. AN HISTORICAL SURVEY OF CURRICULUM DEVELOPMENT IN BOTSWANA

2.1 INTRODUCTORY REMARKS

The history of education in Botswana predates the colonisation of the country, and according to Mautle (in Marope & Weeks 1996:101), this is largely a history of what has come to be known as primary education, and which dates back to the 1940s. Secondary and tertiary education in Botswana is a much more recent development with the former dating back to the 1950s, and the latter to the 1960s (Mautle in Marope & Weeks 1996:101).

In the following sub-sections, the “sense of history” as Mautle (in Marope & Weeks 1996:101) calls it, of the Botswana curriculum is provided, because the perceptions and

the insight of the past curricula should be linked to the curriculum planning and development process of the present.

2.2 THE PRE-INDEPENDENCE PERIOD (GENESIS TO 1966)

Education in Botswana, prior to the arrival of the Europeans, was largely informal in nature. It sought cultural “schooling”; inculcating tribal lifestyles that were vital to a subsistence economy (Goldblatt 1971:3-10). According to Mogapi (1984:187-190) this education system involved:

education as social responsibility; participation in ceremonies, rituals; imitation; recitation; demonstration; sport; epic; poetry; reasoning; riddles; praise songs; story-telling; proverbs, folktales; word games; puzzles; tongue-twisters; dance; music; plant biology; environmental education, and other education centred activities.

Parsons (in Crowder 1994:22) classifies this traditional education system into three categories – informal, formal and vocational education:

There was informal education in the home, which was mainly parenting, and included relations among siblings, with special emphasis on the aged as repositories of wisdom. Formal education was characterized by *bojale* and *bogwera*, adolescent initiation schools for females and males, respectively. In *bojale*, young female adults were formally taught matters concerning womanhood, sex, behavior towards men, domestic and agricultural activities. *Bogwera* was formal instruction for young male adults where they were circumcised and taught skills such as kaross sewing for shields and clothing, and modeling cattle in clay to reinforce practical knowledge of livestock. They were trained to be responsible men, warriors and fathers. Whereas women qualified for motherhood and marriage after *bojale*, *bogwera* did not qualify men for marriage until after they had proved themselves as herders, hunters and fighters. Vocational education consisted of part-time individual apprenticeships in trades such as medicine, mining and smelting. Also, skills in agricultural, and hunting techniques were imparted.

The Botswana National Archives (1983:BNB 7562-3) confirms Parson's classification. Salia-Bao (1991:11) is of the opinion that the content of the informal curriculum included cultural instruction, vocational training and agricultural education.

According to the Botswana National Archives (1983:BNB 7562-4), formal education during this period catered for the political and economic needs of state power, particularly of the Tswana "states" which emerged and covered most of Botswana during the 19th Century. Formal education was also organised through traditional initiation ceremonies for adolescent boys (*bogwera*) and girls (*bojale*) respectively. According to Schapera (1978:3), the *bogwera* and *bojale* ceremonies, marked the termination of a period during which the youths were due to be incorporated into the next age-set, a recognised social category, distinguished in order of the *mephato* (age-regiments).

The formal education system produced an individual that would be independent-minded and could create a vocation in addition to the line chores of hunting and cattle herding. They could be skin tanners, basket weavers, woodcarvers or thatchers (Mosothwane 1999:19). According to Schapera (1978:3), "naturally men were formally taught such skills as mining, medicine, smelting, occasional demands by the state for drilling in techniques of mass hunting and warfare". According to Schapera (1970:127), "these ceremonies were last held among the BaNgwato in 1876, the BaNgwaketse in 1896 and the BaKgatla in the 1902. They were abolished locally by the ruling dikgosi (Khama, Bathoen I and Lentswe) and were never revived".

According to Boaduo and Babitseng (2006:1):

the curricula of the traditional education concentrated on the provision of a practical, applicable, relevant, functional and

easily convertible knowledge and skills that would help to provide the needs of the Batswana society. The traditional Batswana youth or adult was not educated to migrate from the rural to the urban area. Whatever education was provided equipped the Batswana to make use of the naturally available resources to be able to live sustainable lives.

Prior to the establishment of the museum in Botswana in 1968, valuable collections of local people were kept at home for household use and passed on to succeeding generations through a heredity system. In some cases, special sanctuaries were built to keep cult objects which were also used for traditional religious purposes. In some families, the family relics were jealously conserved in special rooms; sometimes certain categories of people could access them – those excluded often, the young, women and non-initiates (Schapera 1970:144). During one of his tours to a village in 1906, Sargant, the Colonial Schools Inspector, describes what he saw after he invited the local people to bring their traditional items to the kgotla:

I saw the following specimens: bowls, jugs, spoons of various sizes, folding chairs etc; leather articles of attire; sandals, fur-caps and karosses; belts and necklaces of beads; deep baskets for grain, shallow baskets for winnowing, and a smaller deep bowl of about 2 quarts measure, so beautifully weaved of rushes that it could be used for holding native beer. There was also a cylindrical basket, like a drum with upper end taken out, the lower flat surface being made of skin. They then brought the ingenious native bellows used in smelting and working iron – two large bladders which can be inflated or emptied by the alternate motion of the two arms, the draught being directed down a nozzle held between the feet of the smith. Various claypots were brought, enough was produced to show that woodcarving might with advantage be made a subject of instruction in schools. Similarly the weaving of baskets and mats could be practised and improvements effected by the introduction of some of the Barotse people as instructors (Botswana National Archives 1906:BNB RC 6/1).

Rose (1973:48) opines that “before the coming of the Europeans, education was an integral part of the Bantu social structure. If viewed only as the passing on of culture to new generations, the education of the Bantu child was efficient”. The arrival of the Europeans in Botswana altered this perception totally, as the needs of communities changed, altering the character of the traditional education system.

The first schools established by missionaries (starting in 1847) had a significant influence on all communities in Botswana. The curricula and syllabi, although non-official and non-formal, which were used in these missionary schools, were European in nature as the education system was specifically used to replace the so-called “primitive” cultures with European culture, cultural goods and skills (Bruwer 1966:58). Bruwer (1966:58) asserts that it is hardly possible to overestimate the enormous impact of the missionary endeavours on the indigenous peoples of Botswana. The presence of the missionaries undeniably changed the lifestyle of the indigenous people of Botswana forever, because it introduced a different set of principles, values and skills by means of an European-oriented education system (Jenny 1976:44). According to Töttemeyer (1978:172), “education became the most important instrument for change within the old order, altering outlooks and helping to create new economic and political structures”.

When the Christian missionaries introduced western education to Botswana, their primary objective was to train the Batswana to acquire a Christian character; which the missionaries believed to be more important than gaining other forms of knowledge and skills. The missionaries used the church as a vehicle for promoting western education in the name of salvation. Parsons (in Crowder 1984:25) describes the content of the curriculum as follows:

... doctrinal conceptions of *thuto*[sic] entailed, by our standards, neglect of academic and technical education. ... there were no formal examinations or school inspections. The pedagogic principle was essentially the monitor system of only really teaching a few by direct methods, so that they could preach to others by what David Livingstone called using “native agency, putting the white missionary in the background”.

The missionaries were the carriers of western civilisation, and took the responsibility upon them, not only to Christianise the Batswana, but also to bring education, health and welfare to the people. Each missionary group established its own schools among one of the specific ethnic group(s), (Brunette 2006:21).

According to the Botswana National Archives record, the preamble to the 1940s syllabus states:

the aim of education and the purpose for which our schools exist is to equip the children with a training such as will enable them to take their proper place in life, economically, sociologically and culturally and to enable them to live fully their lives The core of the syllabus is textbooks, published by the London Missionary Society, Sepeleta (spelling) for substandards I and II and assorted literacy works by missionaries. Arithmetic was to be practical and English not to be formal. History and Geography were to be local. Manual training was to be consistent with modeling, plaiting and beading followed by gardening and livestock for boys. ... arithmetic was a weak subject in all classes; mental work in particular, “children must be taught to use their brains”. It looks ridiculous to see even the oldest scholar having recourse to their fingers. Geography was a mere repetition of continents and oceans, and countries of the world: knowledge fragmentary and unintelligible to the children (Botswana National Archives 1947: BNB 3444).

Apart from conversion to Christianity and basic literacy and numeracy training, no industrial skills training were offered. In a letter from the Chairman of the London Missionary Society to the High Commissioner of the Cape Colony in 1900, it is indicated that the “children were taught subjects required by the Cape Code up to standard III and

IV, in addition to religious subjects which the Cape government naturally takes no notices of’.

According to Mautle (in Marope & Weeks 1996:102), the above curriculum included a wide range of subjects: English, History, Scripture, Domestic Science (girls), Agriculture (boys), Elementary Biology, Craftwork, Setswana, Geography, Elementary Mathematics and Hygiene. Scripture was the most important subject. Government regulations required that it be taught a minimum of two and half hours per week; in the learners’ home language, and examined. Secondary schooling facilities were non-existent in the Bechuanaland Protectorate until the last two decades of colonial rule (1960s). The early secondary schools founded in the Protectorate offered a curriculum that led to a junior certificate examination (taken after three years of secondary schooling) and a matriculation certificate examination (taken after five years of secondary schooling). Both of these examinations were prepared by the Examination Board of the University of South Africa.

At independence in 1966, Botswana inherited an education system that had not only benefited a few, but had also impacted negatively on the traditional Batswana way of life (Njabili 1993:3). According to Mannathoko (1998:6) and Njabili (1993:3), the Botswana government inherited a western-oriented education system that was poor in quality and catered for a very small proportion of the population. Hence, the school curriculum did not address the needs of society, especially of its children. The majority of primary school leavers lacked minimal competency in reading and writing.

The speech by the first President of an independent Botswana, Sir Seretse Khama, describes the colonial education system as follows:

We were taught, sometimes in a very positive way, to despise ourselves and our ways of life. We were made to believe that we had no past to speak of, no history to boast of. The past, so far as we were concerned, was just blank and nothing more. Only the present mattered and we had very little control over it. It seemed we were in for a definite period of foreign tutelage, without any hope of our ever again becoming our own masters. The end result of all this was that our self-pride and our self-confidence were badly undermined. It should now be our intention to try to retrieve what we can of our past. We should write our own history books to prove that we did have a past, and that it was a past that was just as worth writing and learning about as any other. We must do this for the simple reason that a nation without a past is a lost nation, and a people without a past is a people without a soul (Botswana National Archives 1971:BNB 6786).

According to Mafa (2003:152) and Mannathoko (1998:6), the government had to design a curriculum to address two issues in the decade since independence – 1967 to 1977:

- provide education to the majority of the population with the long-term goal of creating a literate society.
- provide education facilities for a limited few that could eventually occupy civil service positions which at the time of independence were dominated by expatriates.

2.3 THE NATIONAL POLICY ON EDUCATION (1977-1993)

The curriculum development in post-colonial Botswana could be constructed from the government's many pronouncements on the subject in its National Development Plans and the reports of its various commissions, committees and departments.

The First National Development Plan, 1968 to 1973 was a transitional plan that had sought to bridge the period of constitutional change, from internal self-government to full independence; and from rudimentary planning to full resource planning. The planners sought to create a rationally planned and guided economy without stifling private initiative. The concern was a curriculum for manpower training in order to take over the control of the bureaucracy and the economy from the British colonial officers (Botswana Government 1968:124). The Second National Development Plan, 1970 to 1975 was about self-reliance and democratic planning. A curriculum should be designed to involve the people. It should establish village and district development committees (Botswana Government 1970:86).

The Third National Development Plan, 1973 to 1978, was about literacy, and required that the Ministry of Education and Skills Development in consultation with other ministries:

investigate the role of national literacy programmes in the development strategy and, where possible, sponsor functional literacy programmes on a local and/or national scale using existing institutions and organizations as the base for action (Botswana Government 1970:38).

According to Townsend Coles (1985:38), it was stated in the Third National Development Plan, 1973 to 1978 that:

the expansion of secondary and vocational education can only produce the skills and abilities needed in Botswana if the primary school has given each child a good basic education. The goal of primary education in the Third National Development Plan was to ensure that primary school leavers had acquired the following: permanent literacy in Setswana and English; numeracy to deal with everyday life; practical skills and high standards of individual behaviour.

Resulting from the activities of the First National Commission on Education of 1977, was the *Education for Kagisano* (Education for Social Harmony) policy. The latter was the blueprint for the development of education in Botswana (Kann, Mapolelo & Nleya 1989:1). The above became part of the Fifth National Development Plan, 1979 to 1985, and the corner stone of the Sixth National Development Plan, 1986 to 1991. The Fifth National Development Plan, 1979 to 1985, described the policy as follows:

government attaches the highest priority within education to the primary education sector. Firstly, in the interests of equality of opportunity and developing the potential of all children, that is providing universal access to primary education. Secondly, since primary education lays the foundation for further education and training and for productive employment, the government sought to improve its quality and relevance (Botswana Government 1979a:107).

This aim was further developed in the Sixth National Development Plan, 1986 to 1991 whose aims were as follows:

- To prepare the Batswana for useful and productive lives, with emphasis on training to meet the manpower needs of the economy. Rural development would be given special attention.
- To promote coordination between the various subsections of the education sector with the ultimate aim of providing continuous access from primary to post-primary education and training by using both formal and non-formal systems.
- To strengthen cooperation between the school and the community by encouraging increased participation of the community in the management of schools (Botswana Government 1986:78).

According to the Botswana Gazette (2007a:13), in line with international trends in education at the time, the *Education for Kagisano* policy's aim was to make minimum

basic education accessible to everybody. The report of the First National Commission on Education (1977) declared that “primary education is the most important of all the stages of education” (Botswana Government 1977:66); and pointed out that:

a fully literate population is an important long-term objective if Botswana’s other national objectives are to be met ... literacy should not be pursued in isolation from other development programmes (Botswana Government 1977:67).

At primary school level, the implementation of some of the First National Commission on Education’s (1977) recommendations led to an unprecedented expansion of schooling.

According Mautle (1996:107), under the First National Commission on Education’s (1977) curriculum eleven subjects were offered at the primary school level. Five of the subjects, namely English, Setswana, Mathematics, Science and Social Studies were examinable at the end of the primary schooling period. The remaining six subjects, Religious and Moral Education, Agriculture, Home Economics, Physical Education, Art and Craft and Music were time-tabled subjects but not examinable.

Until the 1980s, government-supported secondary schools had catered for both the junior secondary school and the senior secondary levels of education. According to Plank (1987:119) the purpose of the junior secondary curriculum had been to lay a basic foundation for academic studies at the senior secondary level and the university levels of education. The government of Botswana decided in the 1980s that junior secondary education would be provided jointly by the central government and the communities (Mautle 1996:107). The government decided on the above strategy to among others double the enrolment rate in junior secondary schools, develop new curricula and produce

new textbooks. The effect was that basic education expanded phenomenally in the 1980s at the expense of both senior secondary and tertiary education (Plank 1987:119).

According to Morapedi (2002:6) since the advent of the Nine-Year Basic Education Programme initiative of 1986, the goal of the government was to provide all learners with the opportunity to continue their formal education to junior secondary school level. As a result, the junior secondary school curriculum was to become more closely aligned and integrated with the primary school curriculum. The purpose of schooling at all levels was to prepare learners for a useful, productive life in the real world:

They should have the basic skills of literacy and numeracy and the knowledge that will make them self-reliant later in life, whether they continue full-time schooling, study on their own, find employment, or become self-employed (Morapedi 2002:6).

The secondary school curriculum was, however, found to be mainly academic-oriented, designed for the select few, and heavily oriented toward the Junior Certificate examination. It became apparent in the 1990s that for many of the learners, the junior secondary school level was the end of their school careers (Morapedi 2002:6).

2.4 THE REVISED NATIONAL POLICY ON EDUCATION PERIOD, 1994 TO 2009

The Education for Kagisano policy emphasized universal access to nine years of schooling by 1990, and concentrated on basic education, senior secondary education did not feature within the scope of the First National Education Policy's (1977) deliberations. The Kedikilwe Commission of 1992 had been tasked to find a way that would "vocalionalise the curriculum content at the senior secondary level" (Botswana

Government 1993:107). The report of the Kedikilwe Commission (1992) outlined this as follows:

that there was need to modify content and improve the quality of education at all levels to ensure that it provided both the fundamental competencies that will enable young Batswana to contribute to the development of attitudes and understanding that will foster democracy, development, self reliance, unity and *Kagisano* (Botswana Government 1993:144).

Having established the problems in the education system, the Kedikilwe Commission recommended the development of a new curriculum (Botswana Government 1993:2).

in terms of international trends it could be said that Botswana should enjoy the advantage of having a senior secondary curriculum which may be regarded as contemporary among middle-income developing countries as it has not suffered from misdirected “vocationalization” efforts. The trend among middle-income countries is that emphasis should be placed on cognitive development, language, Mathematics and Science at the secondary level. Training for employment should begin after education. Botswana is therefore correctly aligned in concentrating on the academic disciplines. At the same time the key workplace-related subjects like Commerce and Design and Technology ... are being introduced (Botswana Government 1993:172).

The Revised National Policy on Education (RNPE) of 1994 refined and updated the whole education system to enable Botswana to catch up with the modern-day educational developments. According to Tabulawa (2002:102-118), the thrust of the RNPE (1994) was its emphasis on the need to relate education to the world of work by vocationalising the curriculum. This was to be achieved in two ways, firstly, by giving all academic subjects a vocational orientation; and, secondly, by introducing new technical and vocational subjects, thus broadening the curriculum.

Recommendation 17 of the RNPE (1994), (Botswana Government 1994a:17) proposes that:

a policy on curriculum development should be formulated to include a framework for integrating new subjects, themes and issues into the existing curriculum, the package of subjects for the various levels of primary education, the criteria for determining core and optional as well as time allocation for various subjects.

According to Recommendation 17 (Botswana Government 1994a:17), the junior secondary school curriculum should emphasize the creative and performing arts in subjects such as Design and Technology, Arts and Design, Home Economics and Business Studies.

The RNPE in Recommendation 32 recommends that:

- All Junior Certificate learners should take a minimum of 10 and a maximum of 11 subjects.
- Each learner should take eight core subjects, namely: English, Setswana, Social Studies, Mathematics, Integrated Science, Design and Technology, Agriculture and Moral Education.
- In addition, each learner should select a minimum of two and a maximum of three optional subjects. At least one of the subjects selected should be from each of the following groups of subjects:
 - a. Practical Studies: Home Economics, Commerce, Principle of Accounts/ Bookkeeping and Office skills.
 - b. General Studies: Religious Education, a Third Language, Art, Music and Physical Education (Botswana Government 1994a:63).

At the senior secondary school level, the syllabus allows for up to ten practical subjects to be offered. These are: Agriculture; Design and Technology (the independent subjects

Woodwork, Metalwork and Electronics were phased out in the mid-1990s); Home Economics (the three independent subjects Food and Nutrition, Fashion and Fabrics and Home Management were integrated); Art (which was renamed in 2001 as Art and Design); Computer Studies; and Business Studies (the independent subjects, Principles of Accounts/Bookkeeping and Commerce were integrated in 1999 to form a new subject). Of these ten practical subjects, only five (Agriculture, Design and Technology, Business Studies, Home Economics and Art and Design) are currently taught in all of the senior secondary schools. The major constraint in the teaching of the other five subjects at secondary school level is a combination of limited facilities and a shortage of qualified and experienced teachers to teach the subjects.

The RNPE Recommendation 120 [paragraph 11.6.9] recommends that:

the Educational Publications Unit in the Department of Curriculum Development and Evaluation should inform local educators about the syllabuses which are currently operational; the pattern of relevant materials currently in place; the changes in syllabuses and materials distribution that can be expected in the near future (before the next information is issued); and the longer-term policies and plans (with dates).

For the senior secondary schools, Recommendation 42 recommends the following (Botswana Government 1994a:15-16):

Pre-vocational orientation in senior secondary schools: to facilitate the orientation of schools to the world of work; the localization of the examinations; the assistance of the Curriculum Development Unit in the development of practical and business subjects (syllabi and materials) and to emphasize integration across subjects; continuous assessment should be weighted in the final grading of students; there should be more practical and work-related subjects in the curriculum; management structures should be strengthened; links between the school and commerce and industry should be established; the research unit should conduct regular tracer studies of school leavers to assist

career guidance and curriculum development; all senior secondary school teachers should acquire computer literacy and the supply of an adequate number of computers to schools is required; practical and business subjects in senior schools should build on what will be taught in junior schools in the future; all teachers should receive training in guidance and counselling and exposure to commerce and industry at Teacher Training Colleges; the reliance on expatriates should be reduced; adequate budgets for practical and commercial subjects are required; supervisory staff need to be retrained to achieve an orientation to the world of work; revitalize guidance and counselling at the schools (office, reduced teaching load, dedicated classroom, relevant material); practical subject clubs and clubs that support work should be encouraged.

During the curriculum development process in 1994, emphasis was therefore put on the following:

- Education to be a driving force in transforming Botswana from an agriculture-based society to a modern industrial society.
- The curriculum to be restructured to provide for an increased emphasis on sciences and technology, more practical or prevocational types of subjects, and a greater practical orientation in the general subjects.
- The socio-cultural dimensions of a good quality education in the curriculum through areas such as Social Studies should be highlighted.
- The set of subjects which come under the umbrella of Administration, Business, Design and Technology and Commerce should feature prominently (Wright 1995:5).

Since 1996, the education system has been undergoing review. For example, the Two-year Junior Certificate curriculum, proposed by the First National Commission on Education (1977), was changed in 1996 to three years. According to Mautle (1996:107),

this change was engineered by unfavouring reports that graduates of the Two-year Junior Certificate were not only immature, but also having a too weak academic background to be able to pursue further education or join the world of work.

According to the Ministry of Finance and Development Planning's Ninth National Development Plan (2008 to 2009), (Botswana Government 2003:268), the continued and sustained improvements in the relevance and quality of education, as well as access to education as pronounced in the RNPE of 1994, lie at the core of the Long-term Vision 2016 document:

By the year 2016, the government of Botswana and the people of Botswana envision a system of quality education that is able to adapt to the changing needs of the country as the world around changes. This is the education system that will empower citizens to become producers of goods and services. It will produce entrepreneurs who will create employment through the establishment of new enterprises.

Building the future of Botswana as envisaged in the goals of the Long-term Vision 2016 document demands a massive effort by all members of the society and partners in the provision of education to make Botswana a learned society (Botswana Government 1997b:5).

The MoESD adopted the content of the Long-term Vision 2016 document in its curriculum design endeavour for the National Development Plan period, 2001 to 2009:

to offer equitable lifelong education and training that is relevant and responsive to the rapid technological development and the changing socio-economic environment, and that produces knowledgeable, skilled, enterprising and independent individuals (Botswana Government 2003:268).

The challenge for Botswana today (2009) is not to preserve a traditional curriculum, but to explore a curriculum that focuses on how learners utilize their talents to sustain themselves, and ensure that learning remain a continuous process.

3. THE CURRICULUM AND MUSEUMS

3.1. THE NATURE AND FUNCTIONS OF MUSEUMS

A survey of the literature resulted in the following outline of the nature and functions of a museum-school relationship:

3.1.1 Museums versus schools

Caston (1989:97) argues that teaching and learning in schools is most often accomplished through verbal communication, with facts, concepts, skills, values and attitudes presented sequentially and in a structured way. The school contains teachers, learners and a curriculum, and comprises among others multitudes of lessons and activities from a multidiscipline perspective. In museums, teaching and learning objects are usually the basis of the learning process, teaching and learning is less structured, partially directed by the learners' own interests, ideas and experience and often linked to the curriculum. Museum teaching and learning also contains educators who are very knowledgeable about museum collections, and a curriculum that could provide interdisciplinary lessons and activities on specific topics. According Falk and Dierking (1992:157), the museum enables learning for people of all ages, from under 5s to older people; people from diverse backgrounds; and in a variety of settings – formal, informal and self-directed.

3.1.2 Informal learning experience

Hein (1998:43) argues that visitors (learners) may not view their visit to the museum as a learning experience. Regular visitors are attracted by the informality of the visit and the fact that taking part in the experience does not require too much time or money.

Falk and Dierking (1992:16-21) argue that the outcomes of museum learning experiences are equally diverse. Among the most positive outcomes are increased knowledge and understanding, the development of new skills and abilities, and the inspiration to learn more. Falk and Dierking (1992:157), further point out that quite often learners use their visits to museums to reinforce their tacit knowledge and to share the knowledge gained with other people, for example, with their parents or peers. Learners who find a connection at the museum with their interests, experience or sense of themselves in the world, are more likely to re-visit the museum than learners who do not make that connection. Through private or organised visits to general collections and to thematic exhibits, museums perform a transformative function, by giving all visitors the opportunity to meet the unknown, to have firsthand contact with “foreign” objects; and, to stimulate and entertain their curiosity.

According to Gibbs, Sani and Thompson (2007:18-26), “museums are informal learning places that have the unique advantage of respecting the “rhythm” of visitors, their preferences, their curiosity and their intimacy”.

3.1.3 Teaching and learning role

Museums are places of memory, and for conserving heritage; as well as enhancing collections, and designing reference points for visitors. Museums collect, document and safeguard objects for public discovery and admiration. Their primary role is to reveal the significance of those objects and ensure good conditions for the best possible reading and viewing of them. Scholars such as Hein (1998:16-21) and Hooper-Greenhill (1994:40-41) indicate that education in museums embraces learning from museum buildings, sites, documentation, research and, most importantly, collections.

3.1.4 Meeting the needs of all learners

By creating exhibits that vary in both subject matter and style, museums can provide a potential for meeting the comprehension level of many different people. As confirmed by Talboys (2000:5) and the University of Leicester (2007:5) respectively:

A museum should in some way offer the opportunity to see, touch, hear and have sensual, emotional and intellectual interactions with and experiences of what is in that place. A visit to a museum should be an experience similar to listening to music, visiting a library, reading a book, going to the theatre or cinema – a confrontation with the products of fellow human beings that can lead to revelation and deeper understanding.

... Museums are remarkable sites for learning, capable of inspiring teachers and pupils alike and able to respond flexibly to the interests of children and young people. The experiences that museums can offer can touch pupils deeply, generating curiosity, motivating learning, and inspiring self-confidence.

According to Cochran (1986:32-39) teaching and learning in museums is multi-sensory, and the exhibits support many learning styles and abilities. Exhibits are visually exciting and most have a text to help explain what is going on. But they also produce sounds and encourage touching. Exhibits often use interesting kinetic experiences, spatial relationships, intriguing sounds, text and images. Because of this richness, museums and exhibits have the opportunity to connect with the many different learning modes that people use. According to Screven (in Jacobson 1999:131-192), museums offer untapped potential for communicating social and cultural knowledge. Learning in the museum is voluntary, self-directed, curiosity-driven, discovery-oriented, and exploratory and the sharing of experiences with companions. Teaching and learning in museums, in its broadest sense, is a by-product of the free interaction of leisure-oriented visitors (learners) with exhibitions and the surroundings.

3.1.5 Active learning

According to Falk and Dierking (2000:225), the ideas and objects in museums are discovered by the active process of learners moving about: inside the building the learners have the opportunity to wander and to make their own personal connections and meaningful choices. However, teaching and learning in museums also encompasses specific programmes, such as object-handling sessions for schools; art and craft workshops for families; and the study of material culture by researchers.

3.1.6 Publications

A range of museum publications furthers its function. Museum publications consist of *inter alia* written material that is either kept in the exhibition hall to assist in explaining an exhibition or sent to schools to aid the teaching and learning in the classroom. These may include, from information booklets about collections, activity books and worksheets for school learners, site guide books, and teacher resource packs. Site guide books are found at a site and they contain the information to explain a particular site. Teacher resource packs comprise teacher manuals and a series of booklets on a particular theme. They are meant for classroom use (Norwich Castle Museum and Art Gallery 1996: Internet).

3.1.7 Mobile services

Some museums extend their educational activities to wider audiences through programmes such as travelling exhibitions and lectures and talks. Travelling exhibitions can be taken to other museums within or outside a particular country. Lectures and talks entail public discussions on a specialty field led by a museum employee (Norwich Castle Museum and Art Gallery 1996:Internet).

3.1.7 Digitized collections

In their paper on museum education, Korteweg and Trafenenko (2002:Internet) outlined how museums can make “extraordinary electronic resources available for learners and teachers to use in the classroom”. They argued that a world presented through digitized museum collections is richer and more heterogeneous than what has typically been found inside the classroom. Where distance is a constraint, electronic museum resources do not only offer learners and teachers digital access to museum collections, but they also allow them to view artefacts with curatorial interpretations and museum educator-generated lesson plans.

3.1.8 Symbiotic relationship

According to Harrison and Naef (1985:9-12), classroom teachers who seek to utilise the rich resources of museums, the expert knowledge of its staff, and additional meaningful methods of facilitating learner development, can inject the strengths of museum teaching and learning into their classroom activities. In return, museum educators who relate their programmes to the school curriculum, make themselves available to work with teachers on specific topics. They can also offer in-service teacher training opportunities and empower teachers to become knowledgeable about and confident in using the museum as an educational resource. When these two institutions work together to facilitate the teaching and learning of learners, they form a symbiotic relationship which positively impacts classroom activities.

3.2 CURRICULUM AND THE BOTSWANA NATIONAL MUSEUM

The Botswana National Museum has contributed to the improvement of the quality of education in Botswana during the post-colonial period, 1966 to present, using among others the Museum-in-a Box programme and the Mobile Museum Service.

Correspondence from the Ministry of Finance and Development Planning revealed that in 1997 the United Nations International Children's Education Fund (UNICEF) granted the Botswana National Museum, the sum of 155500.00 Botswana Pula (about 22,936.25 USD) for the implementation of a Museum-in-a Box project in areas such as Kweneng, Kgalagadi, Ghanzi and the North West Districts (Botswana National Museum 1997a:FDP 4/5 XXIV (15) Pov). Reports indicated that the Museum-in-a Box project went through a pre-test stage at Motokwe village in December 1997, and was duly launched from 27 to 30 April 1998 in Motokwe village. The activities at the launch included woodcarving, painting, leather tanning and working, ostrich eggshell decoration, necklace, ear ring and bracelet-making; all activities facilitated by local craftsmen. Moffat and Woollard (1999:112-113), confirm that local experts facilitated the sessions that took place over the four days. Children were involved in crafts such as leather tanning and working, woodcarving, painting and drawing, ostrich-eggshell decoration, necklace, bracelet and ear ring making, and papier maché. The products of the sessions, the children's own-crafted items made from natural or recycled materials, were housed in a large box. The idea was that different teachers would use the contents of the box(es) as teaching aids in their classrooms and each school would have its own box that contains the items made according to local traditional methods, and each school's boxes would eventually also be circulated to other schools, providing a very efficient method of spreading culture (Moffat & Woollard 1999:112-113).

The report on the evaluation of the trial-run of the programme in 1997 indicated that teachers found the Museum-in-a Box project “highly relevant to the school curriculum because it covered most objectives of Setswana and Social Studies”. Teachers even recommended that more time be allocated to the creation of objects and that the latter should take place during the school holidays. They also recommended that a “user’s manual” on how to use the contents of the programme be provided. The minutes of the programme’s Interdepartmental Working Group meeting held at the Botswana National Museum in July 1998, however, reported that some of the teachers who took part in the launch of the programme felt that the programme was “imposed on them”, and that the Botswana National Museum did not “appreciate the teachers’ workload”. Teachers also complained about the MoESD “not communicating anything about the programme to them”. The Ministry accepted the blame for this miscommunication (Botswana National Museum 1998:2).

The Mobile Museum Service was launched in 1979 (Zebras Voice 1986:37). Its focus was to take the museum to geographically remote and disadvantaged schools. When the Botswana National Museum was established according to the Zebras Voice (1986:37):

It initially served Gaborone only, but as it grew it started to extend its feelers outwards to a radius of about 80 kilometres ... in 1976/77 the United Nations children’s Fund (UNICEF) had put US\$40 000 at the disposal of the Ministry of Education to be spent on curriculum development. That Ministry was not immediately able to produce a project memorandum and asked the museum for an education project on which that money could be spent ... from this sprang the Mobile Museum Service.

Three units of the Mobile Museum Service made a 20-day tour of various schools at least twice a year, and during these visits each unit carried out classroom activities interspersed

with drama, dancing, and poetry involving the “whole” village (Rammapudi 1999:Personal experience).

The programme of the Mobile Museum Service lasted for the whole day; therefore, the normal school activities of the day were suspended. Standards 5 to 7 learners were also instructed to bring to school cultural objects from their parental homes for a show-and-tell. This show-and-tell period would be scheduled a week prior to the visit in order for learners to gather enough stories from their parents about the objects they would bring to school (Rammapudi 1999:Personal experience). The school and village community would also prepare traditional performances that would take place in the afternoon. After the performances, in the evening a film show on a topic of interest about Botswana would be shown to the whole community. The Zebras Voice (1986:37) reported the curriculum arrangements of the Mobile Museum Service as follows:

The schools will be divided into two groups: Standards I-IV and Standards V-VII. Standards I-IV visit the museum and watch films only. Standards V-VII view films, visit the Museum and receive lectures. The lectures entail presentations to learners about the ways of life of certain ethnic groups in Botswana. Each visit to a school lasts for a day and learners are given the chance to interact with artefacts a particular group made. The great strength of the Mobile Museum Service is the opportunity to present participants with a hands-on environment. The programme is designed to increase the learners’ knowledge and appreciation of some of Botswana’s culture and traditions. The approach used is to study different aspects of a particular ethnic group, economic activity, social and political organization.

Parents and the community at large were invited to take part in the activities, and the day often ended with music and dance performances. According to Stanley Ntlhatsotlhe, a head-teacher of Tsamaya School, “including the parents has improved teachers’ working relationship with the community, in the northeast region” (UNESCO 1998:7-8). The

inclusion of parents in the Mobile Museum Service visits served to introduce the Botswana National Museum experience to members of the community that may otherwise have perceived the Museum as an inaccessible institution, due to geographic and/or financial constraints. According to Maria Siyangaphi, the headteacher of Mpani Primary School, “the project [Mobile Museum Service] reminds people about their own culture and also teaches about that of others. It is a big help to teachers because they do not always know about cultures and customs from other areas of the country”.

It is remarkable what impression constructivist activities could leave on a learner such as in the case of Leaza Fergus, a 10-year-old from Motetshwane School, who still keeps a vivid memory of the Mobile Museum Programme, “They showed us a movie about the San going off to kill a giraffe and sharing the meat out with the entire village, we had never seen this before” (UNESCO 1998:7-8).

When during a school visit the focus was on an ethnic group that is predominant in the school, the community’s knowledge was tapped because according to UNESCO (1998:7-8), it happened time and again that learners and/or their parents actually correct the museum employee’s activities. The museum employees learned from learners and their parents just as much as they learned from them. Curators could therefore also enhance their own knowledge. When the Mobile Museum Service visited a village, the villagers would come to the school to inform the museum representatives about a rock painting, a sacred area or an old tree that has played an important role in a village. The purpose of the Mobile Museum Service was:

to bring people the knowledge about themselves, their culture, their history, their environment and most important of all, to teach that their country is a multicultural nation, and that cultural tolerance should be the guideline for

encouraging an attitude of give and take. The Botswana National Museum through the Mobile Museum Service plays an educational role (UNESCO 1998:7-8).

An undated video of the Mobile Museum Service revealed that after the Mobile Museum Service was launched in Gaborone it covered villages in a radius of 80 kilometres, and within a few years it had covered areas beyond a radius of 500 kilometres (Botswana National Museum 1997c:Video). The Botswana National Museum Booking Diary of 1984 revealed a number of requests from interested institutions to the Botswana National Museum for presentations on certain topics. Topping the list of these requests was visits to individual schools. Teachers' feedback on the Mobile Museum visits indicated on that day every learner ensured that she or he were present at the school.

According to Oram and Nteta (1983:46), apart from the Mobile Museum Service, the Botswana National Museum has also pioneered art classes for learners. The latter were conducted with the assistance of volunteer teachers. The art classes were based at the Botswana National Museum in Gaborone. Besides its educational activities the Botswana National Museum has also sought to involve itself in the community in a host of other ways. It has acted as an information bureau for researchers, consultants, the government and the general public on a variety of subjects (Oram & Nteta 1983:46).

In an official letter from the Ministry of Education to the Director of the Botswana National Museum (Botswana National Museum 1984a.:E 12/9 VI (1)) the Botswana National Museum was requested to organise a slideshow for participants attending a workshop on the "Community Financing of Schools". In another correspondence from the Ministry of Education (Botswana National Museum 1984b.:E/10/28), two Botswana National Museum employees, Mr. Gordon Mertz and Mrs. Ellan Forrester of the Art

Division were invited to lead a taskforce which investigated the introduction of Art as a timetabled subject in the public school academic programme. After completing their taskforce responsibilities, the two officers conducted workshops for Art teachers.

The Botswana National Museum also hosted the National Children's Art Competitions for schools, which started in 1979 and was co-sponsored by the Lions Club of Gaborone and De Beers Botswana: "The Botswana National Museum expected every child or school group to enter the competition through paintings, drawings, handicrafts and sculptures" (Botswana National Museum 1980a:14/1-3). A speech by a representative of De Beers Botswana to launch the competition in 1980, revealed that initially when the Botswana National Museum invited schools to participate in the annual competition, it proved difficult to get the participation of all the schools: "About 7000 entry forms were sent to every school in the country, and newspapers and the radio was used, yet only 10% of the entry forms sent out were returned with entries". This was attributed to a lack of infrastructure within the education system to make it possible for Art to be taught as a subject in schools (Botswana National Museum 1980b:NMMAG 14/3).

In official correspondence (Botswana National Museum 1989:SE 10/28/3) it is also reported that the Botswana National Museum, in collaboration with the Ministry of Education, conducted a workshop for all secondary school Art teachers in 1989. This workshop comprised demonstrations by local craftsmen and hands-on activities in basket weaving, pottery and woodcarving. The workshop had been preceded by another workshop in 1987 which demonstrated to teachers how to appreciate Art, entitled "You teach one teacher, you teach the whole nation" (Botswana National Museum 1989:SE 10/28/3).

In a speech to open a National Art Competition in 1988 the Minister of Education commended the effort that the Botswana National Museum had put into the development of Art and Art education in Botswana. The Minister also commended the Mobile Museum Service programme as another worthwhile project of the Botswana National Museum (Botswana National Museum 1989:SE 10/28/3).

According to the Botswana National Museum (1981:E10/31), the MoESD also requested the Museum to prepare and present a paper on the topic “The role of the Botswana National Museum in the development of Social Studies materials” to teachers at a workshop in Francistown in 1981.

The Botswana National Museum documents (1997b.:NMMAG 7/12 I [172]) indicated that by 1997 the collaboration between the schools and the Botswana National Museum had weakened. Consequently, in a letter addressed to the Ministry of Education, the Head of the Education Division in the Botswana National Museum wrote:

The Botswana National Museum is in the process of intensifying its relationship with schools. The Botswana National Museum has a wealth of cultural and environmental information and materials relevant to school syllabi. This wealth is under utilised by schools. As a result the Museum has embarked on workshops for teachers to help them use the Museum as a resource in teachings.

Following the drive, Botswana National Museum successfully conducted various workshops for primary school principals on the topic “The National Museum a resource for teachers”. The workshops covered all school inspectorial areas in the country, and were timetabled in the schools’ annual programmes to ensure attendance by all primary school principals. The last of these workshops was held in 2002, in preparation for the next theme that never took off (Rammapudi 2006b:Personal experience).

Another letter from the Botswana National Museum to the Department of Secondary Education in October 1997, revealed that teachers were invited to attend scheduled meetings prior to the introduction of the Museum Mobile Service in secondary schools (Botswana National Museum 1997b:14). Not only were relations between the Botswana National Museum and the schools in jeopardy, but also between the Education Division and Divisions in the Botswana National Museum. Correspondence in June 1999 from the Museum's Education Division addressed to all Heads of the Divisions requested suggestions for a theme for the next round of teacher workshops. The request did not receive the necessary attention of the Heads of the other Divisions. By July 1999, the date set as deadline for their responses, the Education Division had not received any suggestions. In August 1999, the Education Division wrote a follow-up letter to the Heads of the other Divisions to remind them to respond and submit the requested suggestions. However, to no avail (Botswana National Museum 1999a: NMMAG7/12/3 I (51); Botswana National Museum 1999b.:NMMAG 7/12/3 I [54]).

Correspondence (Botswana National Museum 2003:NMMAG 7/7 III [97]) also revealed that the Education Division of the Botswana National Museum had a meeting with the Principal of Molepolole College of Education in 2003, during which it was agreed upon that student teachers would be seconded to the Botswana National Museum as part of their final year project. During this time student teachers would assist the Botswana National Museum to develop programmes appropriate for use in public schools. As a result of this meeting, the MoESD also requested the Botswana National Museum to develop a programme to be implemented in schools in 2004. The Education Division never delivered the programme (Rammapudi 2006:Personal experience).

Internal correspondence (Botswana National Museum 2002:Minute 34) revealed that the Botswana National Museum in 2002 developed two museum–school programmes that were tested in schools in 2004 – the Tsodilo Education Kit and the Archaeology kit. Reports indicated that teachers rejected the two programmes because they were not relevant to the schools’ activities, and the teachers were not involved in the development of the programmes.

According to Oram and Nteta (1983:47), the Botswana National Museum has produced a variety of publications through the years (ranging from postcards to pamphlets on its art collection). The “Zebra’s Voice” has been one of the means of bringing the Botswana National Museum to the public’s notice on a regular basis, and educating a wide range of people (and learners) on what the museum “is” and “does”. The “Zebras Voice” explains to and informs the nation about the functions and activities of the Botswana National Museum, and covers various cultural events which took place at the museum and elsewhere in Botswana. The Zebra’s Voice is published on a quarterly basis (Oram & Nteta 1983:47).

A journal was also produced by the staff of the Botswana National Museum, printed by the Government Printer and sent out free of charge to all schools in Botswana, and even beyond the borders of Botswana (Oram & Nteta 1983:47). In 1984 the Botswana National Museum also started weekly radio programmes which explain and generate national discussion on various aspects of museum work:

through our educational programmes, the Mobile Museum, the Zebra’s Voice and weekly radio programmes, we are trying, and seem to be succeeding, in reaching most Batswana wherever they happen to live (Zebras Voice 1986:40)

Many of the education programmes were put on halt in 2006 to allow for a total revamp of the museum's activities (Rammapudi 2006b.: Personal experience).

4. THE VIEWS OF INTERNATIONAL SCHOLARS ON MUSEUM EDUCATION

4.1 GENESIS AND THE EVOLUTION OF MUSEUM EDUCATION

Falk and Dierking (1992:xiii) pointed out that the first museums were private collections, shared selectively with others by the collector. The field trips to these private collections were privately conducted and the issue of educating the public did not arise yet: “The earlier museums were scholarship oriented, opened to scholars and members of royal houses, with object of curiosity. The common people did not have access to it yet”. Over time, the role of the museum as a public asset and an educator became increasingly important, but for many it remained a secondary function. According to Falk and Dierking (1992:xiii) whereas a quarter of a century ago most museums would have “education” as a distant third on their list of institutional priorities; that is behind collections and research, these same museums would now (1992) be inclined to state that they are, first and foremost, centres for public learning – or at the very least, equally concerned about education, research and collections.

According to Hooper-Greenhill (1994:10) several disparate forces contributed to the emergence of museums as educational institutions at the beginning of the 19th Century:

a belief in educational self-help among both the working and the middle classes; a concern on the part of radical reformers to provide leisure opportunities for the working classes in the form of rational recreation; a conviction in the power of art to humanize and civilize; and a desire to provide neutral spaces where all sections of the society could meet.

At the beginning of the 19th Century, museums and galleries were thus understood as educational establishments. The ideal museum was considered to be an advanced school of self-instruction, and the place where teachers should naturally go for assistance (Hooper-Greenhill 1994:25). Objects from the natural world and from the past were accumulated in order for people to have the opportunity to learn about the world in which they lived, called object- teaching:

object-teaching leads the scholar to acquire knowledge by observation and experiment; and no instruction is properly so-called unless an object is presented to the learner so that the addition to her or his knowledge may be made through senses In object-teaching the chief interest in the lesson should centre in the object itself (Hooper-Greenhill 1994:1).

According to Hooper-Greenhill (1994:26) object-teaching was common in schools in the second half of the 19th Century and many of the methods of teaching from objects that were recommended at that time are recognizable as similar to the methods in use today. Object-teaching in schools began to decline at the very end of the 19th Century.

Above and beyond the educational function, museums were also given the task of unifying society:

they were seen as suitable places where all classes of people might meet on common ground. They were set up to enable people to educate themselves, and were often built in conjunction with libraries, lecture rooms and even laboratories. The larger national museums were expressions of nationhood and advanced culture, and the local town museum often carried messages about important local individuals and civic pride (Hooper-Greenhill 1994:1).

During the First World War (1914-1918), museums played an important role in the provision of schooling for children, and in the communication of important ideas, through exhibitions, to the general public. At the end of the War, educational agencies were anxious to extend these functions of museums, and several proposals were made to

restructure museums and to raise funds for museums to effectively host these functions (Hooper-Greenhill 1994:1).

By the early 20th Century the educational role of museums was no longer emphasised, and the educational potential of museums no longer clearly articulated. New interests came to the fore: collecting was much more seen as an end in itself, and the completion and care of collections became a major professional concern for curators: “Where previously education and curation had been practiced as two parts of the same task, now they became two discrete work areas” (Hooper-Greenhill 1994:2). Specialist education staff were appointed to develop services for schools and adult visitors. The organisation loan services and school visits section became the domain of the museum educator in provincial museums, while the guide-lecturer provided gallery tours for adults, the public, relying on exhibitions as their main form of communication: “By the mid 20th Century, museum education was understood to mean work with schools”. During this time display methods became the focus for research and development (Hooper-Greenhill 1994:2).

By the late 20th Century there was once more a return to an emphasis on the educational role of museums, as attention shifted from the accumulation of objects to the educational use of existing collections. The educational role of museums expanded on all fronts. New approaches to display techniques based on new technology were explored; interactive exhibits were used to involve visitors in active participation in exhibitions; special events were organized using theatre or drama; and educational programmes were designed to suit many different audiences (Hooper-Greenhill 1994:3).

According to Hein (1998:3-7) the public museum is a product of the 18th Century, with a major expansion of museums into significant public institutions occurring in the 20th Century. The early 19th Century museums primarily demonstrated the wealth and power of governments. They displayed the products of imperial conquests, exhibited the exotic material and treasures brought back to Europe by colonial administrators and private travelers, or unearthed by increasingly popular excavations, and generally awed those fortunate enough to be allowed to enter and observe the splendor of a nation's wealth.

In the latter half of the 19th Century owing to industrialization, museums were viewed as one type of institution among several that could provide education for the masses. Museums were included as one of the agencies available to help people better themselves and to appreciate the value of modern life (Hein 1998:3). According to Hein (1998:3-7) museum exhibitions were mounted in support of public campaigns like health education; or to show off magnificent developments in industry or advances in technology. At the same time the public school movement developed in industrialized countries. By the end of the 19th Century, schools had eclipsed the museums' public education function; however, the latter started to play a complementary role to schools, primarily contributing to the informal education sector.

Present-day museums focus on objects, their interpretation and their preservation. More importantly, these objects are placed within open, visually-oriented physical spaces that vary in structure, formality, comfort and "welcome"; and are moved through by participants (Harrison & Naef 1985:9-12; Vallance 2007:701-706). Gagliardi (1996:573-574) asks: What have museums got to offer that restaurants, clubs, bars and cafes cannot? The answer lies according to him in the strength and appeal of their collections. Museums

are places where the objects and messages have been selected as ones of high cultural value – whether one is referring to a specific art collection, historically salient artifacts, or a collection of bones or scientific findings. Sometimes objects are included in museums because they are unique examples of a category – the oldest, largest, rarest, or most complex of their kind. Sometimes objects are presented in museums for the exact opposite reason because they are common evocations of an interesting or important group, time, or place. Objects are displayed in systems designed to encourage visitors to consider a particular take on a discipline and to encourage reactions such as amazement, mystification, realization, and personal connection.

4.2 VAN MENSCH'S MUSEOLOGICAL MODEL AS THEORETICAL FRAMEWORK

According to Van Mensch (1992:141-157), the traditional museum is by definition an institute in which the preservation and use of heritage is implemented, but only in relation to tangible, movable objects, usually excluding books and other written and printed documents. Van Mensch (1992:141-157) discussed three parameters of museums, namely: the collection, the museum (as institute and/or building) and the public; and the microlevel (object/heritage), mesolevel (institute/territory) and macrolevel (society) of museological understanding. According to Van Mensch (1992:141-157), the basic parameters and their interrelationship represent a globe with four different spheres. The innermost sphere stands for the object, or by extension the collection or heritage at large. The second sphere refers to the functions. The third sphere concerns the institutional form in which the functions are implemented. All (museological) institutes can, in view of their objectives, be seen as social-cultural organisations. They serve the interests of individual

and/or social development. The above results in the fourth sphere, which relates to society as a whole.

An elaboration of Van Mensch's (1992:141-157) notion of spheres follows: the first sphere consists of the object, seen as the methodological reduction of the cultural and natural heritage. Heritage is considered as that part of the material environment which the ancestors considered worthy of preservation for future generations.

The second sphere consists of activities concerning the preservation and use of the cultural and natural heritage. The activities are preservation, research and communication which form the basic museological functions, i.e. the expressions of a special relationship between a given community (Sphere 4) and its heritage (Sphere 1). The museological functions can be found in different forms in all communities. In many communities these functions are institutionalised. The museum is such an institution where a special form of preservation and communication is implemented. Humanity at large (in past, present and future) is the general context of museological thinking and museological work. In practice one tends to focus on a more narrowly defined part of humanity, using terms such as society or community. As the object is usually considered being the atom of heritage, the visitor is mostly referred to as the atom of humanity.

According to Van Mensch (1992:141-157), the object should be perceived as a witness that can convey the knowledge it holds if the visitor knows how to question it. The museum object carries three levels of data, i.e. three properties:

- physical (structural) properties (structural identity)
- functional properties and significance (functional identity)

- the object's relationship to its context (contextual identity).

The three levels refer to the object in a certain stage of development. The term identity is used by Van Mensch (1992:144), to denote a state of being, a theoretical construct serving to mark the different aspects of the object “synchronically”.

The physical (structural data) or properties (structural identity) of the object imply the physical characteristics of the object. Common usage of the term object refers to this level of information. It includes the material, the construction and the design. Material involves what the object is made of. Construction entails the way parts are organised to bring about the object's function. Design includes the structure, form, style, ornament, and iconography of the object. The structural identity refers to the sum total of physical characteristics of the object, i.e. all properties that can be detected by our senses (sight, as well as hearing, taste, smell and touch) and by physical and chemical research techniques.

The functional properties and significance (functional identity) of the object refer to the use (potential or realised) of the object, i.e. its utility. The contextual identity of an object is the object's relationship to its context. Context refers to the physical and conceptual environment of the object. This is the identity the object acquires due to its exposure to a certain environment, for example, the change of colour due to exposure to sunlight or dirt (Van Mensch 1992:146).

The information value of an object is the result of a historical process. The sequence of stages and processes is: invention – conceptual identity, realisation – factual identity and use-actual identity. The artefact starts with an idea of the maker, this idea is related to the conceptual context of the maker, i.e. her or his culture, or, in other words, human

intelligence, sensitivity, imagination and creativity. This conceptual identity is, in fact, the potential object. By choosing the material (matter) and the technological process this potential object is realised (the genesis). The conceptual identity thus expresses itself in form – structural identity and function – functional identity. The factual identity refers to the realised object with its structural, functional and contextual aspects. It is the sum total of the characteristics of the object as it was intended (and not-intended) by the maker, and exists at the moment the production process has been completed. Factual identity presupposes the existence of a “finished object”. Actual identity, during the object’s life history changes in general, its information content will grow, although quite often an erosion of information occurs. The result of the accumulation of information, on all levels, constitutes the actual identity, the object as it appears to the visitor now, as sum total of the primary data and the effects of use, deterioration, etc. (secondary data). It is a random indication of the object's continuous development as data carrier. Essential is the notion that the object in phase 1 (conceptual identity) is not the same object as in phase 2 (factual identity). It might be the same painting, church, car, etc. but it is not the same sum total of chemical and physical characteristics, function and meaning, and context. But even if the whole chemical and physical structure is changed, it still could be the same painting, church, car etc. on the basis of spatio-temporal continuity (Van Mensch 1992:141-157).

Scholars such as Gagliardi (1996:573-574) and Harrison & Naef (1985:9-12) are also proponents of Van Mensch’s museological model. Gagliardi (1996:573-574) argues that meaning-making of the visual is not the same as that of language: visual imagery has a greater power to trigger behaviour, arouse emotions and be remembered than mental images induced by words; it is also more difficult to talk about because it allows a

simultaneous grasp of several, even contradictory meanings, and can transmit implicit knowledge that resists verbal expression. Harrison & Naef (1985:9-12) confirm that the basic premise behind museums namely, that objects embody values, tell more and communicate more directly than a description (in written or spoken words, pictures, film, animation) is not an alien one. That objects have meanings, and have different meanings for different people and in different contexts, is in fact universally understood, and not a piece of obtuse museology.

4.3. VIEWS OF SCHOLARS' – THE EDUCATION OPPORTUNITIES OFFERED BY MUSEUMS

The distinctive qualities of museum education are observed as being: focused on subject matter connected to the museum collection, self-paced and self-directed, based on participative, exploratory, activity-based encounters and characterized by social interaction (Gurian 1991:176-189; Vallance 2007:701-706; Xanthoudaki 1998:181-195). Griffin (1999:8) identifies the unique education opportunities offered by museums as follows:

opportunities to closely examine objects or specimens; opportunities for comparison that allow trends and patterns to be deciphered; natural learning processes that incorporate the sharing and communication of ideas and the raising of questions; and opportunities to develop perceptual skills that teach how to gather information from objects and experiences.

According to Hooper-Greenhill (1988:57) “the meaning of museum education is that museums provide a learning situation in which the visitors experience learning”.

According to Falk and Dierking (1992:97-115):

Learning in museums generally involves a visitor or a group of visitors attending to an object, a display, label, person, element or some mental construct of these. The information thus collected by the visitors is stored in the brain and

remains there over a period. The information a visitor receives during a museum visit tends to bear a “contextual map”. The museum visit represents a collection of experiences rather than a single unitary phenomenon. Any information obtained during the museum visit is likely to include social related, attitude related, cognitive related and sensory related association. These associations will become embedded in memory altogether with the result that anyone facet of these experiences can facilitate the recall of the entire experience.

Jones (1999:23) describes the qualities of a museum visit as constituted of a subtle, nuanced interplay of what she views as contexts. These include the personal, the social and the physical contexts. According to Falk and Dierking (1992:1-7) the museum is therefore a space for many diverse people who view the world in different ways, whose previous experiences may be very different:

the challenge is to create an environment where many needs are met. Here the curator’s expertise in the collections together with knowledge about the visitor and the potential visitor, gained through audience research and outreach activities, will inform the interpretive strategy for the gallery. But fundamental is the ethos of creating a space that is inclusive, that begins to meet the challenges of the inclusion agenda. Within this overview interactive design elements are among the many tools available to create a different space, a different experience.

According to Falk and Dierking (1992:1-7) the museum visit can be visualized as a three-dimensional set of three interactive spheres, each representing one of Jones’s (1999:23) three contexts:

The personal context: The personal context takes into account what personal background the visitor or learner brings to the learning experience – her or his interests and personal motivation, preferred learning style, prior knowledge and previous experiences. This is bearing in mind that each museum visitor’s context is unique; it incorporates a variety of

experiences and knowledge, including varying degrees of experience in and knowledge of the content and design of the museum. The personal context also includes the visitor's interests, motivations and concerns. These characteristics help mould what an individual enjoys and appreciates, how she or he wishes to spend her or his time, and what experiences she or he seeks for self-fulfillment. These characteristics also mean that each person arrives at the museum with a personal agenda – a set of expectations and anticipated outcomes for the visit (Falk & Dierking 1992:2).

The social context: A visit to a museum occurs in a social context. Most people visit museums in a group, and those who visit alone invariably come into contact with either other visitors or museum employees. Every visitor's perspective is strongly influenced by this social context:

What people learn from settings is not always a consequence of premeditated design. Settings are at once physical and psychological constructs. The light, the ambience, the 'feel' and even the smell of an environment influences learning. Often these influences (physical environments) are at once the most subconscious and the most powerful, the hardest to verbalise but the easiest to recall. For this reason, the role of the physical context on learning has been one of the least studied, most-neglected aspects of learning (Falk & Dierking (1992:5-7).

The physical context: The museum is a physical setting that visitors, usually freely, choose to enter. The physical setting of the museum includes the architecture and "feel" of the building and objects contained within. Visitors behaviour, what they observe, and what they remember is strongly influenced by the physical setting. The physical context therefore refers to the design and architecture of the museum environment: orientation, construction and lay-out of the exhibits and display of the objects (Falk & Dierking 1992:3-4).

According to Bontempo (2006:1) exhibition halls, properly arranged collections, labels, guided tours, traveling exhibitions, school class visits, loan services to schools, teacher training courses, illustrated teacher's guides, motion pictures, film strips and publications are the various means which constitute the educational activities in a museum. Bontempo (2006:1) observes that the vital part of any museum is the objects themselves which are authentic and capable of conveying information in an accurate manner. It is also the responsibility of museums, apart from their other functions, to impart education through exhibitions to the masses, irrespective of their educational background. Museums belong to all, from retirees or the old-aged to kindergarten children, from a sophisticated film actress to a house wife, from the richest to the poorest, the illiterates or semi-literates, the physically challenged and the minority groups. All are welcome to the museum exhibitions which provide indirect instruction in a discreet manner (Bontempo 2006:1).

According to Singh (2004:62-89) museums are compelling aesthetic environments:

they engage the senses, stimulate, inspires and sometimes even overwhelm. The museum makes the whole world, the past, the present and the imagined; accessible to the visitor. Museums support a wide range of different types of learning, formal (learning which results from engagement in the curriculum and which is driven education planned by a teacher or tutor), informal (the kind that begins at birth and develops throughout life through social interaction with other people), self directed (learning which is sustained and directed by individuals outside the formal education sector but which, over a lifetime, can result in a high level of expertise). In addition the museum learning experience is often brief (though intense), it is influenced by the whole experience of the visit (galleries, social interaction, shop, café, publications, digital media, etc.)

Chapman (1982:68) states that when learners leave the classroom to visit a museum, they enter a setting where they are surrounded by "real things" that give a new dimension to the information they are acquiring in school. In museums, ideas and concepts are framed

in a different “language” than in the classroom. The unique characteristic of museum learning is that it is based on first-hand, concrete experiences of real objects, specimens and works of art in a social environment in galleries and at sites. Learning in schools is most often accomplished through verbal communication, with facts and concepts presented sequentially and in a structured way. In museums, on the other hand, objects are usually the basis of the learning process, which is less structured and partially directed by the learners own interests, ideas, and experience. According to Anderson (1997:6) museum learning is more concentrated and deliberately structured than everyday life, and more diverse, informal and culturally rich than formal education.

Bloom and Mintz (1990:12-15) and Csikszentmihalyi and Hermanson (1995:67-78) observe that learning is becoming equated with active participation and interaction with that which the museum offers. The Smithsonian Institute (1991:11-18) argues that museums offer visitor: a chance to touch; a closer look; freedom to be curious; self-directed, self-paced activities; an understanding of what museums do; a place for families; and fun.

Hein (1995:15-17) summarises the educational activities provided by museums as follows:

- Organising and carrying out programs for exhibition visitors.
- Directing teaching services that include dance, theatre, music, guided tours, holiday activities and handling sessions.
- Developing educational materials and resources that include teachers’ packs, worksheets and gallery notes.

- Planning outreach activities to classrooms and community centers that include loan services, traveling exhibitions, distance learning packs, slide sets and videos.
- Participating in community activities.

According to Hein (1995:15-17) museums offer learners a vastly different experience from the classroom. They provide great potential for multidisciplinary and interdisciplinary learning; and with their material resources and use of new technology, offer opportunities for teachers to cater for multiple intelligences. He concludes that teachers need to see museums not just as an alternative source of information but as places for learners to encounter alternative learning experiences that engage more of their senses.

4.4 AN INTERACTIVE EXPERIENCE MODEL OF MUSEUM EDUCATION

According to Falk and Dierking (1992:1-7) the interactive experience model provides a framework for understanding how “museum-going” is a social event: a daytrip for the whole family, a group of friends or class of learners. Companions share their experiences with each other and talk over their impressions. These conversations visitors share about their impressions during the visit, invariably add to their learning experience. Morrissey (2002:285-299) adds that social interaction does not only promote, but is also a prerequisite for intellectual, social, personal and cultural development. The interactive experience model provides a framework for understanding how a learner is engaged in a regular education environment.

4.5 THE SOCIO-COGNITIVE MODEL OF MUSEUM EDUCATION

Mathewson-Mitchell (2006:272-324) developed the socio-cognitive model for learning in the art museum setting. According to Mathewson-Mitchell (2006:272-324) the model applies a socio-cognitive approach that recognizes the social basis of educational experiences and the cognitive demands of learning in informal settings. The model was articulated and interpreted in relation to school-based curricula and syllabi directives. Mathewson-Mitchell (2006:272-324) designed the model in collaboration with the Bathurst Regional Art Gallery, a small art museum, which services the regional area of Bathurst and surrounding district of the Central West of New South Wales.

The socio-cognitive model acknowledges that negotiating meaning-making is central to the museum experience, and that all individuals construct meaning in different ways. The process of construction is seen as encompassing development from a simple, subjective response based on immediate feelings, experiences and responses to the more sophisticated and complex construction of narrative that incorporates the use of concepts, awareness of relationships, increased autonomy and the recognition of alternative interpretations. The model is presented in a nine cell matrix, the configuration of which ensures that all elements of the model can be inclusively engaged and related to each other (see Table 1 on p. 118).

The model recognizes and addresses a diversity of experiences and relationships to culture, and encompasses different needs and developmental levels. It can be applied at all levels of secondary education. At a basic level, learners can be guided in small scale investigations based on the actions proposed in any single cell. The model used in this way will enable the discrete introduction of definitional concepts. These concepts can

then be used as investigative tools for generating an understanding of the example under scrutiny. The novice learner can also be guided by the content of all three cells. These investigations establish and develop a connection between the learner and the museum, through a series of steps that involve the development of knowledge, skills and experience. For more experienced learners, who have more developed relationships to culture, the next logical step is to consider more engaged investigations using the model. More competent learners can use the engaged structures represented by all three columns and rows of the model to expand from the particulars of one experience to make connections with others. Integrated approaches to the curriculum can be adopted by involving art making. The content of the scaffold allows for investigations that can be part factual and part speculative. In relation to the latter, the various connections can be revisited as the learner becomes more proficient and experienced. Table 1 represents the socio-cognitive model for secondary school art teaching and learning.

The model focuses on developing educational encounters that enable learners to engage in the cultural practice of museum visiting within and beyond the school years. The model acknowledges the importance of school-based education in laying the foundation for cultural practice, and seeks to prepare all learners for the opportunities, responsibilities and experiences of cultural practice. It directly addresses the issues related to access to museums that have systematically impeded involvement within some sections of the public.

Table 1: A socio-cognitive model for secondary school art teaching and learning

	VISUAL ARTS	ART MUSEUMS	REPRESENTATION
	Cell 1	cell 2	Cell 3
Art works	Art works are visual expressions in a range of physical forms that have symbolic meanings and functions.	Art museums present art works to audiences according to an established but contested system. The presentation of art works in art museums alters their meaning and restricts their accessibility.	Artworks are represented in art museums according to an institutional classification system. Institutional representations in art museums mediate relationships between individuals and art works.
Audience	Attitudes and preferences in the visual arts are linked to sustained cultural access gained through family and education.	Art museum participation is dependent on recognition of and familiarity with the systems of the art museum sub-field.	Practice in the visual arts is represented as requiring specialized skills and knowledge.
Cultural competence	The visual arts require the application of interpretative frameworks of varying sophistication and complexity, to disclose culturally competent meanings.	Interpretation and appreciation of the meanings of art works in art museums requires cultural competence.	Institutional representations of the visual arts in art museums assume prior knowledge and experience.

(Mathewson-Mitchell 2006:272-324)

Cell 1 focuses on the visual arts and art works. The aim of the cell is to introduce learners to the field of the visual arts, develop an understanding of the relationships and purposes of the field and ensure an understanding of what art works are and how they operate in the visual arts. A clear definition of these concepts allows the learner to interpret the experiences they may have according to a clear, collective understanding. In addition, the cell aims to enable learners to participate in the field of the visual arts and identify access and interpret artworks in a variety of forms. Cell 2 addresses art museums and audiences. The aim of this cell is to provide an introduction to the social situatedness of art museums

and an understanding of audience participation. The cell also aims to familiarise learners with art museums to enable active participation as audiences. Cell 3 focuses on representation and cultural competence. The aim of the cell is to provide knowledge about the effects and requirements of art museum representations in terms of ability and intelligence. It further aims to develop the ability of learners to relate representations to their existing knowledge, experiences and understandings.

The model illustrates the relevance of museums to schools, namely that in the museum the visitor to exhibitions comes into direct contact with evidence of the authentic, “touches” the past or the “reality” at their own pace, interprets and comprehends the value of culture and art. Museums are places of learning and this central role is clearly articulated in many museum mission statements with phrases such as: “increase understanding”, “promote enjoyment, understanding and awareness”, “encourage exploration and understanding” and “be a catalyst for change”. All these phrases rely on forms of communication and interpretation, thus placing the educative role of museums in a central position (Mathewson-Mitchell 2006:272-324).

4.6. THE THREE APPROACHES TO MUSEUM EDUCATION

Gibbs, Sani and Thompson (2007:18-26) and Hein (1998:26) describe three main approaches to education in museums, namely, the instructive or didactic approach; the active or discovery learning approach; and the constructivist approach.

4.6.1 Instructive or didactic approach

With the instructive or didactic approach, the museum educator designs a lesson based on the structure of the subject, and then presents to learners in a step-by-step process, what is

to be learned. The museum educator then presents an explanation of the applicable principles, provides examples to illustrate these principles, and repeats the principles to some extent to implant the material in the learner's mind (Gibbs et al 2007:18-26; Hein 1998:26). The central issue in this approach is the transfer of information by means of facts. In the instructive or didactic approach the museum regards itself as the teacher and the visitors as a largely passive and receptive audience. The institutional culture tends to be hierarchical with great emphasis on expert knowledge, at the expense of informal or everyday knowledge. Mediators or guides may act as the messengers of specialists in the transmission of pre-decided information to the learners. For example, this approach underpins the traditional guided tour (Gibbs et al 2007:18-26; Hein 1998:26).

The advantage of the instructive or didactic approach, is that it focuses on delivery of content which can be quickly assimilated or memorized – the facts about a work of art or an object. The disadvantages of this approach are that knowledge is selected by “experts” and it is assumed that visitors will learn what has been selected, with little or no room for discussion: learning is seen as fixed and cumulative, and knowledge regarded as neutral, objective and universal. The instructive or didactic approach does not allow for different learning styles, since content is transmitted as though everyone learns in the same way. Some museums have modified their traditional guided tours to include question time to the audience, both to determine prior levels of knowledge and to involve the audience more actively in the learning process.

According to Gibbs et al (2007:18-26) museums that are organised on instructive or didactic lines will have

- exhibitions that are arranged sequentially, with a clear beginning and an end.

- didactic components (such as labels, panels) that describe what is learned from the exhibition.
- a hierarchical arrangement of the subject – from the simple to the complex.
- a school programme that follow a traditional curriculum, with a hierarchical arrangement of the subject – from the simple to the complex.
- educational programmes with specified learning objectives determined by the content to be learned.

4.6.2 Active or discovery learning approach

According to Gibbs et al (2007:18-26) and Hein (1998:26) the active or discovery learning approach entails the notion that learning is an active process, that learners undergo changes as they learn, that learners interact with material to be learned more fundamentally than absorbing it, and that learners somehow change the way their minds work as they learn. Active learning is translated into physical activity associated with the learning, i.e. “hands on” learning. Adopting the active or discovery learning approach suggests that the museum envisages that learning will happen best in a relaxed, informal atmosphere, where the distinctions between education and entertainment are blurred or merged. Museum staff are frequently organised into teams comprising complementary professionals who then develop both exhibits and education content. Learning is regarded as a process of inquiry that involves role-play and activities that require direct participation by learners — who are rather seen as participants and not as a passive audience. According to Gibbs et al (2007:18-26) and Hein (1998:26) museums that are organised according to the active or discovery learning approach will have exhibitions that allow exploration; a wide range of active learning modes; didactic components (such as labels, panels) that ask questions; prompt visitors to find out for themselves; and ways

for visitors to assess their own interpretation against the “correct” interpretation of the exhibition.

4.6.3 Social constructivist approach

Hein (1998:155-180) has written extensively about constructivism and museums. According to Hein (1998:155-180) when museums adopt a constructivist approach, the institution becomes a forum in which there can be many different kinds of learning experiences for different visitors. The focus is on the learner rather than the exhibit or the subject content. Museum employees work in teams and the visitors’ knowledge is integrated in the experience through evaluation and audience studies. Learning is regarded as an active process, social activity within a specific context. Since learners bring their own perspectives, values and experiences to the museum, museum educators seek to provide different kinds of learning opportunities through different exhibition styles, learning styles and levels of engagement.

The social constructionist approach assumes that museums are sites in which social, cultural, historical and political knowledge is constructed and negotiated. Visitors are seen as interpreters who have the right to negotiate this knowledge according to their own identity and position in society. In this context, the learners’ class, gender, race, ethnicity, sexuality, religion and so on, become of vital importance to what they bring to bear on their interpretation of knowledge (Hein 1998:155-180). The context is assumed to be more important than the exhibit or the content. Knowledge is regarded as fluid – in the post-modern sense – in that it is created out of struggle and conflict, and is subject to constant change and re-negotiation. It is this approach to learning that has influenced

attempts to include learners' voices and personal narratives in multi-cultural exhibitions (Hein 1998:155-180).

According to Hein (1998:155-180), a social constructivist exhibition in the museum will have many entry points, no specific path and no beginning and end; provide a wide range of learning modes; present a range of view points; enable visitors to connect with objects through a range of activities and experiences that utilise their life experiences; and provide experiences and materials that allow learners in school programmes to experiment, conjecture and draw conclusions. Exhibitions are one of the most important functions of the museum's contact with the public. They are a powerful means of communication and their goal is to offer information and knowledge, aesthetic enjoyment and essential entertainment. The exhibition is the only language through which the museum can communicate and in order to make a direct impact on the masses. Therefore the exhibition has to be meaningful. In the display, the objects, the surroundings and the lighting should be coordinated. The authenticity as revealed by real objects and phenomena exhibited in museums, communicates to visitors with a powerful clarity (Bontempo 2006:1).

4.7 THE MUSEUM-SCHOOL RELATIONSHIP APPROACH

According to Mathewson (2006:34) recent observations of the characteristic use of museums by school-based teachers suggest that the relatively passive, idealist approach to museum experiences has continued, with teachers lacking confidence and competence in the museum setting. According to a research project conducted by Stone (1992a:72-81), while art educators utilize art museums, they do so at arms length, invest minimal effort and fail to integrate museum experiences into classroom learning. Hooper-

Greenhill (1991:114, 174-181) also identifies the integration of museum experiences into the school curriculum as a problem. In addition she argues that school visits tend to be seen as a chance to acquire information rather than an opportunity to develop the processes of learning. She asserts that learners are often confused about the purpose of the trip as teachers do not always have fully defined the educational objectives of the field trip, but tend to rely on the visit as a justification in itself. The latter argument is supported by Harrison and Naef (1985:9-12) who claims that the literature addressing school visits to museums reveals that teachers express vague or limited learning goals for their excursions, concentrating mainly on enrichment and social interaction.

While collaboration between museums and public schools is consistently noted as important to the development of positive learning relationships, research findings identified a major factor that is hindering co-operative and collaborative relations as a general lack of insight into the different professional worlds of museums and schools, and the differing roles and responsibilities of those involved (Stone 1992b.:51-61; Walsh-Piper 1989:195-203). The lack of insight and understanding is seen to result in a lack of insight and communication and unity, and in some cases, friction. In addition, Walsh-Piper (1989:195-203) identifies the different pedagogical standards of schools and museums, and more specifically, a lack of museum literacy training in teacher preparation. Another contributing factor is the differing nature of the education environments of the two institutions.

Mathewson (1994:7) outlined the following propositions for an improved museum-school relationship:

- Social relations between museums and schools must be exposed and acknowledged. Any attempt to create opportunities for transformation within museum-school relationships must first attempt to render explicit what is taken for granted and provide an objective sociological account of how the two institutions operate within social space.
- Teachers must be empowered to initiate a transformation of relations that would advantage them. The empowerment of teachers in the museum setting requires them to be able to engage in a “game” that they are familiar and skilful in playing. While museums have made efforts to provide familiarity and skills related to the museum field, research has demonstrated that such efforts are undermined by the dominant position of museums, and actions that a degree of self-interest. Considering this, efforts to empower teachers must be initiated by those (educators) whose interests such an advancement would serve.
- Higher education institutions should incorporate a study of the museum and education as part of their teacher education programmes. Making the museum topic of scrutiny would enable teachers and learners to gain awareness and understanding that would effectively demystify the museum and provide an understanding of how the museum game functions. This knowledge would not only enable them to participate more, but also to conceive of ways in which they can engage with museums to achieve their educational objectives.

Edwards (2000:76) concluded as follows:

Until museum educators and teachers have closer links and better communication, improvements will not occur. Teachers must communicate more effectively what they want from museum visits and museum educators must do the same in regards to their expectations of what benefits learners will receive from the museum experience.

5. CONCLUSION

In this chapter, the curriculum development in Botswana with special reference to museums was discussed. An historical survey of the curriculum development in Botswana was provided. Included were the curriculum developments in the pre-independence period (genesis to 1966), the National Policy on Education period (1977-1993) and the Revised National Policy on Education period (1994-2009). A section was also devoted to curriculum and museums with special reference to the Botswana National Museum. The latter was preceded by an outline of the nature and functions of museums. The views of international scholars on museum education were also presented. The emphasis was on aspects such as the genesis and the evolution of museum education, a museological model, various learning models and approaches, and museum-school relationship approach. In the next chapter, the research design of the empirical study is described.

CHAPTER 3

THE RESEARCH DESIGN OF THE EMPIRICAL STUDY

1. INTRODUCTION

This chapter describes the research design and the methods used in the process of gathering, analysing and interpreting the data of the study. The chapter begins with a description of the research design, followed by an outline of the research method. Data collection techniques, data analysis and the interpretation and writing of the research report are also described. The chapter concludes with a description of issues of credibility which include reliability and validity.

2. RESEARCH DESIGN

According to De Vos, Strydom, Fouché and Delpont (2005:268), the concept research design entails the way a researcher goes about developing rich insights, or the approach the researcher selects to study a particular phenomenon. Creswell (1994:2) describes it as the entire process of research, from conceptualising a problem to the writing of the narrative. Strauss and Corbin (1990:17) define the concept research design as “the plan for the study, providing the overall framework for collecting the data, outlining the detailed steps in the study and providing guidelines for systematic data gathering”. They further compare the research design to an architectural blueprint which plans on organising and integrating results in a particular end-product. According to Mouton and Marais (1992:32) the research design is “the arrangement of conditions for collecting and analysing of data in a manner that aims to combine relevance to the research purpose with economy in procedure”; and Tripodi (Grinell 1993:210) defines the concept as a “logical strategy that plans procedures and provides evidence for the development of knowledge”.

In line with the definitions, in this study the research design guided the researcher to follow a certain pattern in the research of the problem. This refers to all the decisions the researcher made in planning the study, not only what type of design to use, but also the sampling, sources and procedures for collecting data and to analyse the data. The qualitative research design which this study followed is briefly elucidated below.

2.1 CONCEPT OF QUALITATIVE RESEARCH APPROACH

As indicated in the previous section the approach I followed to conduct this empirical study was a qualitative research approach. Slavin (1992:65) and Strauss and Corbin (1990:17) define the qualitative research approach “as any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification”. Qualitative research is best used for depth, rather than breadth of information (Chisaka & Vakalisa 2000:11). While quantitative research is a survey which is an important medium of gathering a breadth of information regarding how many or how much, qualitative research, on the other hand, is, according to Vishnevsky and Beanlands (2004:4), the best research method for discovering underlying motivations, feelings, values, attitudes and perceptions. They argue that it is a “way of knowing and learning about different experiences from the perspective of the individual”. Polit (2001:12) argues that unlike quantitative methods which assume that “truth” is objective and can be empirically revealed, qualitative research follows a naturalistic paradigm based on the notion that reality is not predetermined, but constructed by research participants.

According to Merriam (1998:5) qualitative research is an umbrella concept covering several forms of enquiry that help to understand and explain the meaning of social

phenomena with as little disruption of the natural setting as possible. Wiersma (1991:14) contends that qualitative research is context-specific with the researcher's role being one of inclusion in the situation. According to Rees (1996:375) "a qualitative approach is the systematic process of collecting information on what people say, do and create in their natural settings to discover the world as the people themselves see and experience it". Rees (1996:375) further observes that the qualitative research approach involves broadly stated questions about human experiences and realities, studied through sustained contact with people in their natural environments, generating rich, descriptive data that helps the researcher to understand their experiences and attitudes.

Rees (1997:11) asserts that rather than presenting the results in the form of statistics, the qualitative research approach produces words in the form of comments and statements. Its aim is to discover people's feelings and experiences from their own point of view rather than from that of the researcher. Bates (1995:67-69) and Morse (1996:467-468) concur that the qualitative research approach has a greater validity since it is a holistic approach to research that does not reduce participants to functioning parts. Cutcliffe (1997:969) argues that the qualitative research approach is rigorous, systematic and it gives the researcher a chance to be clear about her or his chosen methodology. Henning (2004:8) states that "the qualitative research approach is research that utilises open-ended, semi-structured or close, structured interviews, observations and group discussions to explore and understand the attitudes, opinions, feelings and behaviour of individuals or group of individuals". The qualitative research approach can take many forms, such as ethnographic studies, field studies, case studies and phenomenological studies (Chisaka & Vakalisa 2000:10; Vishnevsky & Beanlands 2004:3).

2.2. RATIONALE FOR THE QUALITATIVE RESEARCH APPROACH

According to Verma and Mallick (1999:27) the rationale for using the qualitative research approach includes among others:

2.2.1. The natural setting, design and redesign

According to Groat and Wang (2002:176), by natural setting they meant that the objects of enquiry are not removed from the environment that surrounds them in everyday life. Conducting the study in a natural setting essentially means observing subjects in their “real life” environments. According to Cohen and Manion (1994:8) in methodological terms the qualitative research approach is the approach which emphasizes the realistic nature of the social world. Qualitative research has the natural setting as the direct source of data and the researcher is the key instrument “... the data are collected on the premises and supplemented by the understanding that is gained by being on location” (Denzin & Lincoln 2000:3).

The researcher attempts to observe, describe and interpret settings as they are, maintaining what Patton (1990:55) calls an “empathic neutrality”. Verma and Mallick (1999:27) argue that the qualitative research approach involves the gathering of evidence that reflects the experiences, feelings or judgements of individuals taking part in the investigation of a research problem whether as subjects or as observers of the scene. Denzin and Lincoln (2000:3) offer a robust definition of the qualitative research approach, which emphasises its broad scope and usage as follows:

... a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self. At this level, the qualitative research involves an interpretive, naturalistic

approach to the world. This means that the qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them.

This approach is concerned with interpreting and recounting the meanings attached to reality by participants in a particular situation. According to Burgess (1985:7) the qualitative research approach includes:

a range of activities with the result that the researchers engaged in educational studies who utilize this approach might sit at the back of classrooms with note book and pencil, might collect documents that are in school office or might produce a video recording of classroom activities.

In the current study, the participants were interviewed in their own work settings, and stating their own experiences within the context of their workplace. The Botswana National Museum employees were interviewed in their own museum workplace, the curriculum developers in their curriculum development and evaluation work environment, and the teachers and learners in the public school environment. The aim was to gain as much information as possible in all three natural settings, the Botswana National Museum setting, the Curriculum Development and Evaluation setting and the public school setting. Working within their context of the Botswana National Museum environment, the museum employees have designed various educational programmes. In designing these programmes museum employees relied on their expertise and the museum collections, and how collections could be used in public schools.

The curriculum developers on the other hand, are trained to design curricula. They are also responsible for prescribing the teaching and learning strategies and the appropriate

teaching-learning support materials for schools. It is also their responsibility to select who they consider to be stakeholders in the curriculum development process in Botswana.

Teachers have the freedom to involve whoever they think could contribute to their everyday teaching and learning activities, such as the Botswana National Museum. The learners use their metacognitive and tacit knowledge of field trips to museums in the classroom.

2.2.2 Flexibility

The qualitative research approach is not fixed, but flexible. Cohen and Manion (1994:8) contend that the principal concern in qualitative research is with understanding the way in which the individual creates, modifies and interprets the world in which she or he finds herself or himself. The data collected in a qualitative approach is in the form of words or pictures rather than numbers. The written results of the research contain quotations from the data to illustrate and substantiate the presentation. The data include among others interview transcripts, field notes, photographs, videotapes, personal documents, memos, and other official records. In their search for understanding, qualitative researchers do not reduce a lot of narration and other data to numerical symbols. They try to analyze the data with all of their richness as closely as possible to the form in which they were recorded or transcribed. Qualitative research reports have been described by some scholars as “anecdotal”. This is because they often contain quotations and try to describe what a particular situation or view of the world is like in narrative form. The written word is very important in the qualitative research approach, both in recording the data and disseminating the findings. In collecting descriptive data, qualitative researchers approach the world in a nitpicking way (Cohen & Manion 1994:8).

According to Eisner (1991:36), the qualitative research approach demands that the world be approached with the assumption that nothing is trivial, that everything has the potential of being a clue that might unlock a more comprehensive understanding of what is being studied. Human behaviour and experience is clearly shaped by context. As such the events that occur in the context cannot in any way be understood in isolation from the context. Sherman and Webb (1988:4) also contend that the aim of the qualitative research approach is not a verification of a predetermined idea, but discovery that leads to new insights. The qualitative research approach addresses questions about how social experience is created and given meaning, and produces representations of the world so as to make it understandable to people (Denzin & Lincoln 2000:3). The aspect of flexibility also applies with regard to the data process in a qualitative research study. These two features accompany each other in the qualitative research process. According to Miles and Huberman (1994:91), the analysis process involves transcribing, reviewing, and summarizing the data, as well as consulting relevant literature during the data gathering process. In the qualitative research process there is nothing that is taken for granted or pre-defined.

In this study the aim was to discover the participants' opinions on and experiences of the Botswana National Museum as an educational resource in public school classrooms. The research process was "designed" and "redesigned" based on the situation in which the particular data was to be collected. The assumption of the Botswana National Museum is that the Museum through programmes such as the Mobile Museum Service and the Museum-in-a-Box could effectively contribute to education in Botswana. This is notwithstanding the fact that a national plan has never been designed or an empirical study conducted. The researcher envisaged to contribute to the above by interviewing the

different role-players and to propose changes to the curriculum in the service of Botswana society. The researcher was guided by scholars' views and previous research findings, and envisaged to also contribute to the debate.

2.2.3 Social process and meaning

According to Eisner (1991:36) the concept meaning refers to how people use language, classifications, etc. and orders the latter to make sense of and structure experiences. The concept social process on the other hand, is the practice or the way the above occur. According to Denzin and Lincoln (2000:3), qualitative researchers are concerned with process rather than with outcomes or products. The qualitative research process addresses questions about how social experience is created, given meaning, and produces representations of the world that make the world visible. The qualitative research process is done in order to understand the manner in which individuals in a given context see their situation and what it means to be in that situation. Blummer (Burgess 1985:9) states in this regard that "one would have to take the role of the actor and see her or his world from her or his stand point". A great deal of qualitative research is conducted from an "interactionist" point of view which stresses the need to understand how participants perceive their role and their experiences. Different social actors see the same situation in different ways and the interaction between them may have consequences of which neither is fully aware (Woods 1983:1-17). Qualitative researchers must understand the actors' perspectives, but will also try to highlight the wider perspective. Eisner (1991:36) argues that qualitative research reports are descriptive, incorporating expressive language and the "presence of voice in the text".

The aim of qualitative research is also to understand in detail what it is that is taking place in the lives of individuals. The qualitative research approach therefore emphasizes attention to all the features of the experience of individuals in particular situations. That experience should be taken and studied “as a whole, or holistically” (Sherman & Webb 1988:5). Sherman and Webb (1988:5) further argue that the researcher, in the process of studying a particular context, should devote herself or himself sensitively to the participant’s experiences as a whole.

By allowing participants to share their experiences in the case of this study, the researcher complied to the above criteria in the sense that the participants were free to provide information and the researcher did not use leading questions. Streubert and Carpenter (1995:10-11) indicated that the primary concern in a qualitative research approach is with process, rather than outcomes or products. The researcher in this study wanted to represent everything as it is said, and not as a result of what was said. The perceptions of museum employees, curriculum developers, teachers and learners were the main concern of this study. The focus was on a verbatim version of their descriptions and thoughts. In a qualitative research approach the involvement in fieldwork is important, where the researcher physically goes to the participants, setting, site or institution, to observe or record behaviour in its natural setting. The researcher was involved in fieldwork in this study. The Botswana National Museum, Curriculum Development and Evaluation offices and public schools were visited in person to conduct the semi-structured face-to-face interviews.

3. DATA COLLECTION

According to De Vos et al (2005:287), interviewing is the predominant mode of data collection in qualitative research. Seidman (1998:10) states that you interview because you are interested in other people's stories. According to McCracken (1988:3) and Bergum (Morse 1996:61) the interview process is a kind of conversation, a conversation with a purpose. It is a conversation between the interviewer and the interviewee. The interview is thus conversational, and typically conducted in a naturalistic setting. It is not only a flexible but also an adaptable way of collecting information. The aim is to elucidate the participants' perceptions of the world without imposing any of the researcher's own views; therefore, avoiding bias and achieving greater reliability. According to Best and Kahn (1998:320-321) the interview is often superior to other data gathering devices because people are often more willing to talk than write. The interviewer can also explain more explicitly the investigation purpose and what information she or he wants. According to Lichtman (2006:119), "our purpose in interviewing is to hear what the participant has to say in her or his own words, in her or his voice, with her or his language and narrative".

In the words of Lichtman (2006:119), during the interview session the interviewer can use several ways to get information about the same phenomenon to confirm the "truthfulness" of the responses. The interview also offers the interviewer the latitude to explore areas not originally planned for. According to McCracken (1988:34) "the first objective of the qualitative interview is to allow the participants to tell their own story in their own terms". He advises that the interviewer should remain unobtrusive and ask questions in a general and nondirective manner. The information obtained from interviews far exceeds the information obtained from telephone and mail surveys.

Babbie, Mouton, Vorster and Prozesky (2001:289) confirm that a qualitative interview is an interaction between an interviewer and a participant in which the interviewer has a general plan of inquiry. The participants also contribute to the setting of direction in the process. In interviews most of the talking is done by the participant because she or he is the provider of information. Miller and Dingwall (1997:59) also argue that the sequence and question wording in an interview may be flexible; and that it may be in the format of a conversation between friends. The researcher is in conversation with the interviewee. However, according to Cohen and Manion (1994:272) interviews are not actual conversations, but a deliberately created opportunity to talk about something that the interviewer has an interest in. From the responses provided, the interviewer can pursue specific topics in search of clues. The rationale for utilising interviews stems from the fact that “they allow for greater depth than is the case with other methods of data collection”.

According to Miller and Dingwall (1997:59) the results of interviews are that the data produced are social constructs, created by the self-presentation of the participant and whatever interactional cues have been given by the interviewer about the acceptability or non-acceptability of the accounts being presented. With interviews the participant can expand on some issues if she or he sees it fit to do so. The interviewer also is free to intervene and seek “clarification or further explanation” (Bless & Higson-Smith 1995:107). A videotape recorder is therefore recommended to record the interview, if the interviewee has consented to do so (Macionis & Plummer 1998:44).

The interview may be structured (where the researcher asks clearly defined questions), or unstructured (where some of the questioning is allowed to be led by the responses of the

interviewee). Structured data is organized and can be produced by closed questions, unstructured data is relatively disorganized and can be produced by open questions.

According to De Vos et al (2006:296) researchers use semi-structured interviews in order to gain a detailed picture of a participant's beliefs and perceptions or accounts of a particular topic. The above gives the researcher and the participant much more flexibility. With semi-structured interviews the researcher will have a set of predetermined questions on an interview schedule, but the interview will be guided by the schedule rather than dictated by it. According to De Vos et al (2006:296):

The interview schedule is a questionnaire written to guide interviews. This provides the researcher with a set of predetermined questions that might be used as an appropriate instrument to engage the participant and designate the narrative terrain. Producing a schedule beforehand forces the researcher to think explicitly about what he hopes the interview might cover. It forces the researcher to think of difficulties that might be encountered, for example in terms of question wording or sensitive areas. The questions are nearly always open-ended.

For the purposes of this study, individual semi-structured interviews were conducted within a fairly open framework that allowed for focused conversational two-way communication. Semi-structured interviews were used for both giving and receiving of information. The role of the researcher in the semi-structured interview was to facilitate and guide, rather than to dictate exactly what would happen during the process. The researcher asked the following open-ended questions to the identified role-players, namely the museum employees, the curriculum developers, the teachers and the learners:

- The interview questions for the museum employees were:
 1. What is your experience of the curriculum development process in Botswana?
 2. Were you at any time part of the process you described?

3. If yes, how did you experience the process?
 4. How do you view this process in terms of the quality of education vision as set out in the Revised National Policy on Education document published in 1994?
 5. What are according to your experience the typical learner activities during the five days of the school week?
 6. What is your experience of the effectiveness of these activities?
 7. What are the learner activities provided by the Botswana National Museum?
 8. How different are the museum activities from the learner activities in school?
 9. Would a possible collaboration between public schools and the Botswana National Museum be to the benefit of the whole education system?
- The interview questions for the curriculum developers were:
 1. What does the process of curriculum development in Botswana entail?
 2. What are your functions in this process?
 3. What is your opinion on the curriculum development process in Botswana – past, present and future?
 4. How do you feel about this process in terms of the quality of education vision as set out in the Revised National Policy on Education document of 1994?
 5. How do you view the typical classroom activities of learners in public schools?
 6. What is your assessment of these activities?
 7. Do you have any information on or experience of the learner activities provided by the Botswana National Museum?
 8. If yes, what is your opinion on the educational value of these activities?
 9. What do you think of a future collaboration agreement between the Botswana National Museum and public schools in Botswana?

- The interview questions for the teachers were:
 1. What does the process of curriculum development in Botswana entail?
 2. What are your functions in this process?
 3. What is your opinion on the curriculum development process in Botswana – past, present and future?
 4. What are the typical learner activities that you design for your learners to complete in the classroom?
 5. What is your opinion on the educational value of these activities?
 6. Do you know of or were you at anytime involved in the learner activities provided by the Botswana National Museum?
 7. If the above answer is positive. Answer the next two questions;
 8. How are the learner activities of the museum different from the learner activities used in your classroom?
 9. What is your opinion on a possible collaboration agreement between your school and the Botswana National Museum?

- The interview questions for the learners were:
 1. What are the typical activities that you do in your classrooms?
 2. Do you gain anything from these activities?
 3. Do you know of, or were you involved in, any of the activities provided by the Botswana National Museum. If no, why not?
 4. If yes, how are the museum activities different from the activities in your classroom?
 5. What is your opinion on any future activities which might be provided by the Botswana National Museum?

6. Would such activities teach you anything for your everyday lives and future?

Prior to the start of the individual interviews, each of the participants was given the interview schedule with the questions. After they had read and reflected on the questions, they were instructed to determine which of the questions are unclear. These questions were elaborated on. The following issues were then put to the individual interviewees: Their anonymity was guaranteed. No one other than the researcher knew who took part. The participants were encouraged to be as open and honest as possible. There were no right or wrong answers to the questions. The participants should feel free to indicate any question that they were not happy about answering, and the latter would be passed over. They should also feel free to discontinue her or his participation in the interview or halt the interview at any stage. All interviews were face-to-face interviews conducted in English. Where it appeared as if a certain question was not making sense to the participant, an improved formulation was sought. Interviews were conducted in a small room that was quiet and relaxed allowing the interviewees to speak freely, without disturbances or intrusions. Most of the interviews were planned to last an hour.

On the day of the interviews, the researcher arrived at the interview room ten minutes prior to each interview in order to set up the audiotape equipment, as tape recording was the principal means of gathering the information from each group. The tape recorder allowed the researcher to concentrate on the conversation and record the non-verbal gestures of the interviewee, rather than spend time looking down at the notebook writing down what was said. According to Babbie (1992:272) the tape recorder guards against interviewers substituting their own words for those of the person being interviewed.

At the commencement of the interview session each participant was asked for their consent to the tape recording of the conversation, and the latter was done only with the interviewee's approval. I allowed them, as a result, to talk freely. If the participant strayed from the topic, I "gently" redirected what she or he was saying so that their answers do not stray too far from the interview questions themselves (Burns 2000:425). I made use of probes as a way to extract more information. Bishop (1997:33) explains that interviews should focus on depth, details and probes which go beneath the surface of the conversation to seek detail. Elaborating probes (asking the participants to explain in more depth) which were included were examples such as, "*Tell me more about ...*" and, "*Could you give some more examples to explain ...?*"; and clarifying probes (asking the participants to explain their responses in more detail) which included examples such as, "*Why?*" and "*Could you explain your response in more detail?*" (Cresswell 2002:208). In addition, as termed by Burns (2000:426), I made use of parroting (mirroring) and minimal encouragers to keep the participant talking, for example "*So you are saying that ...*", "*mmm ...*" and "*Uh huh ...*". In this way the participant was reassured that I am following with understanding what she or he was saying. I became a co-constructor of the data itself through prompts, encouragement and interest in what the participants were saying (Henning 2004:57). Schleurich (Cohen et al 2000:122) reasons that the interviewer has more power than the interviewee in that the interviewee is under examination – not the interviewer. In my case, where participants knew me, an amount of reciprocity could have taken place, where they could provide answers that they thought I wanted to hear (Cohen et al 2000:123). This might have been the case for those that have known me as a museum employee or as a teacher.

4. SAMPLING

A qualitative research approach according to Stake (Denzin & Lincoln 2000:446-447) and Creswell (2002:194), requires a small sample of participants. For this research project, the non-probability purposive sampling technique was used to identify the participants. Cohen et al (2000:103) point out that with this type of sampling technique, researchers handpick the cases to be included in the sample in terms of their typicality. Using the non-probability purposive sampling technique allowed the researcher the opportunity to build a sample which suited the needs of the study, namely to establish how the Botswana National Museum can be used as an educational resource in public school classrooms. Creswell (2002:194) reiterates this notion by explaining that with the non-probability purposive sampling technique the participants are selected intentionally so that the central phenomenon can be studied. Cohen et al (2000:103) explain that while this type of sampling technique may satisfy the needs of the researcher, it does not represent the wider population. Furthermore, for the individual semi-structured interview process using open-ended questions this sampling technique might be subjective and selective. Thus, the purpose of the non-probability purposive sampling technique is not to generalise. According to De Vos et al (2005:203) non-probability purposive sampling is based entirely on the judgement of the researcher, in that a sample is composed of elements that contain the most characteristic, representative or typical attributes of the population.

According to Dane (1990:44) the advantage of the non-probability purposive sampling technique is that it allows the researcher to home in on people or events, which have good grounds in what they believe and which was also critical for the research project. Instead of going for the typical instances, a cross-section or a balanced choice, the researcher was

able to concentrate on instances which displayed wide variety – possibly even focused on extreme cases to solve the research question at hand. The goal of non-probability purposive sampling is to choose cases that are likely to be information-rich with respect to the purpose of the study (Patton 1990:169; Creswell 2002:194). The term information-rich refers to those cases that one can learn a great deal about, or issues of central importance to the purpose of the research. According to McMillan and Schumacher (2001:401) non-probability purposive sampling is used to increase the utility of information obtained from a small sample. The key concept in sampling is representativeness. Furthermore, Creswell (1994:14) states that the idea of qualitative research is to purposively select participants who will best answer the research questions.

With the non-probability purposive sampling technique the number of participants interviewed is less important than the criteria used to select them. The characteristics of the participants are used as the basis of selection, most often chosen to reflect the diversity and breadth of the working population (Glasser & Strauss 1967:48). According to Sells, Smith and Newfield (1997:173) non-probability purposive sampling is the type of sampling technique in which information is collected from a group of participants chosen because of key characteristics.

In this study the sample comprised ten teachers, ten learners, ten museum employees and ten curriculum developers. The ten teachers and the ten learners were selected from three junior secondary schools, the ten museum employees from the employees of the Botswana National Museum and the ten curriculum developers from the permanent staff of the Department of Curriculum Development and Evaluation. In the case of the Botswana National Museum, the director was requested to identify ten museum curators.

The criteria for the selection of the museum employees were to be based on the fact that the museum employee had to be involved in the design and/or implementation of education activities for schools, be employed on a permanent basis, and had at least two years of museum experience. The Director of the Department of Curriculum Development and Evaluation was asked to identify ten curriculum developers. The criteria for the selection of the curriculum developers were to be based on the fact that the curriculum developer had to be involved in a curriculum development process at least once; and should be a graduate with a specialisation in curriculum development.

In each of the schools at least three teachers and three learners were interviewed. The selection criteria for the teachers were to be based on the following: the teacher had to possess a diploma or degree in education, and be employed permanently in a public school as a teacher, with more than three years of teaching experience in Home Economics, Art or Design and Technology. For learners, the selection criteria were to be based on the following: the learner had to be doing Form two or three and studying either Home Economics, Art or Design and Technology. These were learners who had been exposed to all methods of teaching during their schooling careers and would be able to give a good account of what really takes place in the classroom.

The three junior secondary schools sampled have the following characteristics in common: the syllabus offered (see Chapter 2, pp. 84-86) and the infrastructure that are typical of all junior secondary schools in Botswana. This being the case, all of the schools were equally worthy to be sampled. Three junior secondary schools were used because the junior secondary school is the end stage of basic education in Botswana; the stage in schooling beyond which most learners do not progress, mostly because they fail the

examinations. A general request for permission (see Appendix 2) to carry out the interviews was sent to the MoESD under which jurisdiction these schools fall. It is a requirement according to law for every researcher seeking to do research in Botswana or about Botswana to ask for permission from the government before they can actually engage in the research process. The request was submitted to the MoESD that would in turn talk to the concerned ministries, and which would then eventually grant the permit when there is no objection by the concerned ministries.

Once permission was granted, the school principal of each of the schools was contacted. After the school principals have received my letter of request to participate in the research project (see Appendix 3) as well as the questions, the head teachers chose one of the subject areas as indicated in the letter, and identified the three teachers and the three learners for participation in the study. The teachers selected were briefed about the study, and during the briefing session the teachers were assured that their responses were held in strict confidence and that they could withdraw from the research project at anytime if they felt uncomfortable (Best & Kahn 1998:321). In each of the schools the teachers and learners of the subjects Home Economics, Art and Design and Technology were interviewed. The above-mentioned subjects areas are optional, hands-on, practical subjects, which do not teach theory only (see Chapter 2, pp. 84-86). Much of what is taught in these subjects is similar to the contents of the Botswana National Museum education programmes (see Chapter 2, pp. 93-102).

5. TAPE RECORDING, TRANSCRIBING OF AND FIELD NOTES

All the interviews were tape-recorded. After the interviews were concluded, the data was transcribed. The transcription was done verbatim. Everything the participants had said,

was written down apart from what was said off the record. This involved a straight transcription of all utterances, with added symbols to capture extra-linguistic information, that is, long pauses, hesitation, interruptions, stressed words, changes of subject matter, and emotion (e.g. laughter). Central themes were developed and expanded upon by the researcher.

The interview sheet was filed with the transcribed tape of the interview. The interviews with the Botswana National Museum employees, the curriculum developers, the teachers and the learners resulted in the researcher developing an understanding of the commonalities of experiences and opinions regarding the Botswana National Museum as an educational resource in public school classrooms. Streubert and Carpenter (1995:32) postulate that intuition requires the researcher to become totally immersed in the phenomenon under investigation. In this research project the data that was analysed comprised of verbatim transcriptions of semi-structured face-to-face interviews with the museum employees, the curriculum developers, the learners and the teachers about their experiences and impression regarding the Botswana National Museum as an educational resource in public schools which equipped the researcher to totally become immersed in the phenomenon under study.

6. DATA ANALYSIS AND INTERPRETATION

According to Yin (1994:102) data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial research questions of the study. The collected data was reviewed sentence by sentence to get a complete picture of the phenomenon. According to Strauss and Corbin (1990:72) generating categories early through line-by-line analysis is particularly important because categories

also become the basis of theoretical sampling. The responses provided by the participants were then subjected to content analysis, which assisted the researcher to focus on specific ideas so as to be able to categorise them correctly.

Following the transcription of each interview session, the interview tape was given a code name to assure the interviewee's anonymity. The code name was referred to in any further use of the interview data. The code was recorded on the interview sheet. A wide space was left on the right side of the interview sheet for notes and the writing of codes. According to Mills (2003:5) coding is the process of trying to find patterns and meaning in data collected through interviews. The coding technique was used to reduce the data to a manageable form. The typing was done in double spacing, so that the open coding process could be used. The open coding was proceeded with a lot of spaces for notes, lines, arrows and so forth.

All the transcriptions were read before any formal meaning was attributed to a single unit. The above process is called open coding. According to Strauss and Corbin (1990:62) during open coding the data are broken down into discrete parts, closely examined, compared for similarities and differences, and questions are asked about the phenomena as reflected in the data. The aim was to identify the main patterns and themes. Once the particular phenomenon was identified in the data, the researcher was able to group some concepts around it. This was done because in the qualitative research process, organization and communication are done after developing clear conceptual categories for the empirical data, which provides a focus for the findings (Babbie et al 2001:283). The research questions (see Chapter 1, pp. 64-65) were used to identify themes from the

collected data. Quotations taken directly from the participants responses were used to illustrate and enrich the narrative.

Once the transcription was finished and the codes were awarded to different units of meaning, the related codes were grouped into categories to form themes. Mills (2003:105) asserts that the researcher should consider the big picture and start to list “themes” that have emerged in the literature review and in the data collection process. It was then checked if patterns emerge, such as events that repeat themselves and if there is any match between feelings and responses. The data was used to guide the researcher in deciding what name should be given to a certain category.

7. LIMITATIONS OF THE STUDY

There were some problems that were inherent to this kind of study. Firstly, the fact that the study was done while the researcher was working posed a potential problem of dividing the researcher’s time between office and study. This problem was however immediately overcome by the fact that the researcher’s employer had approved of the study. Much of the time was spent carrying out the research in the Department of Curriculum Development and Evaluation and the Botswana National Museum which are both situated in Gaborone. Initially the researcher was given fifteen days study leave to visit schools for data collection. At the end of the leave period the researcher continued to visit the schools. The schools selected in the sample were in the vicinity of the researcher’s workplace, and as such he spent a few hours every morning away from work to conduct the required interviews.

An eminent problem was a lack of funds to reproduce the necessary documentation and to acquire tape recording equipment for the study. The employer had however pledged to avail part of the material for the study to all interested role-players, since the results would not only to benefit the Botswana National Museum, but also the national education system and the country as a whole. With regards to access and permission to conduct the study no problems were experienced, because the Botswana National Museum and the education sector being the research centres, permission was always granted to the researcher. Moreover, the researcher worked with the sample schools on a daily basis as a former curator of education, and was therefore familiar with most of the role-players and the research environment.

The understanding of the applicable concepts (see Chapter 1, pp. 47-63) proved to be a challenge for the participants, and the researcher's own interpretation influenced most of the participants' understanding of the concepts. The researcher however sought the participants' interpretation and tried to be as general as possible in the definition of the concepts. Regarding the methodology and the interview questions, there was extensive literature available to guide the study. The researcher's promoter was also available to guide the study.

8. RELIABILITY AND VALIDITY OF THE STUDY

The concept reliability, according to Merriam (1998:206), refers to the extent to which different researchers will discover the same phenomena, and researchers and participants agree about the descriptions of the phenomena. According to Schumacher and Millan (1993:386), the concept reliability refers to "the consistency of the researcher's project interactive style, data recording, data analysis and interpretation of participants meaning

from the data”. In this research project reliability was influenced by the relationships and the rapport between the researcher and the participants. Schumacher and Millan (1993:385) point out that “reliability can be achieved and discussed in terms, in design and in data collection”. They argue that in any qualitative research approach the role of the researcher in the study should be identified and the researcher should provide clear explanations to the participants.

There are limits of reliability for the qualitative research approach because unique situations cannot be reconstructed precisely because even the most exact replications of research methods may fail to produce identical results. This research project is qualitative and interviews were used, so replication was only approximated and never achieved. The researcher’s interaction with the participants did not influence reliability as he clearly identified his role and status. No personal opinions were provided by the researcher as it could influence participants towards a particular position, and this could limit reliability. The researcher was not biased because every participant was allowed to voice her or his own opinion. However, in the qualitative research approach the researcher’s bias can never fully be removed from an individual as settings and social context influences reliability (Merriam 1998:206; Schumacher & McMillan 1993:386). In this study, semi-structured interview questions were used so that reliability could not be influenced. Reliability in the data collection procedure of this research project was achieved through the use of written field notes which were recorded throughout the proceedings, and the data was later systematically transcribed.

The concept validity refers to the extent to which the information collected is true and represents an accurate picture of what is being studied (Schumacher & McMillan

1993:392). Schumacher and McMillan (1993:392) state that “internal validity refers to the degree to which the explanation of phenomena matches the realities of the world”. This refers to the extent to which findings of a given study is accurately described. In this research project, validity was achieved through the investigated problem, the research questions, the problem statement and the theoretical and conceptual perspective of the study. The latter relate to how validity is defined. Semi-structured interviews were used aiming at eliciting sufficient information from the research process. The researcher was thoroughly prepared, honest and knowledgeable about the research topic. After the research project was concluded, participants had gained information about the topic. When collecting the data, the researcher ensured that participants interpret reality from multiple perspectives and for varying purposes; hence, the open-ended conversation was mainly utilised to ponder upon the topic of the study.

9. ETHICAL CONSIDERATIONS

According to Kumar (1999:192) the concept ethical means principles of conduct that are considered correct, especially those of a given profession or group. The principles of conduct are important as they address the issue of the content of ethical behaviour in a profession. According to Brockett (1988:146) there are ethical concerns related to every step of the research process. Tripp (Bishop 1997:34) expresses concern about the considerations with regard to the processing of information, the sense-making processes and the way in which the researcher creates meaning from the collected data. For the purposes of this study, the ethical issues relating to human participation and data collection were taken into account. Prior to the interview process the participants were given explanatory statements which, amongst other things, outline the purpose of this study and the aims.

Before the interviews were conducted the researcher had to obtain written permission from the Botswana government as per procedure to conduct the research project, making sure that all aspects of the research process complied with the ethical considerations involved in interviewing people. All participants were government employees excluding the learners, and coming from the public sector it was easy for the researcher to get their consent for interviews. During initial contact with the participants the opportunity to provide feedback was offered in terms of a written resumé of the findings of the research project (Cohen et al 2000:71). Through a strong collaborative inquiry with the focus on respect, trust, openness and reciprocity the researcher had hoped to minimise any potential risks to the inquiry.

Maintaining privacy is an important consideration in a study of this nature. Each participant was assured that nothing discussed during the interview would be exposed as a particular individual's thoughts and feelings. No real names were put onto the interview transcripts. Instead codes were used. After the interview process, transcripts were captured electronically. Each participant was given a copy of the transcript to validate its contents. If there was any information that the participant was not happy about sharing, it was erased. Only then were the transcripts prepared for final analysis. Access to transcribed data was restricted to the individual participants, my promoter and me. Participants were not given the opportunity to view other participants' transcripts. After all ethical issues had been addressed, the focus was turned to how the transcribed interview data would be analysed.

10. CONCLUSION

In this chapter the research design of the empirical study has been outlined. The qualitative research approach was chosen because of its ability to deal with participants in their natural setting, and allow the researcher to deal with social processes and meaning. The qualitative research approach is also flexible; and therefore the researcher designed and redesigned all aspects of the study to ensure that the research is on course. The method of data collection was described. It was the use of semi-structured interviews with ten museum employees, ten curriculum developers, ten teachers and ten learners. Data collection techniques described in this chapter included tape recording and field notes. The chapter discussed the methods of data analysis and interpretation. The chapter was concluded with a description of issues of trustworthiness of the research and study, that is reliability and validity.

CHAPTER 4

RESULTS OF THE EMPIRICAL STUDY: DATA ANALYSIS AND DISCUSSION

1. INTRODUCTION

The main purpose of this chapter is to analyse, present and discuss the findings of the qualitative research project on the use of the Botswana National Museum as an educational resource in public school classrooms. The chapter presents the responses to the interview questions, a critical analysis of the data obtained from the responses and a discussion of the results of the critical analysis. The data collected from the interviews with teachers (n=10), museum employees (n=10), curriculum developers (n=10) and learners (n=10) was analysed with a view to identify aspects that would assist to answer the research question of this study, namely: **How can the Botswana National Museum extend its services to become an educational resource and partner in public school classrooms to improve the quality of education, promote the IKS of Botswana and develop the core competencies of Botswana's citizens?** The identified aspects were then discussed and substantiated with actual interview responses.

2. DATA ANALYSIS AND RESULTS

2.1 BIOGRAPHICAL INFORMATION

In this study individual semi-structured face-to-face interviews were conducted with the sample of participants: ten teachers and ten learners from three junior secondary schools, ten curriculum developers and ten employees of the Botswana National Museum. The biographical information of the participants are presented below.

Table 2: Biographical data of teachers

SCHOOL	GENDER	SCHOOL SUBJECT	TEACHING EXPERIENCE (YEARS)
A	M	Art	15
	M	Art	3
	F	Art	5
	F	Design and Technology	3
B	F	Home Economics	3
	F	Home Economics	10
	M	Design and Technology	4
C	M	Design and Technology	4
	F	Home Economics	7
	M	Art	3

The study involved junior secondary schools (n=3) in and around Gaborone. Ten teachers (n=10) comprising both males (n=5) and females (n=5) participated. Four teachers (n=4) taught Art, three teachers (n=3) taught Home Economics and three teachers (n=3) taught Design and Technology as school subjects. Four teachers (n= 4) in the sample had five years or more school experience, while six teachers (n=6) had less than five years of school experience.

Three junior secondary schools (n=3) in Gaborone participated in this study, from which ten learners (n=10) were selected, five males (n=5) and five females (n=5). The learners were studying subjects such as Art (n=5), Home Economics (n=3) and Design and Technology (n=2). All the learners involved in the study were in Form 3.

Table 3: Biographical data of learners

SCHOOL	GENDER	SCHOOL SUBJECT	FORM
A	M	Art	3
	F	Art	3
	M	Art	3
	M	Home Economics	3
B	F	Home Economics	3
	F	Design and Technology	3
	M	Art	3
C	M	Design and Technology	3
	F	Home Economics	3
	F	Art	3

In table 4 below six male (n=6) and four female (n=4) museum employees were involved in this study. Three museum employees (n=3) were from the Education Division, three from the Ethnology Division (n=3), and one each from the Archaeology, Photography, Art and Natural History Divisions. Seven museum employees (n=7) had worked for the Botswana National Museum for more than five years, and only three (n=3) for less than five years.

Table 4: Biographical data of museum employees

GENDER	FIELD OF SPECIALISATION	WORK EXPERIENCE (YEARS)
M	Education	33
M	Education	17
M	Education	3
M	Archaeology	16
M	Photography	17
F	Art	10
F	Ethnology	29
F	Ethnology	24
F	Ethnology	3
M	Natural History	4

Table 5: Biographical data of curriculum developers

GENDER	FIELD OF SPECIALISATION	WORK EXPERIENCE
M	Social studies	7
M	Agriculture	7
M	Physical education	3
M	Setswana	22
M	Business studies	14
F	Home Economics	2
F	Home Economics	3
M	Curriculum Design	23
M	Design and Technology	5
M	Computer Studies	4

From the sample of ten curriculum developers (n=10) randomly selected by the Director of the Department of Curriculum Development and Evaluation, eight were male (n=8) and two were female (n=2). The fields of specialisation of the curriculum developers were as follows: two from Home Economics (n=2) and from each of the following fields one each: Curriculum Design (n=1), Computer Studies (n=1), Design and Technology (n=1), Social Studies (n=1), Agriculture (n=1), Setswana (n=1), Physical Education (n=1) and Business Studies (n=1). Six of the curriculum developers (n=6) had been employed in the Department for five or more years, and four (n=4) for less than five years.

2.2 RESPONSES

The data collected from the interviews were decoded. The results of the decoding process with regard to the aspects curriculum development process, typical learner activities and collaboration between schools and the Botswana National Museum were as follows:

2.2.1 Responses of the teachers

2.2.1.1 Curriculum development process in Botswana

With regard to the curriculum development process in Botswana, the teachers understood that it had to do with the course of study in as far as learning is concerned in schools; that is, the mission statement, vision, broad and specific objectives of the syllabus: “It is the intended activities within a given period in the learning institution”. While they knew their function as teachers is to “advise the MoESD on areas of improvement in the curriculum”, Teacher #1 noted that they had not been involved in the curriculum development process. Teacher #1 elaborated as follows:

We hear from our colleagues that officers at the Department of Curriculum Development and Evaluation undertake a study on the curriculum and leave out a teacher who does

the groundwork. If teachers were involved we would all understand what the curriculum stands for.

Teacher #1 suggested further that curriculum developers should prepare refresher courses for teachers to find out if the interpretations of curriculum objectives are uniform amongst the teachers in all public schools:

There is need for more supervision in terms of our programmes, there is also a need for teachers to interpret objectives uniformly. When I prepare a lesson plan, my supervisor should be able to interpret it in relation to the requirements of the subject in question and not another subject.

Teachers who were involved in the curriculum development process responded as follows:

During the curriculum development process, a task force proposes the syllabus topics and recommends the topics to the panel. The panel consolidates the recommendations and circulates them among regions for comments. After regions have commented, the draft is then sent to the MoESD to do a final draft (Teacher #5).

Teacher #10 confirmed the above process:

The process involves some teachers and the MoESD officials meeting together in a workshop format to review the syllabus. My functions in the process are to give the MoESD feedback on whether or not there is any learning through the examinations system. The more the learners pass my subject the clearer it becomes that learning took place.

One of the teachers described her functions in the process as a member of the taskforce as follows:

We are approximately 20 members. This includes teachers from primary education, junior secondary education, senior secondary education, Teacher Training and Development and the Botswana Examinations Council. The criteria for selection into the taskforce are not known by teachers but, I thought members represent regions (Teacher #5).

She continued to explain that:

The curriculum development takes place through Education Officers meeting together, particularly those that have taught the same subject. The product of the meeting (draft syllabus) goes to the regions where it is shared with subject teachers. It takes five years to review the syllabus and five years is too much. The review is done by Education Officers who have their hands full (Teacher #5).

Teachers #2 and #3 described their functions in the process as to give an opinion on the subject matter and advise the curriculum developers. They summarised their understanding of the functions of the teacher in the above process (past, present and future) as follows:

My role in this process as a teacher is limited to keeping records of the performance of the learners I teach, evaluate their strengths and weaknesses, and give the MoESD feedback. I am not sure if this role of teachers is effective, but I know that teachers keep records (Teacher #3).

I have always known my function as a teacher in the curriculum development process to be to receive the syllabus from the MoESD and implement it. We receive the syllabus through workshops and meetings. During the implementation process teachers are guided by the assessment criteria determined by the MoESD. We are concerned about the assessment criteria, particularly of Art (Teacher #2).

Curriculum development in the present system is an improvement of the past where emphasis was on household chores. The past education was about survival skills, e.g. farming with emphasis on traditional technology. Due to information communication technology, nowadays education is networked with other systems in the other parts of the world (Teacher # 2).

Some of the teachers interviewed and who were not involved in the process assumed the curriculum development process in Botswana to entail the following:

Teachers are selected by the MoESD to critique the old syllabus. The product is then passed on to schools for comment. The role of the teacher in the curriculum

development process is to critique the old syllabus for review. Although I have never been selected for the process, I know a few teachers that participated in this process. The past curriculum development process was okay, since there was no writing and reading and no reference to anything, it was all hands on. The present syllabus is academic and emphasise a pass in the final examinations (Teacher #4).

For some of the teachers the curriculum development process in Botswana was not known at all:

I am not familiar with the process of curriculum development; we speak of syllabus at school level. I am more familiar with the term syllabus. While at Teacher College for the Foundations of Education course, I was taught that the curriculum development is done by the MoESD and that as we teach we keep records which we later assess for strengths and weaknesses. That is how we assist in the curriculum development process in Botswana (Teacher# 2).

I do not exactly know what is entailed in the curriculum development process in Botswana, but, I assume the curriculum development to be the review of the current syllabus. My experience is that a panel of teachers meet and review the syllabus. They do not have any set methodology to review and develop the curriculum (Teacher #3).

Another teacher who was never involved in the process responded that the curriculum development process in Botswana: “ ... takes place through workshops, panel discussions and interviews”. “Although I have never been involved in the curriculum development process, the process has not changed and is not likely to change in the near future” (Teacher # 6).

All teachers saw their function as to advise the MoESD on areas of improvement in the curriculum (Teacher #1). However, Teacher #2 remarked that teachers were left out, but if teachers were involved they would understand what the curriculum is about.

The teachers interviewed were convinced that unlike in the past, the present curriculum development process in Botswana has a “direction”, but the problem is how subjects are weighed:

As an optional subject, Art has no significance unlike other core subjects. It is not clear who determines what is core and what is optional. Whoever determines this should be guided by the fact that the ultimate goal of school is life. Optional subjects are taken for granted at school level (Teacher #3).

Teacher #8 responded that he was not knowledgeable about the curriculum development process at all, but “I have heard that the curriculum development process entails Education Officers and teachers reviewing certain topics in the syllabus. Teachers submit topics that they feel should be reviewed to the MoESD”. According to this teacher “unlike in the past, the current curriculum is loaded with a lot of subjects at secondary school level. The MoESD has also added many topics per subject”. According to this teacher, the past curriculum had fewer subjects, but in the present curriculum the number of subjects a learner is expected to take in the secondary school has been increased: “For the future I would suggest that the syllabus be decongested of the topics”.

Teacher #10 who was involved in the curriculum development process, confirmed that the current syllabus is loaded with subjects in comparison to the pre-1994 curriculum: “This has always been the teachers’ complaint during the taskforce meetings, but it seems our complaint is not taken seriously”.

2.2.1.2 Typical learner activities in the classroom and in collaboration with the Botswana National Museum

Teachers described the activities they designed for their learners in the classrooms in the following manner:

As an art teacher I facilitate the learning of art; drawing, painting, craft and design. We follow the Junior Certificate syllabus, but the current Junior Certificate art curriculum is loaded. It is as a result of this that we rush to complete the syllabus. Having to do four projects is too much for the Junior Certificate learner. My recommendation would be 1 project and 1 controlled paper. This is because not all schools are equipped, for example, in our school we have 1 potter's wheel to be used by 38 learners (Teacher #1).

According to Teacher #2 the typical learner activities he designed for his learners are drawing, painting, sculpting and design in accordance with the syllabus prescription. The educational value of these activities is that: "some learners are not good academically, but are good at practical subjects. Their exposure to these practical subjects is important for their survival in future".

Teacher #1 described his involvement in the activities of the Botswana National Museum as follows:

I just visited the Botswana National Museum with one of my classes and we saw exhibits by professional artists. From this visit we learnt that, based on what one is pursuing, and considering the shortage of the teaching and learning support materials, it is important that we liaise more with the Botswana National Museum because it has a lot of materials that will enable our teaching and learning to be more positive and more realistic. We noticed during this visit that learners got inspired when they interacted with the museum exhibits; and that is because the museum activities are different from the activities in my classroom. Learners looked at different styles of techniques as done by professional artists.

One of the teachers was familiar with the learner activities provided by the Botswana National Museum. He described his experience as follows:

When I was young and as a secondary school art learner we once took part in the Botswana National Museum Children's Art competitions. We submitted our artworks as part of the school's submission during the competition (Teacher #2).

Teacher #2 also pointed out that the learner activities of the museum are different from the learner activities he designed for his learners because: “the Botswana National Museum exhibitions improved ... my ideas about art”. With regard to a possible collaboration agreement between his school and the Botswana National Museum the teacher responded as follows “... learners can use this collaboration to learn from others, the same way as I once did”.

Teacher #1 recommended a possible collaboration between schools and the Botswana National Museum because:

I think it would be important that we liaise with the Botswana National Museum and other centres of learning. The Botswana National Museum and other centres of learning need to involve the learners and the teachers in their activities. We have no collaboration with the Botswana National Museum because of workload, the moment we arrange a visit we lose out on our lessons. On the side of the Botswana National Museum they need to reach out more. The curriculum has to be planned in such a way that it relates to support materials and education centres.

Some of the teachers outlined the “traditional” activities they did in their classrooms as “asking the learners questions, lecturing, giving the learners questions relating to the situation and learners describing what they see”. According to these teachers the learner activities “carry a lot of weight – the problem however, is the environment that influences the learners. The environment here is urban and learners want to do things fast, typical of urban life”.

Learner activities provided by the Botswana National Museum are known to the above category of teachers, and as one of the teachers (Teacher #3) noted: “I have exhibited at the Botswana National Museum and frequently visit the Thapong Visual Art Centre on my own”. The teacher further stated that the activities for learners at the Botswana

National Museum are different from the activities designed for her learners in the classroom, because: “the standard required by the Botswana National Museum is very high and is raised by participating teachers. During our last visit to the Thapong Visual Art Centre our learners benefited from artists with different ideas”.

She therefore recommended a possible collaboration agreement between her school and the Botswana National Museum: “the Botswana National Museum would market artists and develop them, this development would start from school level. The museum no longer communicates with schools as it used to in the past so schools do not know what takes place in the museum”.

One of the teachers (Teacher #5) explained the learner-centred activities she designed for her learners in the classroom as follows:

The typical learner activities we do in a typical classroom include the learners researching a topic and making presentations in front of other learners on what they researched on. Sometimes learners do group work. We spend most of our time in the classroom doing notes as time is a limitation to do practical work. These activities encourage all learners to share and open up. Presentations by learners enhance their art of public speaking.

She had never been involved in any Botswana National Museum activity, but indicated that:

The collaboration between the Botswana National Museum and public schools is vital because the teachers could use museum collections to teach the learners in a limited time ... they have e.g. fashion trends (factors that contribute to selection of clothes). The problem, however, is that the perception is that the Botswana National Museum is about history and may not be relevant to Home Economics.

According to one of the Home Economics teachers, Teacher #6, her learners do the following activities in the classroom: “group presentations, writing of notes and the chalkboard-based exercises. Learners also do a compulsory sewing project in Form 2”. She was of the opinion that: “the activities are okay because they are supposed to be learner centred. As you know teachers understand things differently”. The teacher confessed that she has: “never been involved in any Botswana National Museum activity” and “has no idea of what the Botswana National Museum can offer,” but considering the shortage of materials in schools, she would support any collaboration as long as that would give learners the necessary exposure.

Some of the teachers used active learning methods, the activities for the learners in their classrooms included group work, practical work, demonstrations by the teacher and learner presentations to the class as a whole. According to Teacher #7:

Even though I have never been to the Botswana National Museum, but I have been to schools’ Design and Technology exhibition as a learner. The learner activities found during the schools’ Design and Technology exhibition is the finished product of the classroom exercise. The product tells its story, the maker, the material used and the idea of the maker. I have never been to the Botswana National Museum, but the ideas of the schools’ Design and Technology exhibition bear evidence that schools need that kind of idea exchange. Teachers depend on textbooks at school and that is insufficient.

Teacher #8 also employed active learning as a teaching and learning strategy in her classroom:

The activities we do in the classroom include discussions about a topic of an assignment. We do two practical activities per term. I give learners handouts to write notes at home because of lack of time and syllabus overload. The activities we do in class give learners a chance to interact as opposed to passive learning.

This teacher was involved in the learner activities of the Botswana National Museum. He commented as follows:

I have attended the national exhibition at the Botswana National Museum. The Botswana National Museum is a business and the set up of the exhibitions is appealing and can trigger an idea exchange within the classroom confines.

According to this teacher, the Botswana National Museum could be the platform where learners might display “stuff” at school level for people from the museum to showcase talent.

According to Teachers #8 and #9 the activities they designed for the learners are primarily based on the textbook method:

I give handouts to learners for them to copy notes on their own time, and we review the notes the next day. I ask them questions relating to the notes and they answer back. Sometimes I give them a quiz on the same notes to check how much they can recall written notes. The educational value of these activities is that through recall learners would be prepared for examinations (Teacher #8).

Teacher #9 explained that:

I have never been to the Botswana National Museum. However, considering the amount of work prescribed for teachers, the Botswana National Museum would probably assist with any information they may have. The problem is the Botswana National Museum does not market itself to schools. I have once heard about the Mobile Museum Service programme and heard that it is good, but I do not know what it has to offer (Teacher #9).

Teacher #9 remarked the following regarding the learner activities in her classroom:

I give learners work to write notes, to sew when we can. Sometimes I just teach for the whole eighty minutes of the 2 sessions. These activities are valuable because learners are able to learn what I teach them. The problem is the number of learners that I have to teach, 38 learners would be difficult to teach using any other method.

Finally, Teacher #9 recommended that: “Nevertheless, I suppose the Botswana National Museum would provide a good ground for benchmarking by public schools”.

Some of the teachers used cooperative learning methods. The following are according to Teacher #10 the typical learner activities in his classroom: “I emphasise group work, some presentations by learners on the notes they wrote during the previous lesson”. However, he admits that: “most of the time I do a lot of talking in the classroom as most of the material I teach is new to the learners”. According to Teacher #3 the educational value of these activities are evident when, “learners do show they have learnt something during end of month tests”. However, the teachers were never involved in any of the activities provided by the Botswana National Museum. But Teacher #10 is of the opinion that public schools need a lot of partners who can assist in the teaching and learning process: “If the Botswana National Museum is such a partner then collaboration will be a welcome development” (Teacher #10).

2.2.2 Responses of the learners

2.2.2.1 Typical learner activities in the classroom and in the Botswana National Museum

According to one of the learners interviewed typical learner activities in their classrooms include among others:

drawing, painting, sculpting, craft and design. The different Arts we are supposed to learn are fine art, craft, and commercial art. For the final examination we choose a project from any of the three. In the classroom we write notes and the teacher explains, rubs the board and gives a quiz. In a double lesson class, the teacher gives paper/clay/paper maché so we do some practical exercises. In Form one we drew, wrote notes and practised painting. In Form three we made a clay pot (sculpture), (Learner #1).

Most of the learners had never been involved in any Botswana National Museum activity, but indicated that as part of their school, they undertook a one day trip to the Thapong Visual Art Centre. The difference between what they experienced at school and at the Thapong Visual Art Centre was the level at which the artists at the Thapong Visual Art Centre operated: “It was beyond that of the school because the artists at the Thapong Visual Art Centre are professionals” (Learner #4). He suggested that, “activities provided by the Botswana National Museum can help schools improve their standard of performance and I can be encouraged by the artworks I see to change my standard”.

Learner #2 confirmed the above response: “the activities done in the classroom include painting, drawing and writing notes that we did in Form one. In Form two we did sculpting and a whole lot more notes. In Form three we started the project, and we learn so as to pass examinations”. She had been involved in a casual visit to the Botswana National Museum, the Tsodilo Hills, the Oodi Weavers and the Thapong Visual Art Centre:

The visit to these places gave me ideas of what I can do with my work. I got inspired by the different media I saw and therefore collaboration between schools and the Botswana National Museum would enable us to see and ask more questions so we learn. We would get exposed to different media and different styles of painting and drawing. We would have the opportunity to learn different designs and different ways to express ourselves (Learner #2).

Learner #7 had been to the Botswana National Museum and claimed that the Museum dealt with life in the past: “I could learn Social Studies since that is the only subject that the Botswana National Museum deals with and could perhaps get better marks during the examinations”.

Many of the learners indicated that in the classroom, the teacher talks and writes notes: “We did five projects since Form one. The teacher gives us handouts to write notes at home. In class most of the teaching and learning takes place through the question and answer method” (Learner #3). He remarked that “practical exercises would be good because they would reinforce what is being taught”. According to Learner #5 classroom activities they were involved in, comprised “projects, write notes, write tests and do corrections. Sometimes the teacher asks questions and we answer them”. The teacher also directed them to read notes so as to pass the examinations: “The teacher tells us we have to work hard to pass examinations and so we read a lot”.

Learner #8 was never involved in any Botswana National Museum activities: “I have never seen the need, besides the Botswana National Museum is a government office and how does it involve people that do not work for it?” As such she did not have the slightest idea about what the school could gain from collaborating with the Botswana National Museum: “I really do not know what the Botswana National Museum can offer”. Learners #9 and #10 have also never been involved in any Botswana National Museum activities:

I do not know of any Botswana National Museum activity I could participate in. If they are helpful to my schoolwork I will be interested to participate. I wish I knew the type of activities the Botswana National Museum would provide because we really need materials to help us learn in the classroom (Learner #9).

I have never been there myself. I hear the Botswana National Museum is about things of the past, so it could help schools with Social Studies material and I believe the Botswana National Museum would not help me, unless I want to know about the past (Learner #10).

Learners #3 and #4 did not see the value of a visit to the Botswana National Museum, and did not think that the Botswana National Museum would interest them, because the Botswana National Museum is mostly about history and would have no relevance to subjects like Home Economics: “It would only assist Social Studies learners” (Learner #3). Although some learners did not relate a visit to the Botswana National Museum to the study of their school subjects, they indicated that they could use information from the Botswana National Museum: “schools need information from whatever source” (Learner #9).

Most of the learners confirmed the use of the traditional teaching and learning approach in their classrooms:

In the classroom we write notes during the first session of an eighty-minute lesson. The second session we go over the written notes. Sometimes we do a quiz in the first session and revise during the second session. At other times we are lectured to. There are times that we do questions and answers. We do not have group discussions. We cook and sew for practical exercises. The activities give us a chance to understand what the teacher is supposed to teach us (Learner #4).

Some of the learners were involved in foundational as well as practical competence activities:

the activities we do in the classroom include writing notes and the teacher explaining the notes. We draw and paint. The teacher explains to learners how to paint in light and dark colours. Some other activities include the teacher asking questions and the learners giving answers. Learners are sometimes asked to repeat what the teacher said. These activities help us prepare for tests (Learner #6).

“The activities we do in the classroom include note taking and the explanation by the teacher. We do projects like carving, sketches and quizzes” (Learner #6), and “I gain a lot from these activities because I learn and am able to pass” (Learner #7).

Learner #9 responded to the interview question regarding typical classroom activities as follows: “In the classroom we sew, write notes and spent the last few months working on a project. All these we do to prepare ourselves to pass the Form three examinations so that we proceed to Form four”. According to Learner #8, “In the classroom the teacher asks us questions and we answer back. Sometimes he makes us write notes, write quizzes and end of month tests. We rarely do practical work”, and “we only learn things we are supposed to do with our hands theoretically”.

Some of the learners were involved in research projects: Learner #10 described a typical learner activity involving a research project in her classroom as follows: “we do some exercises, write notes, read and lately we have started a project. The project is “involving” because we have to research about it and write about it on our own. That way we learn”.

2.2.3 Responses of the museum employees

2.2.3.1 Curriculum development process in Botswana

Many of the museum employees responded to this interview question as follows: “I have no idea what the curriculum development process involves and I have never been part of the process” (Museum employee #1). Museum employee #2 also indicated that she had “no experience whatsoever of the curriculum development process”. The museum employees interviewed who had never been involved in the curriculum development process in Botswana remarked that: “In the curriculum development process in Botswana experts are often left behind during the process. Only employees of the MoESD are involved” (Museum employee #5).

Museum employee #4 also said that he has never experienced a curriculum development process but indicated that:

I suppose the curriculum has to be reflective of and be informed by the national vision, from primary school level. All professionals in the various fields must be involved in the process. I heard that since the 1990's, at secondary school level the MoESD used to ask for contributions from the Education Division in the Museum who would in turn ask for topics from other divisions. I was never directly part of the curriculum development process but have contributed through the Education Division. I felt there was a need for more engagement through workshops and meetings. These would give non educationists a chance to know what their expectations are in the process. In terms of contribution to quality, the process is lacking. There is not much engaging, other players are not sure of what information to give out as some could be beyond the learners' understanding.

Most of the museum employees did not know much about the curriculum development process, but was aware of the fact that learners at school level were taught so-called curriculum-based subjects: "I am aware of the 1993 Education Commission and that it emphasises the use of teaching aids and visual aids. I was never part of the process described above. I have no experience of the process, so I cannot answer the question asked" (Museum employee #7). Museum employee #9 indicated that she had no experience of the curriculum development process in Botswana, but once in the 1990s had to contribute a topic to this end to a colleague at the Education Division.

One museum employee, Museum employee #6, indicated that he was involved in the curriculum development process once:

The MoESD sometime invited us to brief them about what we do, they asked for topics for the curriculum. We compiled information and aligned it with the Millennium Development Goals and national strategy. I only submitted topics on art to the MoESD. I can remember how I felt because I only did this once. While I acknowledge that there are gaps that distract the intended purpose and that different

stakeholders are supposed to be brought in, the education systems still emphasises theory.

2.2.3.2 Learner activities in public school classrooms and in the Botswana National Museum

The museum employees differentiated between learner activities in the classroom and in the Botswana National Museum. They distinguished as follows: the first, includes the teacher writing on the board and the learners copying the notes: “This could be a composition or a letter. The teacher is a leader and learners follow the instructions” (Museum employee #1). The learner activities of the Botswana National Museum as emphasized by the museum employees were active learners and authentic activities.

In the view of the museum employees, the Mobile Museum Service brought the information to the people (schools). The information taken to the schools includes among others evidence of past life including the tools that were used, the heritage sites, other artifacts and information of when and who were responsible for the sources and evidence. The Botswana National Museum also dealt with the public (learners) through film shows and programmes like the Museum-in-a-Box which contained evidence of the Batswana people’s creativity. The Botswana National Museum’s radio programme broadcasted messages to the people about the activities of the museum. The Botswana National Museum also hosted events such as the International Museum Day and Exhibitions. The museum activities were thus centred on showcasing culture, while the classroom activities were centred on teaching and learning textbook content. The museum educators provided information accompanied by evidence in the form of artifacts. The teaching and learning in schools were focused on rote learning, chalk and talk and teacher activities: “The possible collaboration with schools would be a welcome idea as schools need

museum information to bring life-experience to the classroom. A lot of schools come on excursions and as we guide them you realise how much they need the information we give them” (Museum employee #1). The museum employees’ opinions about classroom learner activities versus museum learner activities were also presented as follows:

The learner activities in the classroom include teacher talking to the whole class of about forty learners, spelling, notes writing, use of teaching aids and demonstrations in Physical Education lessons. The use of teaching aids and demonstrations leave a memory of what was discussed. The museum activities on the other hand comprise the use of objects and discussions about them. The use of film shows, demonstrations by makers of the objects. Learners get a chance to hold and feel the objects (Museum employee #2).

On the point of a possible collaboration between public schools and the Botswana National Museum, the employee remarked that: “The Botswana National museum through its object-oriented teaching and learning would enhance the learners’ ability to retain information about the objects they saw” (Museum employee #2). Museum employee # 3 confirmed the above notion:

... in the classroom the teacher tells the learners and asks the learners to repeat what she or he just told them. There is no interaction in the classroom from the learners’ side to such an extent that it is the examination that would tell if indeed any learning took place. The teacher teaching without engaging learners is not effective as learners do not partake.

Museum employee #4 stated that the Botswana National Museum provided guided tours, handouts and worksheets dealing with objects and displays; and as such the learners actually saw what is being discussed:

In the Botswana National Museum one can see what the learners are taught. School teaching and learning is abstract. It is mostly bare and no pictures. Perhaps the presentation is the same – except the difference is the time and the number of learners in the classroom. The possible collaboration can

be of benefit to learners as the environment would be different. Learners would enjoy being taught by a “stranger” and they would see and feel the actual artefact (Museum employee #4).

Some of the museum employees emphasised the pros and cons of the passive-active learner divide:

The learner activities in the classroom are predominantly theory, there is not much interaction. There is no link between the time allocated for a lesson, the reference material and the syllabus. Teachers just rush through the syllabus because of time. Learners are not assisted to unpack the stuff they learn. The curriculum is not reaching the potential, it is mostly abstract work. The Botswana National Museum uses education kits which is interactive, this despite the fact that the Botswana National Museum is not doing enough to let teachers know about the amount of research information they have. The museum emphasises hands on activities, while the school emphasises rote learning. The schools and the Botswana National Museum collaboration would only be good for schools to benchmarking, to check the relevance of information versus the content needed and ownership by both (Museum employee #4).

Museum employee #5’s opinion of the learner activities in classrooms and in the museum was as follows: “in the classroom the teacher gives out work, for example tests and some reading work to the learners. The activities described are not effective because the same teacher offers nine subjects per day and therefore after the fifth subject the teacher is exhausted”. In contrast the Botswana National Museum’s activities:

... include the Mobile Museum Service programme that entails the use of artefacts. The Botswana National Museum packages the topic and its associated objects. The atmosphere in the museum is different and there is excitement on the part of the learners. The use of artefacts as a method of teaching is very powerful. The Botswana National Museum has a lot of information in Art, Social Studies and Science, more than the schools and can therefore be a reference point (Museum employee #5).

Museum employee #6 argued that “the learner activities in the classroom are mostly theoretical exercises with less emphasis on practical exercises. Schools are not well equipped so even though teachers might have an interest, they are constrained”. She pointed a way forward:

The Botswana National Museum runs workshops, does guided tours and mounts exhibitions that are meant to involve learners. The Botswana National Museum tries to enhance what has been taught at school level. Whatever is done at school should be conveyed to the Botswana National Museum and vice-versa. The Botswana National Museum should update schools on its research findings, particularly on topics that are part of the school syllabi (Museum employee #6).

Museum employee #7 had an alternative opinion: “The activities learners do in the classroom include writing notes and the teacher explaining the topics to the learners. These are mostly theoretical exercises with less emphasis on practical exercises”. However, she noted that learner activities provided by the Botswana National Museum are defunct. These activities nevertheless offered the learners an opportunity to be aware of the cultural diversity in Botswana and how it could be exploited in the quest for national unity:

The Botswana National Museum as a custodian of heritage is well positioned to inculcate a sense of national pride in Botswana, because it is through one knowing her or his culture as well as appreciating what culture can offer that can create a person. The Museum has the wherewithal to teach the learners to use their hands to create objects that can be relevant and useful to their lives as Batswana.

Museum employee #8 stated a different opinion. He said that in the classroom learners make presentations and they are allowed to ask questions. These activities are effective because they are group work-based and go beyond the classroom as they carry a home assignment. According to him:

the Botswana National Museum no longer has programmes for learners except a few that will help with research materials when the Museum is asked. The Botswana National Museum is not a classroom, it is research based and when learners come here for research, we give them real objects to deal with. The MoESD should involve stakeholders during the process of curriculum development so that each stakeholder can make his/her contribution to the education system.

According to Museum employee #9, who confirmed Museum employee #8's view, typical classroom activities included debates and research projects by learners. These activities would help to improve the standard of teaching and learning in the classroom:

I have never read the RNPE of 1994, but from what I hear about the RNPE, teachers do the opposite of what is prescribed. They lecture to learners all the time. A long time ago teaching and learning was teacher-centred and it still is teacher-centred. Some schools, however, have introduced debates, research and projects that will improve the standard of teaching and learning in the classroom.

She indicated that the Botswana National Museum used to provide *Pitse ya Naga* (the Mobile Museum Service), radio programmes and research opportunities for learners:

The activities were full of information, researched information and they were always accompanied by the use of objects. The schools and Botswana National Museum collaboration can help schools as long as museum employees that specialise in certain fields are invited by schools to teach about their topics of speciality. They would in the process understand what schools need most and prepare some educational packages for use by teachers when teaching such topics.

One of the Museum employees (#10) emphasised the hands-on activity-based nature of the Botswana National Museum activities and reiterated that the: “learner activities in the classroom are exercise-based, the learners reading and writing. The activities only help the learners to read and write better”. On the other hand, he indicated that the Museum teaches the learners through the use of objects, films and pictures: “Unlike the classroom that emphasises the use of letters and numbers, the museum emphasises touch, smell, see,

hear and feel". The collaboration would therefore encourage learning that is hands-on and activity-based (Museum employee #10).

2.2.4 Responses of the curriculum developers

2.2.4.1 Curriculum development process in Botswana

The curriculum developers involved in the empirical study summarised the curriculum development as follows:

According to Curriculum developer #1:

The curriculum is developed following needs assessment carried out by government officials through a Commission on Education. The product of this Commission is developed into a policy. The policy is translated into the Curriculum Blueprint for different levels of education by a group of curriculum developers. The Curriculum Blueprint covers broad issues on education and programme aims. These programme aims are translated into individual subject aims by different subject specialists. This is the stage where syllabi development begins. From the subject aims we draw topics and content. It is the duty of the curriculum developer who is a subject specialist to develop the scope and sequence charter of their subjects. This is then referred to the standing committee who are about fifteen teachers for their input. What they have agreed on is then referred to the subject panel that includes all stakeholders: the University of Botswana, a representative from the secondary department, a representative from the senior secondary teachers for different subjects, a representative of Teacher Training and Development, a representative from the Department of Primary Education, a representative from primary school teachers, a representative from Special Education and a representative from the Examinations Council. The subject panels consider the draft that eventually goes for interdepartmental evaluation in the Department of Curriculum Development and Evaluation for approval. The agreed product is final and passed by the Permanent Secretary in the MoESD to be implemented at schools level.

Some of the curriculum developers described their roles and functions in the process as follows:

I translate the education policy aims into subject aims. I develop the subject syllabi. Thereafter I draw topics and relevant content. I guide panels and committees as we develop the syllabi. I actually design the first draft of the syllabus, the content and the sequence of topics. While this process is good, stakeholders do not come for our meetings. We should be involving the learners but we do not. There is broad consultation considering the stages that the process has to go through, the problem is teachers are resentful of change. Teachers want to sit on what they know and are confident they can do best (Curriculum developer #1).

For Curriculum developer #8 the curriculum development process entailed:

translating policy objectives into educational objectives. There are different phases to this process. The first phase is when as curriculum officers we agree on the Curriculum Blueprint, this is followed by individual subject officers deciding on their subjects' scope and content and drawing a draft document to be presented before the standing committee. The standing committee, comprising about 15 teachers, make suggestions relating to the topics in the draft. The product of the meeting is presented to the subject panels. These are mostly academics and senior officials who would then make their contribution to be presented before the curriculum developers. After this cycle the product is presented before all heads of the MoESD to approve and pass it to the Permanent Secretary for endorsement. When the Permanent Secretary has endorsed the syllabus we present it to teachers through workshops.

My function is to lead this process until the syllabus is complete and implemented, after which I do the evaluation. The process of curriculum development has never changed and it does not appear like it will change. The goals of education however keep on changing. If the manner in which the curriculum is developed is not changed, then it will be difficult to achieve any quality in the education system.

For Curriculum developer #2 the curriculum development process entailed the evaluation of existing programmes and addressing the gaps and shortcomings in the curriculum that was being implemented. The process is done by a Commission set up by the President who then recommends an education policy. His own functions as a curriculum developer were provided in the Curriculum Development Guidelines, and it is similar to that of any other curriculum developer in the Ministry:

I decide on the Curriculum Blueprint, the conceptual framework of the curriculum and the subject combination. I develop detailed areas that need to be captured in the curriculum, the generic and the subject-based framework. I determine what documents and what issues in the said document should be addressed including subject aims. I determine the subject's scope and sequence. Once done, I refer them to the taskforce which comprised of teachers and other stakeholders in a draft form. My role is basically to facilitate the curriculum development process.

He (Curriculum developer #2) additionally remarked that:

the curriculum development process does not have a philosophy. It is not clear what kind of learner we must produce. My take is that in future industry should be involved more especially when developing the curriculum – for industry-based subjects. The curriculum should be industry driven as well as drivers of culture, but especially industrial technology.

The curriculum developer's view on the RNPE and the curriculum development process was:

the RNPE is a good policy document if it were to be implemented as recommended, the problem however, is the manner in which the curriculum development process has been cast. The process has never changed since the First Education Policy (1977). We need to have a curriculum development philosophy, agree on the quality of education and agree also on the indicators and measures of such quality. We need to identify learners' strengths and let them follow their interests.

In contrast, Curriculum developer #3 understood the curriculum development process in Botswana as to assess the policy documents for needs and to consult with schools on the curriculum needs. He remarked that, however, “I know that I have to facilitate the process, but, I have not been involved so far. Since the current policy provides for five years within which we can review the curriculum and as long as we stick to that, the process will be effective”. One of the curriculum developers (Curriculum developer #4) responded as follows to the question on the curriculum development process in Botswana:

The curriculum development process is similar for all the subjects. The difference is the subjects’ content and scope. My role is to guide the different panels through each phase of curriculum development. At implementation I introduce the curriculum to the teachers and explain that it cannot be changed. There is not much difference between the curriculum development process in the past, present and the future. The difference is the country’s needs and its relevance to development in the country. The country is concerned about the HIV/AIDS prevalence and therefore HIV/AIDS is being infused across the syllabus. There is an element of quality as teachers are guided. The problem though is at implementation stage, the teachers are lazy to research some topics. Another problem is that there is no more school inspections carried out on the way teachers teach (Curriculum developer #4).

Curriculum developer #5 confirmed the above scenario:

the process of curriculum development is similar for each and every one of the curriculum developers. My role is to provide professional guidance to panels and committees during the curriculum development process. Professional guidance means putting the syllabus in an acceptable form. The process is fine as it involves the teachers and other stakeholders.

In contrast, Curriculum developer #6 indicated that she only read the content of the Curriculum Guideline and has never been involved in the curriculum development process in Botswana. She, however, knew that she had to guide the process as a professional: “That is part of my job description. The process has been the same

according to my reading. I believe the quality of education is okay, even though I have never been part of the process”.

Curriculum developer #7 had a new take on the process. He answered this question in the following manner:

The process involves turning the Educational Policy aims into aims that can be achieved by a teacher. My function is to give professional guidance to role players during the curriculum development. Although the present curriculum development process is good, it is not a perfect one. It would be perfect if more stakeholders were involved, including the learners. The process does not produce quality documents that become relevant in the classroom because learners are left out during the development.

Curriculum developer #10 confirmed this view:

The process of curriculum development entails deriving educational objectives from the education policy. It is the process of breaking the education policy into syllabi and accompanying teaching and learning support materials for use by teachers and learners in the classroom. My role is to design and evaluate the curriculum process. I do all this through workshops with teachers and other stakeholders. The problem is that only teachers would show up at these workshops, but other stakeholders are not at least interested.

The education system lays emphasis on the learner’s ability to pass examinations, and quality is measured in terms of how many learners have high grades in the school. Unfortunately, the RNPE expects learners who can fit into the industry. We use the wrong measure for quality.

2.2.4.2 Typical learner activities in the classroom and in the Botswana National Museum

According to the curriculum developers interviewed, although the curriculum is geared towards promoting learner-centredness, the activities are teacher-centred: “Mostly teachers prefer chalk and talk to quickly cover all the topics in the syllabus. The learner

activities in the classroom are as a result not effective as a medium of instruction and hence the retention rate among the learners is very low” (Curriculum developer #1).

Even though many of the curriculum developers had never experienced the museum activities, Curriculum developer #1 was convinced that it would be useful: “I have seen a lot of schools gathered at the museum. I have also heard about the Mobile Museum Service and that it is good”. However, he could not confirm the effectiveness of these activities. He further stated that, “I have read somewhere that a lot of topics we prescribe are dealt with by the Botswana National Museum. In that case the Museum can be helpful as a resource for these topics”.

In the opinion of Curriculum developer #2 the syllabus is overloaded because of the congestion in the timetable:

We educate the learners so that they pass examinations and proceed to the next level. The teachers rush to complete the syllabus rendering the teaching and learning process teacher-centred. The teachers have to use as little time as possible to deliver the content. Imagine each lesson is allocated 35 minutes and during that learner’s move between classes. In reality the class lasts 25 minutes. The learner activities in the classroom are not very effective as they are based on the lecture method of teaching and learning.

This curriculum developer did not know anything about the Botswana National Museum, and could therefore not respond to the Botswana National Museum question: “If culture could be mainstreamed in the system we could see the value of visiting the Botswana National Museum” (Curriculum developer #2). He indicated that as a Physical Education specialist, he is aware of the fact that the subject lacks the use of equipment:

The 35 learners in the class cannot access and use equipment in the given time. The approach used in schools is therefore traditional and lecture based. I am trying to

introduce teaching games to make up for the concept of mixed ability learning.

He did not have any information relating to activities designed by the Botswana National Museum to this end.

Curriculum developer #4 answered the question on the typical learner activities in classrooms as follows: “Teaching and learning in classrooms is teacher-centred. The teacher provides the content. The learners are never involved in any learner-centred task. The day the teacher gives the learners a task to perform it means that the teacher is not ready to teach”. The curriculum developer’s response to the role of the Botswana National Museum was as follows: “I only recall the Botswana National Museum’s Mobile Museum Service educational programme, but cannot exactly say what it is about”; “I cannot evaluate what I do not know about the value for my subject, Setswana. There can be collaboration with the Botswana National Museum, but the collaboration should be based on an infusion in the syllabus” (Curriculum developer #4).

Curriculum developer #5 also indicated that the “learner activities in classrooms are teacher-centred. The teachers complain about the load in the syllabus content because the activities do not make the learners understand the importance of the syllabus”. He did not have an informed opinion on the Botswana National Museum:

I do not have any information about the Botswana National Museum. I only took my children once on a weekend to the Botswana National Museum and on that guided tour we got a lot of information about Botswana. I have never thought about that, but I think art and culture would be relevant in this collaboration (Curriculum Developer #5).

According to Curriculum developer #6 for the practical subjects, learners need to do demonstrations. The nature and requirements of the subjects determine that about 30% of

the subjects' teaching time should be allocated to practical work, and 70% to theory: "Practical subjects have a high chance of being "retained" by the learners for a longer time because they are involved in the teaching and learning process". She said that she has "no clue what the Botswana National Museum stands for and cannot answer any question about it". For Curriculum developer #7 the typical activities in the classroom are teacher-centred: "They are inhibited by facilities, materials and equipment in the curriculum development process". The designed activities could be good but they need enhancement to be facilitated as well as skills building. Curriculum developer #7 did not have information on the Botswana National Museum but remarked that: "the Mobile Museum Service and Radio programme are worthwhile museum programmes that are desirable and can add value to the education system".

Curriculum developer #8 noted with regard to classroom activities that "the teacher lecturing to 45 learners about a topic and that learners copying notes from the chalk board. Teachers complete the prescribed syllabus and learners pass and get certificates, but they are not educated in accordance with the RNPE of 1994". He did not have an idea of what the Botswana National Museum can provide.

Curriculum developer #9 said that the classroom activities are teacher-based with little contribution by the learners. That is according to him: "the nature of the syllabus, it is based on theory. The activities are not relevant to practical subjects, but the reality is, there are no funds for suitable space and equipment; and there is no literature". The curriculum developer said that he passed by the Botswana National Museum many times, but he has never gone inside the museum building: "The reason might be I have never seen its relevance to education. I really do not know, but if the Botswana National

Museum has educational activities to offer, it might really assist the public schools that do not have resource materials”.

According to Curriculum developer #10 the number of times that he had been to schools, he experienced the following: “I have seen teachers going to class with chalk and paper which suggest that there is little participation by learners”. He did not have any information about the Botswana National Museum, but he noted that, “the Botswana National Museum would be welcome if they were to offer something different from the classroom”.

3. DISCUSSION

In this section the results of the empirical study are discussed using the categories identified as a result of the interviews.

3.1 THE ROLE-PLAYERS’ EXPERIENCE OF THE CURRICULUM DEVELOPMENT PROCESS IN BOTSWANA

From the results of this study, it is clear that the natural setting of the 40 participants interviewed influenced their position regarding their role in the curriculum development process in Botswana.

3.1.1 Teachers

Table 6 below illustrates the extent of the teachers’ experience of the curriculum development process.

Table 6: Teachers experience of the curriculum development process

Variable	n
No idea	2
Assume/heard of	7
Participated	1

The responses of the teachers as gleaned from the collected data were: Two teachers had no idea of what happened during the curriculum development process (n=2). Seven teachers assumed that they knew what the concept entailed, or that they had heard of it from friends or the media (n=7). They had actually not participated in a curriculum development process in the past. One teacher participated in the curriculum development process (n=1), she gave the following account of her participation:

The curriculum development process takes place through workshops, panel discussions and interviews. A panel of teachers meet and review the syllabus; follow no methodology and develop the curriculum. I am a member of the taskforce and we are approximately 20. The criteria for selection into the taskforce are unknown, but I thought members represent regions.

Even though she had participated in the curriculum development process, the teacher did not understand the extent of her contribution as part of the panels in the curriculum development process.

Interviews confirmed that teachers are as a rule excluded from all the major phases of the curriculum development process; they only participate (n=1) when panels start developing syllabi: “ ... It is the duty of the curriculum developer who is a subject specialist to develop the scope and sequence charter of their subjects. This is then referred to the standing committee – about fifteen teachers for their input.

The remaining teachers (n=7) confirmed the above and declared they are only “familiar” with the concept syllabus:

I am not familiar with the concept curriculum development, we speak of syllabus. I am more familiar with the term syllabus. I do not exactly know what is entailed in the curriculum development process, but, I assume the curriculum development to be the review of the current syllabus. During curriculum development a task force proposes the syllabus topics and recommends the topics to the panel.

The above data and responses are further corroborated by the biographical data of the teachers who participated in the study. Their work experience spanned between three and fifteen years, yet only one teacher (n=1) was involved in the syllabus development process. The teachers understood their role in the curriculum development process to be “to advise the MoESD on areas of improvement in the curriculum”, and, yet the sample of teachers (n=10) maintained the view that they:

hear from colleagues that officers at the Department of Curriculum Development and Evaluation undertake a study on the curriculum and leave out a teacher who does the groundwork. If teachers were involved we would all understand what the curriculum stands for.

All of the interviewed teachers, including the one teacher who had participated in the process, used the concept syllabus instead of curriculum.

The extent of the teachers’ experience of the curriculum and curriculum development process in Botswana in a nutshell were as follows:

- They are not knowledgeable about the curriculum development process.
- The curriculum has something to do with the course of study in schools.
- It entails intended activities within a given period in a learning institution.
- The curriculum intentions are unclear.
- All teachers are examination-driven.

- The learners' pass rates are an indication that learning took place.
- The teachers are only interested in completing the syllabus.
- There exists a problem regarding the theoretical “nature” of the practical subjects such as Design and Technology.
- The function of teachers is mainly to keep records of the performance of learners.
- The teachers receive the final syllabus only to implement it in their classrooms.
- The teachers are only concerned about assessment criteria.
- Unlike the core subjects (Mathematics, Science etc.), the optional subjects (Art, Home Economics, etc.) have no significance in the school curriculum.
- The Botswana school curriculum is too loaded.

The teachers suggested the following to the curriculum developers in Botswana as a way forward:

- The need for more supervision en route to the implementation of the curriculum at school level.
- The need to ensure that teachers interpret the curriculum objectives uniformly.
- The need to reduce the number of school subjects.
- The need to revisit the content of all school subjects and to reduce the prescribed topics.

3.1.2 Museum employees

Table 7 below illustrates the museum employees' experience of the curriculum development process.

Table 7: Museum employees’ experience of the curriculum development process

Variable	n
No idea	8
Assume/heard of	2
Participated	0

Of the ten interviewed museum employees (n=10), eight had no knowledge (idea) of the curriculum development process (n=8):

I have never experienced the curriculum development process, but I suppose the curriculum has to be reflective of and be informed by the National Vision from primary school level onwards. All professionals in the various fields must be involved in the process.

I have no experience of the curriculum development process, but had to contribute a topic to my colleague at the Education division sometime in the 1990s.

Only two had either an idea or heard about the curriculum development process (n=2): “I heard that in the 1990s at secondary school level the MoESD used to ask for contributions from the Education Division in the Botswana National Museum who would in turn ask for topics from other divisions”. None of the museum employees had participated in the curriculum development process (n=0).

The above is corroborated by the next quote from one of curriculum developers: “Although the present curriculum development process is good, it is not a perfect one. It would be perfect if more stakeholders were involved”.

Below is a summary of the museum employees’ experiences of the curriculum development process:

- They have no idea of what the curriculum development process entailed.

- They had never been part of the process.
- They are of the opinion that experts and other role-players are not involved in the process.
- These museum employees that were involved in the curriculum development did so indirectly.
- The emphasis is still on theory only.

3.1.3 Curriculum developers

Table 8 below illustrates the curriculum developers’ experience of the curriculum development process.

Table 8: Curriculum developers experience of the curriculum development process

Variable	n
No idea	0
Assume/heard of	3
Participated	7

Of the ten curriculum developers (n=10) interviewed, seven indicated that they had participated in the curriculum development process (n=7). Three of the curriculum developers did not participated (n=3), but read about the process in the Curriculum Development Guidelines.

According to the curriculum developers, the curriculum development process has stayed unchanged overtime – past and present. The process has never changed since the 1970s: “The curriculum standards were set as far back as 1977 and those are the standards that guide our work today.”

All the curriculum developers are supposed to follow the same process:

We translate the policy objectives into a Curriculum Blueprint for the different levels of education to cover broad issues on education and programme aims. These programme aims we translate into individual subject aims. This is the stage where syllabi development begins. From the subject aims we develop subject topics and content. It is the duty of the curriculum developer who is a subject specialist to develop the scope and sequence charter of their subjects. This is then referred to the standing committee who are about fifteen teachers for their input. What they have agreed on is then referred to the subject panel that includes all stakeholders: the University of Botswana, a representative from the Department of Secondary Education, a representative from the senior secondary teachers for the different subjects, a representative of Teacher Training and Development, a representative from the Department of Primary Education, a representative from primary school teachers, a representative from the Special Education and a representative from the Examinations Council. The subject panel considers the draft that eventually goes for interdepartmental evaluation in the Department of Curriculum Development and Evaluation for approval. The agreed product is finally passed by the Permanent Secretary in the MoESD to be implemented at schools.

The functions of each of the curriculum developers are provided in the Curriculum Development Guidelines. The curriculum review process is due every five years.

The curriculum developers identified the following shortcomings in the curriculum development process:

- All stakeholders do not attend meetings.
- Learners are not involved.
- Teachers are resentful of change.
- No philosophy underpins the process.
- The process has never changed since the First Education Policy of 1977.

- Some of the curriculum developers interviewed have not been involved in the process.
- The curriculum development process stayed much the same – past and present.
- No school inspections are done to monitor the implementation of the curriculum at school level.
- Poor quality of the curriculum documents.
- Praxis is a problem.

The curriculum developers suggested the following improvements:

- Industry should be involved in the curriculum development for the industry-based subjects.
- The curriculum should be culture-driven.
- There should be agreement between the various role-players on the quality of education and the quality of indicators and measures.
- All the role-players should be involved at all the different stages of the development process.

However, there existed a discrepancy between the responses of the curriculum developers regarding the involvement of other role-players in the curriculum development process. Some developers confirmed the involvement of teachers while others pointed to their absence in the process. Some developers would welcome learners as role-players, while others did not think that their input is necessary.

The findings of this study have shown that the curriculum developers by virtue of their positions guide the curriculum development process. As one curriculum developer puts it:

We decide on the Curriculum Blueprint, the conceptual framework of the curriculum and the subject combination. I develop detailed areas that need to be captured in the curriculum, the generic and the subject-based framework. I determine what documents and what issues in the said document should be addressed including subject aims. I determine the subjects' scope and sequence. Once done, I refer that to the taskforce comprised of teachers and other stakeholders in a draft form. My role is basically to guide and facilitate the curriculum development process.

The three curriculum developers (n=3) who did not participate in the curriculum development process, argued that they, nevertheless, “read the Curriculum Development Guidelines which refer to their job description; and remarked as follows: “I know that I have to guide the process as a professional. The process has been the same according to my reading.”

3.1.4 The summary

It is clear that the manner in which the curriculum in Botswana is developed determines the nature, content and scope of the subjects taught in schools, the classroom learner activities and extent of the role of each role-player in the education sector. The process followed during the curriculum development in Botswana is as follows: it starts with the national commission appointed by the President in accordance with the laws of Botswana. The members of the commission are normally politicians or technocrats without any background in education. The commission conducts the country's needs analysis. The commission deals with the broad issues of education, such as the type of subjects for each level of schooling and makes recommendations. These

recommendations are discussed by Parliament who then recommends to the MoESD the implementation of the recommendations.

The MoESD receives the recommendations “cast in stone” from Parliament to implement. These recommendations are then published as national education policy. The MoESD is presently guided by the Revised National Policy on Education of 1994. The latter is valid for 25 years, given that its recommendations had been targeted for implementation in the short-, medium- and long-term. Based on the recommendations of the RNPE (1994), the MoESD in 2002 developed a Curriculum Blueprint for the different levels of education, emphasising the programme aims for each of the stages of the education system. Each of the curriculum developers translated the programme aims into “their” subject aims. The subject aims were then converted into subject topics. The topics were developed into scope and sequence by the responsible curriculum developer. This study has, however, shown that the curriculum development process in Botswana is in the hands of the curriculum developers. The teachers, learners and the Botswana National Museum have no major role in the curriculum development process in Botswana.

A summary of the role-players’ views on their involvement in the curriculum development process were as follows:

- The role-players are not knowledgeable about the curriculum development process.
- The role-players are not informed about curriculum implementation strategies.
- The curriculum is loaded and should be revised.
- There exists no agreement on the quality of education and quality indicators and measures.

- The curriculum should be more culture-driven.
- The number of subjects has to be reduced.
- The role-players should be involved at all the different stages of the curriculum development process.

3.2 THE ROLE-PLAYERS' EXPERIENCE OF THE LEARNER ACTIVITIES IN THE BOTSWANA CLASSROOMS

This section comprises of the participants' varied experiences of the typical learner activities in the classrooms of Botswana's public schools.

3.2.1 Teachers

Table 9 below illustrates the teachers' experiences of the classroom activities.

Table 9: Teachers' experiences of classroom activities

Variable	n
Teacher-centred, passive learners	5
Learner-centred, active learners	5

The most common classroom activities identified were teacher talk (the lecture method) and writing on the chalkboard (chalk and talk), (n=5); and group work and learner presentation (giving each group a problem to discuss and present their findings to the class as whole), (n=5). The following quotes elaborate the above stated classroom activities respectively:

We do two practical activities per term. I give learners handouts to write notes at home because of lack of time and syllabus overload. The activities I do in the classroom include asking questions, lecturing, giving learners questions relating to the situation and learners describing what they see.

The activities we do in class include class discussions based on a given topic to a group. I give each group a topic to research on and present their findings to other learners in the classroom. We do practical work but our limitations here are resources, practical work. We spend most of our time in the classroom writing notes as time is also a limitation to do practical work.

The rationale put forward by the teachers for the use and value of the teacher-centred teaching and learning methods were:

- The curriculum is overloaded and teachers have to “rush” to complete the syllabus in time.
- The lack of necessary equipment such as the potter’s wheel.
- The urban environment in which the learners reside informs the attitude of the learners, namely to achieve learning quickly without effort.
- The time constraints for planning, implementing and assessing practical work.
- The motto in public schools is “well preparedness for the tests and examinations”.
- The teacher-learner ratio 1:38 in public school classrooms.

The rationale given by the teachers for the use and value of learner-centred teaching and learning methods were to:

- Assist learners’ with academic barriers; and, to provide practical competence for these learners’ future survival (sewing, craft making, etc.).
- Relate the teaching in the classroom to the learners’ authentic situations.
- Enhance the learners’ art of public speaking.
- Mould research skills in the learners.

3.2.2 Learners

Table 10 below illustrates learners’ experiences of the classroom activities

Table 10: Learners' experiences of the classroom activities

Variable	n
Teacher-centred, passive learners	10
Learner-centred, active learners	0

All learners (n=10) interviewed for this study concurred that the activities they do in their classrooms are primarily based on their teachers giving instructions and the learners writing notes and tests or answering questions orally in the classroom:

In the classroom most of the learning takes place through question and answer and we get handouts to write notes at home. At times in the classroom we spend the whole session to go over the written notes. At other times the teacher gives a short test during first session of our lesson which we revise during the second session.

In the classroom the teacher asks us questions and we answer back. Sometimes she or he makes us write notes, write quizzes and end of month tests. We rarely do practical work. Sometimes we are lectured to.

There are times we do question and answer. We do not have group discussions. These activities help the learners prepare for tests. The practical work we do are limited and based on a project we have to do for the end of programme examinations. We do some exercises, write notes, read and lately we have started a project.

From the responses of the learners interviewed, the following teacher-centred activities were identified:

- Note taking from the chalkboard.
- Completing of quizzes.
- Studying for the examinations.
- Dictating of, and reading from, notes.
- Completing handouts for homework.
- Using the question and answer method.

- Using the lecture method.
- Writing tests and examinations.
- Using the chorus method.

Some of the practical activities learners cited were:

- A project for one of the following learning areas: fine art, craft, and commercial art.
- Paper/clay or paper maché.
- Painting.
- Drawing pictures.
- Sculpting.
- Cooking and sewing.

3.2.3 Museum employees

Table 11 below illustrates the museum employees' experiences of classroom activities.

Table 11: Museum employees' experiences of classroom activities

Variable	n
Teacher-centred, passive learners	8
Learner-centred, active learners	2

Eight museum employees (n=8) described the teaching in public school classrooms to be teacher talk, chalk and talk, writing notes and learners copying notes:

Learners in the classroom act predominantly on theory, there is not much interaction. The learner activities in the classroom are mostly theoretical exercises with less emphasis on practical exercises. In the classroom the teacher gives out work, for example, tests and some reading work to learners. The learner activities in the classroom include the teacher writing on the board and the learners copying.

Two of the museum employees (n=2) imagined the classroom activities to be learner-centred to an extent:

In the classroom the teaching emphasises the use of teaching aids, so I think teachers sometimes use teaching aids and therefore learning must be learner-centred. The classroom activities include debates, research and projects by learners.

The teacher-centred activities included in the classrooms as described by the eight museum employees were:

- Chalk and talk.
- Learners copying notes from the chalkboard.
- Lecture method.
- Spelling and reading.
- Chorus method.
- Coaching to pass examinations or tests.

The learner-centred classroom activities cited by the two museum employees were:

- Composition or letter writing.
- Demonstrations.
- Presentations.
- Group work.
- Debate.
- Research.
- Projects.

3.2.4 Curriculum developers

Table 12 below illustrates curriculum developers' experience of the classroom activities.

Table 12: Curriculum developers' experience of the classroom activities

Variable	n
Teacher-centred, passive learners	9
Learner-centred, active learners	1

Nine curriculum developers (n=9) are of the opinion that the classroom activities consisted of teacher-centred activities and passive learners:

Teachers in the classroom prefer chalk and talk as it is the only way teachers can cover the content of the syllabus quickly. The syllabus is overloaded and because of the education system – education for examination – the teachers rush to complete the syllabus.

The activities in the classroom are inhibited by facilities, materials and equipment. Schools lack equipment so even demonstrations for learners are done by teachers, 35 learners in a classroom cannot access the available equipment given the 35 minutes they have to be in a lesson.

Only one curriculum developer (n=1) indicated that the activities in the classroom are learner-centred and that the learners are active: “Home Economics is a practical subject and about 30% of the time at school is allocated to demonstrations while 70% is allocated for theory”.

The curriculum developers were of the opinion that the following teacher-centred activities were taking place in classrooms:

- Chalk and talk method.
- Coaching to pass the examinations.
- Lecture method.
- Copying of notes from the chalkboard.

Learner-centred activities included in the classrooms were according to the curriculum developers:

- Games.
- Demonstrations and practical exercises.

3.2.5 The summary

Recommendation 17 of the RNPE (1994) provided for a formulation of a curriculum policy framework for integrating new subjects, themes and issues into the existing curriculum, and the criteria for determining core and optional. The junior secondary school curriculum was to emphasise the creative and performing arts such as Design and Technology, Arts and Design, Home Economics and Business Studies. Recommendation 32 on the other hand, proposed a minimum of 10 and a maximum of 11 subjects for junior secondary schools. Each learner should take eight core subjects, namely English, Setswana, Social Studies, Mathematics, Integrated Science, Design and Technology, Agriculture and Moral Education. Each learner should then select a minimum of two and a maximum of three optional subjects taken from the following options: a) Practical Studies: Home Economics, Commerce, Principles of Accounts/Bookkeeping and Office skills; b) General Studies: Religious Education, a Third Language and Art (Botswana Government 1994a:63).

In accordance with the RNPE's (1994) quest to vocationalise the curriculum (by giving all academic subjects a vocational orientation, and, by introducing new technical and vocational subjects – thus broadening the curriculum) the recommendations give the impression of classroom learner activities that emphasise active, learner-centred, authentic and creative work.

The reality in the classrooms is that the emphasis is still on less hands-on activities in the classroom and the curriculum is overloaded. Some of the role-players involved in this study explained the situation in the classrooms in the following manner:

unlike in the past, the current curriculum is loaded with a lot of subjects at secondary school level. The MoESD has also added many topics per subject, the past curriculum had fewer subjects, but the present curriculum has increased the number of subjects a learner is expected to take in secondary school. For the future I would suggest that the syllabus be decongested of the topics.

We follow the Junior Certificate syllabus, but the current Junior Certificate of this art curriculum is loaded. It is as a result of this that we rush through to complete the syllabus. Having to do four projects is too much for the Junior Certificate learner. My recommendation would be 1 project and 1 controlled paper.

They suggested a decrease in subjects, topics, projects and assessment tasks. The teachers were of the opinion that the practical exercises would be good as long as they reinforced what is being taught. The present activities in the classroom are still teacher-centred.

The activities in the classroom comprise, according to the various role-players are chalk and talk, learners copying notes from the chalkboard, the lecture method, spelling and reading using the chorus method, coaching to pass the examinations and tests – the teacher rush through the syllabus due to the time factor. All role-players suggested that classroom activities should be interactive emphasising hands-on activities for learners.

The role-players' specific comments on the learner activities in the classroom were:

- The teachers teach for examinations. The more learners who pass the subject, the clearer it becomes that learning took place.
- The schools are just interested in completing the syllabus.

- The practical subjects emphasise theory, and unlike the core subjects, the optional subjects have no standing in the school curriculum.
- There is a lot of chalk and talk with few practical exercises.

3.3 THE ROLE-PLAYERS' PERCEPTIONS OF THE TYPICAL BOTSWANA NATIONAL MUSEUM ACTIVITIES

In this section the role-players' perceptions of the activities that the Botswana National Museum provides are presented.

3.3.1 Teachers

Table 13 below illustrates the teachers' perceptions of the typical museum activities.

Table 13: Teachers' perceptions of typical museum activities

Variable	n
No idea	9
Show and tell	0
Museum educator active/learners active	1

Nine teachers (n=9) stated that they had never been to the Botswana National Museum, and therefore do not know what educational activities the Botswana National Museum could offer to schools. None of the teachers (n=0) linked the activities of the museum to the show and tell of objects. One teacher (n=1) had experienced the activities of the Botswana National Museum and indicated that the learner activities in the museum are learner-centred.

The teacher who visited the museum indicated his perceptions of the value of the museum activities for schools as follows:

- Given the shortage of teaching and learning support materials in schools the “materials of the Botswana National Museum will contribute to the teachers’ teaching and learning – it will be more positive and more realistic”.
- The visit to the Botswana National Museum would inspire the learners, because the learners would interact with the museum exhibits.
- The activities for the learners in the Botswana National Museum are very different from the activities in schools, because the standard is very high and includes different ideas.

The nine teachers who were ignorant about the typical activities of the museum responded as follows:

- There is no link between the school curriculum and the activities of the Botswana National Museum.
- The museum “no longer communicates with schools” and “schools do not know what takes place in the museum”.
- Teachers could use the museum collections to teach learners in the “limited” time.
- The Mobile Museum Service programme was heard of but they did not know what the programme has to offer.

3.3.2 Learners

Table 14 below illustrates the learners’ perceptions of the typical museum activities.

Table 14: Learners' perceptions of typical museum activities

Variable	n
No idea	9
Show and tell of objects	1
Museum educator active/ learners active	0

Nine of the learners (n=9) had never been to the Botswana National Museum:

I have never been to the Botswana National Museum, but as a school we undertook a 1 day trip to Thapong Visual Arts Centre.

I have never been to the museum and no nothing about that. I hear the Museum is about the lifestyle of the past.

One learner (n=1) had visited the Botswana National Museum as part of a primary school excursion:

I have been to the Botswana National Museum, Tsodilo hills, Oodi Weavers and Thapong Visual Arts Centre. The visit to these places gave me ideas of what I can do with my work. I got inspired by the different media I saw. Collaboration between the schools and the Botswana National Museum would enable us to ask more questions so we learn. We would get exposed to different media and different styles of painting and drawing. We would have the opportunity to learn different designs and different ways to express ourselves.

The learners' perceptions of the typical learner activities provided by the museum were as follows:

The positive perceptions:

- The museum activities could assist to improve the standard of their performance.
- They could pick up information easily.
- They could get "better marks during the examinations".

- The museum might be “helpful to my schoolwork, I thus will be interested to participate”.

The negative perceptions:

- They have no idea about future activities.
- The museum focuses mostly on History and would assist Social Studies learners only.
- It contains only the information on the lifestyle of the past.
- It is a government office and “how does it involve people that do not work for it”.

3.3.3 Museum employees

Table 15 below illustrates the museum employees’ views on the typical museum activities.

Table 15: Museum employees’ views on typical museum activities

Variable	n
No idea	0
Show and tell of objects	10
Lecture method versus active learners	0

All ten museum employees (n=10) were convinced that the museum would provide the learners with visual representations of what they were taught in schools, and that the museum objects could scaffold the school lessons. None of the museum employees (n=0) indicated that the museum uses lecture-based presentations:

The schools’ lack of real objects resort to the use of teaching aids and demonstrations whereas the museum activities on the other hand, comprise the use of real objects, film shows, demonstrations by makers of the objects. The museum uses education kits which are interactive and learners would get a chance to hold and feel

the objects and thus take long to retain the memory of the objects they saw.

The museum employees' list of typical museum activities included:

- Mobile Museum Service taken to the schools, “Pitse ya Naga”.
- Film shows.
- Museum-in-a-Box.
- Radio Programmes.
- International Museum Day.
- Exhibitions.
- Guided tours.
- Questionnaires on objects and displays.
- Interactive education kits.
- Research information.
- Custodian of heritage.
- Inculcate a sense of national pride.
- Demonstrate the value of culture.

All the above activities are learner-centred; and the learners are active as they participate in all the activities

3.3.4 Curriculum developers

Table 16 below illustrates the curriculum developers' perceptions of the typical museum activities.

Table 16: Curriculum developers' and typical museum activities

Variable	n
No knowledge	10
Show and tell	0
Museum educator active/learners active	0

All ten of the curriculum developers (n=10) confirmed that they had never experienced any educational programme offered by the Botswana National Museum. None of the curriculum developers (n=0) had been to the Botswana National Museum and were knowledgeable about of all the museum activities.

A summary of the curriculum developers' perceptions of typical museum activities were as follows:

- The activities might be useful in the implementation of the curriculum.
- They have heard good things about the Mobile Museum Service.
- A lot of the prescribed topics might be dealt with in the museum.
- If culture is mainstreamed in the curriculum the value of a visit to the Botswana National Museum would be indispensable.
- The Mobile Museum Service and the Radio programmes could add value to the education system.
- The museum could assist the public schools that do not have enough or any resource materials.

3.3.5 The summary

The recommendations of the RNPE (1994) could also be achieved by integrating the museum experience into classroom activities. For example, experiences like the Mobile Museum Service and the Museum-in-a Box. The activities included in the Museum-in-a-Box project are most suitable for subjects such as Setswana, Art, Design and Technology, Home Economics and Social Studies. Learners could also create objects for the project during the school holidays.

The various role-players involved in this study, identified the following ways that schools could benefit from using the Botswana National Museum as an educational resource:

- According to the teachers, the museum could develop and market young artists and assist in the teaching and learning process in the classroom.
- For the museum employees, the service that the museum could offer schools are among others the Mobile Museum Service “Pitse ya Naga”; film shows; the Museum-in-a Box; the Radio Programmes; the International Museum Day; exhibitions; guided tours; questionnaires on objects and displays; interactive education kits; and research facilities.
- The learners were of the opinion that the Botswana National Museum’s activities would assist to improve their research skills and the standard of their performance in subjects such as Art, Home Economics and Design and Technology; and disseminate information that would help them to get better marks during examinations.
- For the curriculum developers, the collaboration with the Botswana National Museum would be useful to schools because a lot of the prescribed topics are dealt with in the museum activities; but especially if culture is mainstreamed into the

curriculum the value of visiting the Botswana National Museum would be indispensable and the museum might assist those public schools that do not have resource materials.

3.4 THE ROLE-PLAYERS' OPINION ON A POSSIBLE COLLABORATION BETWEEN THE BOTSWANA NATIONAL MUSEUM AND SCHOOLS

In this section, the role-players' opinions on what they thought would be the value of a collaboration between the Botswana National Museum and schools are described.

3.4.1 Teachers

Table 17 below illustrates the teachers' opinion on a possible collaboration between the Botswana National Museum and schools.

Table 17: Teachers' opinion on a possible collaboration between the Botswana National Museum and schools

Variable	n
No idea	0
Good idea	10
Bad idea	0

None of the teachers (n=0) thought negatively about a possible collaboration between the Botswana National Museum and schools. All ten teachers (n=10) interviewed admitted that a possible collaboration between the Botswana National Museum and schools would be a good idea. The teachers argued that:

Based on what a teacher is pursuing and looking at the support materials, it is important that public schools liaise more with the Botswana National Museum because it has a lot of facilities and materials that will enable our learning to be more positive and more realistic.

At present we have no collaboration with the Botswana National Museum because of workload. The moment we arrange a visit we lose out on our lesson. The Botswana National Museum needs to reach out more. They need to be mobile – involve the learner and the teacher in their activities.

The syllabus has to be planned that it relates with support materials and education centres.

The teachers added that the specific value for schools would be:

- The museum could market young artists and develop them.
- Schools need partners who can assist in the teaching and learning process.

3.4.2 Learners

Table 18 below illustrates the learners’ opinion on a possible collaboration between the Botswana National Museum and schools.

Table 18: Learners’ opinion on a possible collaboration between the Botswana National Museum and schools

Variable	n
No idea	4
Good idea	3
Bad idea	3

Four of the learners (n=4) said that they had no idea what might come out of a Botswana National Museum and school collaboration, and indicated that they “had never been to the Botswana National Museum and would not know what the Botswana National Museum can offer to public schools”. Three of the learners (n=3) were of the opinion that there is a need to collaborate with the Botswana National Museum because:

Collaboration between the Botswana National Museum and public schools would enable us to ask more questions – so that we learn. We would get exposed to different media, different styles of painting and drawing. We would have the

opportunity to learn different designs and different ways to express ourselves.

Three of the learners (n=3) opined that there is no need to collaborate with the Botswana National Museum because as one learner expressed his view: “The Botswana National Museum is about the lifestyle of the past. There is no point for collaboration”.

3.4.3 Museum employees

Table 19 below illustrates the museum employees’ opinion on a possible collaboration between the Botswana National Museum and schools.

Table 19: Museum employees’ opinion on a possible collaboration between the Botswana National Museum and schools

Variable	n
No idea	0
Good idea	10
Bad idea	0

None of the museum employees (n=0) had any negative opinion on a possible collaboration between the Botswana National Museum and schools. All ten museum employees (n=10) opined that there exists a need for schools to collaborate with the Botswana National Museum. As one of the museum employees puts it:

The schools for lack of real objects resort to the use of teaching aids and demonstrations whereas the museum activities on the other hand comprise the use of real objects, film shows, demonstrations by makers of the objects. The museum uses education kits which are interactive and learners would get a chance to hold and feel the objects and thus take long to retain the memory of the objects they saw.

3.4.4 Curriculum developers

Table 20 below illustrates the curriculum developers' opinion on a possible collaboration between the Botswana National Museum and schools.

Table 20: Curriculum developers' opinion on a possible collaboration between the Botswana National Museum and schools

Variable	n
No idea	0
Good idea	10
Bad idea	0

None of the curriculum developers (n=0) opined negatively on a possible Botswana National Museum and schools collaboration. All ten curriculum developers (n=10) indicated that a possible collaboration between the Botswana National Museum and schools would be good because the Botswana National Museum is an educational resource even though they could not point exactly to what type of resource it is:

I have read somewhere that a lot of topics we prescribe are dealt with by the museum. In that case the museum can be helpful as a resource for these topics. The Botswana National Museum would be welcome if they were to offer something different from the classroom. Pitse ya Naga and Radio programme are worthwhile museum programmes that are desirable and can add value to the education system. If culture could be mainstreamed in the system we could see the value of visiting the Botswana National Museum.

3.4.5 The summary

The ten teachers (n=10) who were interviewed highlighted the fact that public schools lack facilities to effectively teach and learn the practical subjects. For example, 38 learners in one classroom have to share one potter's wheel. A possible collaboration with

the Botswana National Museum would therefore be welcomed. They reiterated as follows:

.... It is important that public schools liaise more with the Botswana National Museum because it has a lot of facilities and materials that will enable our learning to be more positive and more realistic.

The Botswana National Museum possesses major collections in the Archaeology, Natural History, Art and Ethnology departments. The Botswana National Museum holds musical instruments, baskets, traditional house-hold utensils and crafts, guns, bicycles and audio-cassettes of oral history and cultural events. The archaeology section holds stone tools, potsherds, ostrich eggshells, beads. The art section collects works of art and crafts of importance to the nation of Botswana, and internationally. The natural history section has a variety of entomology, geology and herbarium specimens.

The museum employees' views regarding the need for a collaboration between schools and the Botswana National Museum are summarised as follows:

The schools ... lack ... real objects ... the museum activities on the other hand comprise the use real objects, film shows, demonstrations by makers of the objects. The museum uses education kits which are interactive and learners would get a chance to hold and feel the objects and thus take long to retain the memory of the objects they saw.

The Botswana National Museum activities are predominantly interactive learners touching and smelling real objects. The curriculum developers echoed the same sentiments as they believed that the museum is an educational resource, although they could not point exactly to what type of resource: "The Botswana National Museum would be welcome if they were to offer something different from the classroom."

The role-players blamed the Botswana National Museum for not doing enough to show what it is capable of. Some of the learners thought that the museum is only about social studies and cannot help them to pass the end of level examinations. Others, however, emphasised the value of the exposure to different media, styles, designs, etc.

4. CONCLUSION

In this chapter the findings of the qualitative research project study were analysed, discussed and presented. The biographical information of the 40 participants was presented in tabular form. This was done according to the different categories of interviewees: teachers, learners, museum employees and curriculum developers.

The data collected from the interviews with the 40 participants were presented in narrative form. The responses were presented according to the three identified categories: the curriculum development process in Botswana (their experiences of and functions in the curriculum development process); the typical learner activities in the classroom and in the Botswana National Museum (their views of the typical learners activities in the classroom and in the Botswana National Museum); and collaboration between the Botswana National Museum and schools (their ideas about a possible museum and school collaboration).

The responses were decoded and the findings were discussed. The data analysis of this study revealed that the curriculum development process in Botswana has not changed since 1977; the curriculum development process was exclusively done by curriculum developers; the learners, the teachers and the museum employees were not involved in the curriculum development process. It was also revealed that the curriculum developers, the teachers and the learners were not familiar with the Botswana National Museum's

education programmes; and that the teaching and learning in the Botswana public school classrooms is teacher-centred with little use of authentic teaching and learning support materials. The study further revealed that all role-players were positive about a possible collaboration with the Botswana National Museum.

In the next chapter, Chapter 5, the findings, conclusions and recommendations of the study are presented.

CHAPTER 5

FINDINGS, CONCLUSION(S) AND RECOMMENDATIONS

1. INTRODUCTION

In this chapter, the findings of the study are summarised, the conclusions are presented and recommendations are put forward. The chapter concludes with some final remarks.

2. FINDINGS

The researcher set out to investigate the possibilities of the Botswana National Museum as an educational resource in public school classrooms. The main body of the study was divided into four chapters, with the fifth chapter being the final chapter.

In Chapter 1 the background of the study was presented (see Chapter 1, pp. 1-19). The origin and nature of the problem was discussed. The role of the museum in education was unpacked, with special reference to the Botswana context. In view of the above, the research question posed for this study was: **How can the Botswana National Museum extend its services to become an educational resource and partner in public school classrooms to improve the quality of education, promote the IKS of Botswana and develop the core competencies of Botswana's citizens?** (see Chapter 1, pp. 19-20)

To answer the research question, the following three sub-problems were outlined:

- **The curriculum development process in Botswana**

Botswana follows the technical approach to curriculum development; the Curriculum Development Division of the MoESD plans and develops the curriculum with little or no

input from practising teachers or any other role-players in education especially the Botswana National Museum (see Chapter1, pp. 19-23).

The limitation of a technical and centrally-produced curriculum, with regard to among others, learning-teaching support materials (LTSMs) in the classroom is the inability of learners to be able to contextualise knowledge, skills, values and attitudes beyond the lower levels of Bloom's taxonomy of the cognitive domain in authentic contexts. The importance of developing a locally-based curriculum cannot be under-estimated. The teachers in a cluster, circuit or region could be given training that will enable them to develop learning-teaching support material and customise it to their learning environment. Museums could assist learners to produce their own learning-teaching support materials, and where learners do so, the level of learning is often much higher than any single learner could otherwise attain, provided that they have the appropriate challenge and support. This is the basis of a critical approach to a curriculum planning and learner-centred approach to education, to develop each learner's ability to construct her or his own understanding.

The curriculum development process in Botswana is weak. The "different sections", technical approach and the RNPE's (1994) critical pedagogy approach have not been synthesized into an efficient and well-coordinated machinery that could address the challenges as posed by Botswana's new vision outlined in the RNPE document of 1994 and Long-term Vision 2016 document of 1997. During the curriculum development process only a few teachers are chosen to represent subject panels. They may only put forward suggestions regarding the syllabus, learning and teaching support materials.

Curriculum planning, development and change designed by small teams, panels and task forces run the risk of creating an in-group of believers and out-group of resisters.

- **Typical learner activities in public school classrooms and the Botswana National Museum**

The Kedilwe Commission of 1992 was tasked with the review of the education system and its relevance in terms of the education policy of 1977, and to identify problems and strategies for further development in the context of Botswana's changing and complex economy. A striking feature of the review was pedagogical renewal in Botswana. The latter had to do with attempts to switch to a learner-centered, activity-oriented pedagogy, away from the teacher-dominated instructional practices of the past.

In the Botswana present-day classroom situation the teaching comprises primarily verbalisation, abstraction and theory. Practical activities incorporated in the Botswana classroom situation is artificial and limited, and cannot be used by learners after completing school. Teaching in Botswana classrooms is invariably still traditional and authoritarian, with little or no recognition of the learner's potential to actively construct classroom knowledge. Apart from the teacher lecturing from behind a podium and the learners listening passively and silently, the teacher is also asking questions and learners are giving the answers. Accordingly, classroom teaching is book-centred and a one-way process, that is from the teacher to the learners. In this way, little critical thinking and creativity are fostered in the learners.

The view of schooling as vocational preparation coupled with an examination culture that filters learners towards paid jobs in the labour market has given life and sustenance to pedagogical classroom practices founded on behaviourism.

The museum activities are learner-centred, and have been learner-centred for a long-time. In the museum real objects are used and handled by visitors. The Botswana National Museum could contribute to fostering intellectual growth and creativity; enabling every citizen of Botswana to achieve her or his full potential; developing the necessary moral, ethical and social values; and inculcating the Botswana cultural identity, self-esteem and good citizenship as per aspirations of the Revised National Policy on Education (1994). In addition to teaching ways of critical thinking, the Botswana National Museum has an important role to play in fostering individual creativity and understanding the creativity of others. The school for its part provides vital tools in defining, understanding and preserving societies, explaining cultural traditions, and informing the experts or “gatekeepers” who define, sustain and imbed those traditions in society. Together, museums and schools can therefore offer important knowledge, skills, values and attitudes critical to cultural advancement and global competitiveness.

- **Lack of collaboration between public schools and the Botswana National Museum**

Museums are a largely underutilized education resource with a vast potential to revitalize education. Forming partnerships with museums has become one response to the demand for stronger interaction between schools and communities. The Botswana National Museum, although created after independence in 1966, was among the first to realize that its prime role was educational: “even though we started from scratch when we built our

own museum, we realized that we could be doing much more to let people know that we existed. And we wanted to catch people at an early age, in primary school”. Museums are educational institutions and yet have difficulty in demonstrating educational effectiveness.

There is a lack of collaboration between schools, the local communities, and other equally important educational partners such as museums. Consequently, classroom teaching and learning is confined to the knowledge and expertise of the teachers and textbooks. Classroom activities are often dominated by guesswork on the part of the learners and teachers, sometimes on issues that the local communities may have expert knowledge of (for instance, local handicraft making). The classroom is dominated by rote-learning, and the question-and-answer method, even where authentic teaching and learning support materials are available. The Botswana National Museum as an educational resources and information centre plays no role in the teaching and learning of the practical subjects of which it might be well vested in, such as the making of local handicrafts. The Botswana National Museum is also not proactive to adequately avail this information to complement the mainstream curriculum.

The motivation and the aims of the study were then outlined (see Chapter 1, pp. 44-46). The clarification of the concepts used in the study followed (see Chapter 1, pp. 46-63). The research methodology and demarcation of the field of study were briefly discussed (see Chapter 1, pp 63-64) and finally the sequence of the work programme was finally put forward (see Chapter 1, pp 68-69).

Chapter 2 outlined the curriculum development process in Botswana with special reference to museums. An historical survey of the curriculum development in Botswana was provided (see Chapter 1, pp 71). Included were the curriculum developments in the pre-independence period (genesis to 1966), the National Policy on Education period (1977-1993) and the Revised National Policy on Education period (1994-2009). A section was devoted to curriculum and museums with special reference to the Botswana National Museum (see Chapter 1, pp. 93-102). The latter was preceded by an outline of the nature and functions of museums. The views of international scholars on museum education were also presented. The emphasis was on aspects such as the genesis and the evolution of museum education (see Chapter 1, pp. 102-106), a museological model (see Chapter 1, pp. 106-110), various learning models and approaches (see Chapter 1, pp. 119-122), and the museum school relationship approach (see Chapter 1, pp. 123-126). The literature review showed that a fruitful collaboration between museums and schools is possible. The literature further indicated that the importance of the museum, with its emphasis on handling objects as an alternative and/or complimentary activity to the school's classroom chalk and talk teaching strategy.

In Chapter 3 the research design of the empirical study (see Chapter 3, pp.128-155) has been outlined. The qualitative research approach was chosen because of its ability to deal with participants in their natural setting and to allow the researcher to deal with social processes and meaning. The qualitative research approach is also flexible; and therefore the researcher designed and redesigned all aspects of the study to ensure that the research is on course. The method of data collection was described. It was the use of semi-structured interviews with ten museum employees, ten curriculum developers, ten teachers and ten learners. Data collection techniques described in this chapter included

tape recording and field notes. In the chapter the methods of data analysis and interpretation were also discussed. The chapter was concluded with a description of the issue of trustworthiness of the research and study, that is reliability and validity.

Chapter 4 confined itself to the results of the empirical study (see Chapter 4, pp.156-184). The findings of the qualitative research project were analysed, discussed and presented. The biographical information of the 40 participants was presented in tabular form. This was done according to the different categories of interviewees: teachers, learners, museum employees and curriculum developers.

The data collected from the interviews with the 40 participants were presented in narrative form. The responses were presented according to the three identified categories: the curriculum development process in Botswana (their experiences of and functions in the curriculum development process); the typical learner activities in the classroom and in the Botswana National Museum (their views of the typical learners activities in the classroom and in the Botswana National Museum); and collaboration between the Botswana National Museum and schools (their ideas about a possible museum and school collaboration).

The responses were decoded and the findings were discussed. The data analysis of this study revealed that the curriculum development process in Botswana has not changed since 1977; the curriculum development process was exclusively done by curriculum developers; the learners, the teachers and the museum employees were not involved in the curriculum development process. It was also revealed that the curriculum developers, the teachers and the learners were not familiar with the Botswana National Museum's

education programmes; and that the teaching and learning in the Botswana public school classrooms is teacher-centred with little use of authentic teaching and learning support materials. The study further revealed that all role-players were positive about a possible collaboration with the Botswana National Museum.

Against the backdrop of the above summary the following findings were arrived at:

- The Botswana National Museum is not involved in matters concerning curriculum development and implementation. The Botswana National Museum is not only playing no role in the curriculum development process, but it is also not assisting teachers with resources for classroom teaching and learning. The curriculum development process in Botswana follows a technical approach. All role-players are not involved in the curriculum development process. According to the role-players the Botswana National Museum's education programmes could improve the quality of education in public schools, promote the IKS, and develop the core competencies of the future citizens of Botswana.
- Botswana's public schools still use the teacher-dominated instructional practices of the past, and lack the necessary teaching and learning support materials. Despite of the fact that the Botswana National Museum houses plenty of museum collections, the role-players are not committed to integrate the Botswana National Museum as an educational resource in public school classrooms.
- The curriculum developers, the museum employees, the teachers and the learners are aware of the potential of a possible collaboration with the Botswana National Museum. Most participants (n=33, 82%) in the study pointed out that such a collaboration would benefit the education system.

While the contribution of the outcomes of this study to the body of knowledge on museums and education, and particularly the Botswana National Museum and its use as educational resource in public school classrooms cannot be over emphasised, the universal applicability and generalisability of the findings might be limited. Other limitations might be:

- The scale of the study. Botswana is a vast country, with more than two hundred junior secondary schools, the semi-structured face-to-face interviews conducted in the three junior secondary schools around Gaborone might not be representative of the opinions of the teachers and the learners in all of the junior secondary schools in the country.
- The location of the study. All the interviews were conducted in and around the capital city, Gaborone where the Botswana National Museum is located, and where the potential threat for competition from other equally exciting venues serving the same educational purpose exists. The natural setting of the city might have influenced the opinions of the participants. The participants might have taken the Botswana National Museum for granted and viewed it not worthy of a visit, or the museum employees might have been influenced by subjectivity.

Notwithstanding the above limitations, the findings of this study might provide pertinent pointers to a number of crucial education issues warranting careful consideration and attention from all role-players in the education sector. These issues are:

- The fact that there is only one Botswana National Museum in the country with a defined Education Division; and that there is also only one Department of Curriculum Development and Evaluation, all with centralized functions which gives credibility to the study's findings, and conclusion(s) arrived at. Chances are

that the opinions expressed on these two institutions are likely to be a general reflection of the situation prevailing in the country.

- The opinions of all role-players were consistently similar.
- All participants in the study were from government departments, and the long-term programmes would have been approved at central level by Parliament; as such they would follow prescribed guidelines informed by government policies. Chances are that the opinions expressed on the programmes and activities of each of the departments could be generalized and transcended beyond the sample schools where the interviews were conducted.

3. CONCLUSION (S)

Against the backdrop of the outcomes of this study, the following conclusion was formulated: The Botswana National Museum can extend its education programmes, such as, the Mobile Museum Service, the Museum-in-a-box, the radio programmes and exhibitions to become an educational resource and partner in the teaching-learning process in public school classrooms. In this way it can contribute to improve the quality of education in Botswana, promote the Indigenous Knowledge Systems of Botswana and develop the core competencies of Botswana citizens.

4. RECOMMENDATIONS

The following recommendations are based on the research questions that informed the study, the review of the literature and the results of the empirical study.

4.1 GENERIC RECOMMENDATIONS

- A critical approach to the curriculum development process is recommended. Each step in the curriculum development process should be debated by all role-players, namely the teachers, the learners, the Botswana National Museum employees and the curriculum developers. The lateral model of curriculum development should be adopted instead of the current top-down model.
- Botswana' IKS should be mainstreamed in the school curriculum as a matter of policy to promote indigenous technology, art, design, etc. Learners in an African setting such as Botswana have a stronger connection with an identity rooted in the immediate community. The Botswana National Museum should as a result, know what collections or educational programmes to avail for supplementing the curriculum and, redesign the procedure of how to make these resources available in public school classrooms.
- Topics from Botswana's IKS should be included in the subjects Home Economics, Art and Design and Technology for each level of schooling and should have been agreed upon by all role-players – teachers, learners, museum employees and curriculum developers.
- Curriculum developers and pre-service and in-service teachers should be continuously trained and inducted into Botswana's IKS and the role of the Botswana National Museum as an educational resource to this end.
- An environment for self expression by learners should be created because learners have an immense capacity for activity, extensive enthusiasm, and wide-ranging curiosity. When subjected to a classroom context, however, these dynamic attributes frequently appear stifled rather than developed, and misdirected rather than focused on productive enterprises. Learning using the museum is

recommended because museums provide engaging methods and materials for learning and understanding during all stages of schooling. Learning in a museum environment is an apprenticeship from childhood to adult masters. The museum activities are learner-centred, and have been learner-centred for a long-time. In the museum real objects are used and handled by visitors.

- The first President of an independent Botswana, Sir Seretse Khama's views should be the vision for Botswana's education system:

We were taught, sometimes in a very positive way, to despise ourselves and our ways of life. We were made to believe that we had no past to speak of, no history to boast of. The past, so far as we were concerned, was just blank and nothing more. Only the present mattered and we had very little control over it. It seemed we were in for a definite period of foreign tutelage, without any hope of our ever again becoming our own masters. The end result of all this was that our self-pride and our self-confidence were badly undermined. It should now be our intention to try to retrieve what we can of our past. We should write our own history books to prove that we did have a past, and that it was a past that was just as worth writing and learning about as any other. We must do this for the simple reason that a nation without a past is a lost nation, and a people without a past is a people without a soul.

- A curriculum that focuses on how learners utilize their talents to sustain themselves, and ensure that learning remain as a continuous process should be envisaged.
- The interactive experience model that provides a framework for understanding how "museum-going" is a social event should be reconsidered. The interactive experience model provides a framework for understanding how a learner is engaged in a regular education environment.
- The social relations between museums and schools should be exposed and acknowledged. Any attempt to create opportunities for transformation within museum-school relationships must first attempt to render explicit what is taken for

granted and provide an objective sociological account of how the two institutions operate within social space.

- Teachers should be empowered to initiate a transformation of relations that would advantage them. The empowerment of teachers in the museum setting requires them to be able to engage in a “game” that they are familiar and skilful in playing.
- Higher education institutions should incorporate a study of the museum and education as part of their teacher education programmes. This knowledge would not only enable them to participate more, but also to conceive of ways in which they can engage with museums to achieve their educational objectives.
- The schools and Botswana National Museum collaboration can help school as long as museum employees that specialise in certain fields are invited by schools to teach about their topics of speciality. They would in the process understand what schools need most and prepare some educational packages for use by teachers when teaching such topics.
- The concept of the Brigade Movement should also be recommended as an exemplar for future collaborations between schools and the Botswana National Museum. A combined academic and practical training aimed to provide vocational training which would also meet the needs of the individual local community. Learners built their own classes, made some of their own furniture and produced their own food in school. Examples were the Swaneng Hill School and the Shashe River School. The Swaneng Hill School in Serowe was a powerhouse of talent, skills and knowledge in its local community; and the staff and the learners were involved in resource, skills and income and expenditure surveys. The objectives were to equip learners with skills and knowledge for development, to make the school a focal point for community development, and

to instil a sense of social justice in the educated minority. The founder wanted to change the direction of the schooling system, away from the production of intellectuals to the production of workers with skills matched to the market-place. The Brigade Movement was meant to ensure that learning remained a continuous process.

- Given that most learners learn by observing tasks and activities, and are given tasks to do according to what they are ready to try out, and can manage it is recommended that the latter should be the basis of classroom teaching and learning. The Botswana National Museum can contribute to the above by fostering intellectual growth, and enabling every future citizen of Botswana to achieve her or his full potential; developing the necessary moral, ethical and social values; and inculcating a cultural identity, self-esteem and good citizenship as per the aspirations of the Revised National Policy on Education (1994). In addition to teaching ways of critical thinking, the Botswana National Museum has an important role to play in fostering individual creativity and understanding the creativity of others. Schools provide vital tools in defining, understanding and preserving societies, explaining cultural traditions, and informing the experts who define, sustain and imbed those traditions in society. Together, museums and schools will therefore offer important knowledge, skills, values and attitudes critical to cultural advancement and global competitiveness.
- The promotion of the teaching strategy, object-teaching is recommended. In this teaching strategy the learner acquires knowledge by observation and experimentation; and the purpose of this teaching strategy is the museum object itself. Museum objects embody values, tell more and communicate more directly than a description (in written or spoken words, pictures, film or animation). The

Botswana National Museum could offer the learners opportunities to closely examine objects or specimens for comparison that allow trends and patterns to be deciphered; natural learning that incorporates the sharing and communication of ideas and the raising of questions; and to develop perceptual skills that teach how to gather information from objects and experiences. The object-teaching strategy engages the senses, stimulates, inspires and sometimes even overwhelm. The Botswana National Museum could support a wide range of different types of learning, formal (learning which results from engagement in the curriculum and which is driven education planned by a teacher or tutor), informal (learning which begins at birth and develops throughout life through social interaction with other people) and self-directed (learning which is sustained and directed by individuals outside the formal education sector but which, over a lifetime, can result in a high level of expertise).

4.2 SPECIFIC RECOMMENDATIONS

This study recognises the Curricula Blueprint for all levels of education in Botswana which was developed in 2002, and that these new curricula are being implemented at the moment. This study also realises the limitations of all role-players to integrate Botswana's IKS as an integral part of the current education system to lay the foundation for technological development in Botswana in accordance with the stipulations of the RNPE (1994). The results of this study have shown that curriculum developers and teachers are inhibited by a lack of knowledge about the Botswana National Museum as an educational resource. The results of this study have further shown that public schools lack teaching and learning resource materials; yet, the Botswana National Museum holds collections in various forms that could be used for these purposes.

Therefore, the study specifically recommends that aspects of Tyler's model of curriculum design and development be used as a road map to implement the conclusion(s) and generic recommendations of this study, involving all role-players.

Tyler's model (1949) to curriculum development sought to answer four questions:

- What educational purposes should the school seek to attain?
- What educational experiences are likely to attain the purposes?
- How can these educational experiences be organised effectively?
- How can we determine whether these purposes are being attained? (Carter 1974:5)

In seeking to address the above questions, four steps or stages were put forward by Tyler (1949), namely, defining the objectives of the learning experience; identifying learning activities for meeting the defined objectives; organizing learning activities for attaining the defined objectives; and evaluating and assessing the learning experiences.

To answer Tyler's first question: What educational purposes should the school seek to attain? a situation analysis is necessary to find out what society, the education system, the school, the teacher and the learner expect from the curriculum (step1). The RNPE (1994) and the Long-term Vision 2016 document state respectively that the people of Botswana should be prepared for transition from an economy based on traditional agriculture to one anchored in industry; and that by the year 2016 the education system should empower Botswana citizens to become best producers of services and goods. The above two documents provided what society and the education system expect from schools. The expectations of the teachers, learners and the existing curricula were sampled in this study.

The second step in Tyler's model is to formulate goals, objectives and taxonomies. This has been defined by the recommendations of the RNPE (1994) detailing the behaviour, the conditions and the standard that must be achieved for the behaviour to be acceptable. The above two steps in the curriculum development and design process of Botswana are a prerogative of the national Commission appointed in accordance with the laws of the country by the President of Botswana.

The third step in Tyler's model is to select the study material and organize learning activities to attain the defined goals and objectives. This requires educational expertise as it touches on the various taxonomies (the cognitive, the affective and the psychomotor domains). It is done by the curricula blueprints for all levels of education. The results of this study have shown that it was only the curriculum developers who determined the content, scope and sequence of each subject. The recommendation of this study is to broaden the participation at this stage, and to involve various role-players, including the museum employees, the teachers and the learners. This stage should not be the domain of the curriculum developers only, in fact the curriculum developers should only be the facilitators of the process. Next is the selection of the methods and teaching and learning support materials that would achieve the objectives.

Being included in the development of the curricula blueprints of the different levels of education, the museum employees would be able to select and design appropriate methods and media to facilitate teaching and learning in the classroom. The Botswana National Museum has designed programmes (the Mobile Museum Service "Pitse ya Naga"; film shows; the Museum-in-a Box; the Radio Programmes; the International Museum Day; exhibitions; guided tours; questionnaires on objects and displays;

interactive education kits; research facilities, etc.) which could be included at this stage to assist the teaching and learning process. The programmes designed by the Botswana National Museum emphasise a learner-centred approach to teaching and learning in public schools.

In the subject panels the museum employees, teachers and curriculum developers could then determine the various subjects' content, scope and sequence, and pairing this with amongst others available museum programmes. The appropriateness of the museum programmes could then be evaluated at the planning and selection stage where learners could also be involved.

The fourth step which involves the evaluation should start with a careful analysis of the learners, to identify what they have already learned, i.e. their cognitive, affective, and psychomotor skill levels. This study recommends learner-centred formative and summative evaluation including tests, essays, short answers, questionnaires, etc. All these evaluation forms could also be accommodated in the educational programmes of the Botswana National Museum.

The results of the study have shown that the figure of the curriculum developer has traditionally been regarded as the sage on the stage, the individual who primarily develop and design the curriculum and determines most of the educational resources. However, in a future learner-centred teaching and learning environment, it is recommended that all role-players should be involved, and that the Botswana National Museum in particular should have a major role as educational resource.

5. FINAL REMARKS

Studies on museum utilisation in public school classrooms have been conducted in the developed countries and the nature, context and infrastructure of these museums are different from those in the Botswana context. There was a need to replicate such studies in the Botswana context. The identified factors (in this study) that contributed to the current problematic situation regarding the use of the Botswana National Museum as an educational resource in public schools are many and varied, these factors require further in-depth and varied and research. The study is therefore concluded with the following topics for further research:

- Strategies to improve the involvement of the Botswana National Museum in the curriculum development process in Botswana.
- The role of the Botswana National Museum in the implementation of the RNPE (1994) and beyond.
- The Botswana National Museum and the teaching of Home Economics, Art, and Design and Technology.
- Mainstreaming Botswana's IKS in the teaching of Home Economics, Art, and Design and Technology.

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APPENDICES

LIST OF FIGURES

APPENDIX 1 – BOTSWANA NATIONAL MUSEUM AND ART GALLERY ACT (CAP 59:01)

APPENDIX 2 – GENERAL REQUEST FOR PERMISSION LETTER

APPENDIX 3 – GENERAL REQUEST FOR PERMISSION LETTER

P.O.Box 80329
Gaborone
(00267-71615720)

17th March 2009

The Headmaster
Moselewapula JSS
Matlala JSS
Motswedi JSS
Gaborone

Dear Madam/Sir

REQUEST TO RESEARCH AT YOUR SCHOOL

I am reading for a Doctoral Degree in Education with Unisa, South Africa. I have been issued with the study permit to do research in Botswana. Find the permit is attached.

The topic of my study is: *Utilising the Botswana National museum as a resource in Botswana public schools*. The study target 3 teachers and 3 learners at your school, randomly selected from the subjects- Art, Home Economics and Design and Technology. The teacher should have more than three years experience in the field. Learners should be Form II and studying any of the subjects above. Only open-ended interviews will be used. Please find the questionnaires attached.

My schedule is as follows

24-25th March – Matlala School
26-27th March - Moselewapula School
30-31st March -Motswedi School

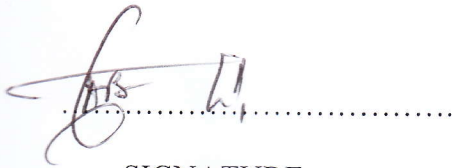
Attached also please find a copy of the research permit.

Yours faithfully.

Thatayamodimo Rammapudi

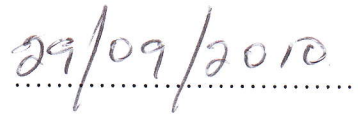
DECLARATION

I declare that **THE BOTSWANA NATIONAL MUSEUM AS AN EDUCATIONAL RESOURCE IN PUBLIC SCHOOL CLASSROOMS** is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.



SIGNATURE

(Mr. Thatayamodimo Sparks Rammapudi)



DATE

TELEPHONE: 3655400
TELEX: 2944 THUTO BD
FAX: 351624/3655408
REFERENCE E 1/ 20/2 II (16)



MINISTRY OF EDUCATION
PRIVATE BAG 005
GABORONE
BOTSWANA

REPUBLIC OF BOTSWANA

10th March 2009

To: Thatayamodimo Rammapudi
P O Box 80329
Gaborone

RE: EXTENSION OF PERMISSION TO CONDUCT RESEARCH ON " UTILIZING THE MUSEUM EXPERIENCE IN THE CLASSROOM: AN EXAMINATION OF THE ROLE OF THE BOTSWANA NATIONAL MUSEUM AS AN EDUCATIONAL RESOURCE IN THE CLASSROOM".

We acknowledge receipt of your application to extend permission to conduct a study on the above topic.

This serves to grant you an extension to conduct your study with the main aim of:

1. Contributing to the understanding of the National Museum as an important classroom resource.
2. Sensitising the teachers to the partnership they can establish with the National Museum in order to improve the quality of education in Botswana.
3. Suggesting a possible model for best practice in implementing the RNPE.

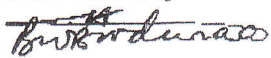
However, you are advised to seek consent from the School Heads of the schools concerned to conduct the study.

Please note that this permit extension is valid for a period of one year effective from 10th March 2009 to 10th March 2010.

You are furthermore requested to submit a copy of your final report of the study to the Research Unit in the Division of Planning, Statistics and Research, Ministry of Education, Botswana.

Thank you.

Yours faithfully


B.B. Nduna
For / Permanent Secretary



*Mogsa act
The writer will meet
you and you organise
Thank u
BBM
20/03/09*