

Classroom Teaching Practices: A Means of Providing Quality Education by Teachers in Botswana Senior Secondary Schools

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ABSTRACT

The problem of poor school based examinations persists among schools in Botswana despite government efforts towards addressing the situation. In an attempt to contribute a solution to this problem, a study aimed at determining the level to which teachers perceive classroom teaching practices as desirable means of ascertaining quality in education was undertaken. A questionnaire was used to collect data. The questionnaire intended to find out the views of the place and importance of testing in educating students for development in our society. Content and construct validity were both established through experts which include one from the University of Botswana and one from the Ministry of Education in Examination, Research and Testing Division. Reliability was established using thirty (30) English, Mathematics and Science teachers from Naledi and Gaborone secondary schools. From the eight (8) Districts in the country, one Senior Secondary School was randomly selected for administration of a questionnaire to all Mathematics, Science and English teachers. Dependent t-test and independent t-test analysis were used to analyze data collected from teachers and the results showed that teachers do teach to the examination instead of the syllabus. Teachers also considered themselves to be having good test development skills and good knowledge of skills necessary for the society. From the findings, it is clear that school based practices undermine the provision of quality education. The study implores teachers to perceive teaching to the curriculum as a means of improving quality of education in Botswana and they must be motivated to do so.

Keywords: quality education, syllabus, examination

INTRODUCTION

According to the Examination, Research and Testing Division (ERTD) (2004), Junior Secondary School form part of the basic education program whose aim is to provide quality education that is successful in developing fully productive citizens for the 21st century. The Senior Secondary School program is a post basic education program with a practical orientation aimed at preparing learners for the world of work and community involvement.

Botswana, like many other third world countries, is committed to the provision of universal access to basic education for its entire population, irrespective of gender differences or socio-economic status. The question that one needs to address is, to what extent can this be termed good quality education? The Revised National Policy on Education of 1994 identified key issues that the government had to address, and one of the issues is the improvement and maintenance of a quality education system. This has been further emphasized by the Long Term Vision for Botswana, Vision 2016, which states that “by the year 2016, Botswana will have a system of quality education that is able to adapt to the changing needs of the country as the world around us changes”.

Teachers often use classroom assessment to obtain information that helps them improve their instruction. This in turn helps them to bridge the gap between curriculum standards and student achievement. Classroom assessment is an ongoing process aimed at ensuring and improving student's learning. It involves making performance expectations explicit and public, setting appropriate criteria and standards for learning achievement and analyzing and interpreting evidence to determine how well performance expectations and standards are met. Thus, it also involves setting test items that reflect the expectations of the syllabus.

Deciding whether a student has mastered a skill in the syllabus involves a criterion-referenced interpretation. A criterion-reference interpretation involves comparing a student's score with a pre-determined standard of performance rather than with the performance of a group. Usually percent-correct scores are used and the teacher determines the score needed for mastery a skill. When making a criterion-referenced interpretation, it is critical that the content area covered by the test (domain) be described in detail. It is also important that the test questions for that domain cover the important areas of the domain. In addition, there should be enough questions on the topic to provide the students ample opportunity to show what they know and to minimize the influence of errors in the scores.

THEORETICAL BACKGROUND

Guajardo (1990) states that the theory of mind development echoes the ongoing debate of how learning and experience interact with biologically based underpinnings in explanations of conceptual change. Research designed to train children to understand mental concepts are based upon the idea that learning is a critical source of children's acquisition of a theory of mind. Goodman (1999) found out that theories that attempt to account for the vocabulary burst that begins about 18 to 20 months of age generally posit two mechanisms in language development: one that describes the slow linear growth from 18 to 20 months and a second that describes the rapid acquisition of words from 18 months through the preschool years.

Hatch's (2005) revealed that the failure to recognize and build on the knowledge that teachers develop over the course of their careers grows out of a set of assumptions about the nature of teaching and the work of teachers. Many controversial approaches to teaching and supporting teachers perceive teaching as a relatively simple process in which teachers deliver information to students and provide opportunities for them to practice and master basic skills. In such a conception, the emphasis for teachers is on delivering curriculum, not developing it. Teachers are only seen as being "on task" when they are working with students in the classroom- not when they reflect on their practice or prepare articles about it. Consequently, teachers receive relatively little institutional support and recognition for contributing to the production of knowledge and understanding that they need to be effective.

Despite these conventional assumptions about the simplicity of teaching, a number of individuals, groups, and organizations have long sought to support teachers interested in examining their practice and sharing the results with others. These efforts embrace an entirely different set of assumptions that: teaching is a complex intellectual endeavor that demands deep understandings of students, the appropriate disciplines, and the pedagogical principles and practices needed to bring all three together. These efforts reflect the view that the development of such understanding depends upon opportunities available for teachers to examine their own practice in the company of their peers over significant periods of time. By inquiring into their own practice, teachers can articulate and share what they are learning in ways that can contribute to the development of a broader knowledge-base of teaching, support the learning of their colleagues, and enhance the performance of schools (Hatch, 2005).

The general “problems” of teaching are well known. The difficulties of raising student achievement; inadequate pay and preparation; and lack of time, support, and resources are often the source of public debates and the focus of research and reform efforts. But the specific problems that teachers face every day in the classroom do not have to be seen in such a negative light (Ford, 2000). Ford further states that for many teachers, the “problems” they face in the classroom can lead teachers to ask serious intellectual questions about their practice that they themselves can address. *How do I help this group of fourth graders develop a robust understanding of odd and even numbers? How can I take into account the backgrounds and experiences of the Haitian students in my preschool class? How can I enable my special education students to build their academic skills and to develop as community leaders at the same time?*

To help every child meet the highest standards, we must insist on rigorous alignment of standards, curricula, and assessments. Standards need to be connected to classroom learning and assessments. We must also match this commitment with resources and demand quality teachers, safe and modern schools, and extra learning support for students in need. Currently, too many state standards are unconnected to curriculum and tests and students do not receive adequate tools and resources to reach them (National Education Association, 2006).

STATEMENT OF THE PROBLEM

Botswana, like many other third world countries, is committed to the provision of universal access to basic education for all its citizens, irrespective of gender, disabilities or socio-economic status. The question that one needs to address is to what extent is this quality education? The Revised National Policy on Education of 1994 identified key issues that the government had to address, and one of the issues was the improvement and maintenance of a quality education system. This has been further emphasized by the Long Term Vision for Botswana, Vision 2016, which states that by the year 2016, Botswana will have a system of quality education that is able to adapt to the changing needs of the country as the world around us changes.

PURPOSE OF THE STUDY

The purpose of the study is to determine the level to which teachers perceive classroom teaching practices as desirable means of ascertaining quality in education, and their knowledge of skills necessary for societal development.

RESEARCH HYPOTHESIS

Ho1: Based on the perception of teachers in Botswana senior secondary schools, there is no significant difference in the level to which they teach to the syllabus and to which they teach to the examination.

Ho2: Based on the perception of the teachers in Botswana Senior Secondary Schools content of the tests and examinations they set is not significantly influenced by the content of the syllabus.

Ho3: Teachers in Botswana senior secondary schools do not have a significant level of knowledge of skills necessary for development in the society.

SIGNIFICANCE OF THE STUDY

The result of the study is useful to the administration, teachers and students as it provides ways that can be used to reduce the tendency of learners being taught to the test instead of

being taught to the syllabus. This will enhance skills deemed essential for the development of the society among students.

LITERATURE REVIEW

Teaching to the Syllabus versus Teaching to the Test

Firestone, Schorr and Monfils (2002) carried a study about the effect of three years of state testing on teaching. The findings are from three years of research on the influence of New Jersey's Elementary School Performance Assessment (ESPA) on the teaching of fourth grade mathematics and science. ESPA is intended to be aligned with New Jersey's core curriculum Content Standards. In mathematics and science, these standards, call for modernizing of the content taught. For most educators, the most concrete aspect of the standards is the state-testing program. The change in standards and tests raises two questions. Firstly, "are teachers teaching different content?" secondly, "are they using more standards –based instructional approaches?" Given the complaints in other states about how teachings to the test changes curriculum coverage, content changes were remarkably modest. Based on a state wide survey, in class observations and teacher interviews, the findings indicated that teaching to the test includes a mix of introducing more intellectually challenging practices – a positive outcome – and narrowing instruction – a negative one. The amount of teaching to the test has not changed over three years, but there is more use of commercial test preparation materials in the poorest districts, which suggest that the tests are having negative consequences for the state's poorest students. One of the recommendations was that changing tests wouldn't improve teaching without more direct attention to deep and sustained professional development for teachers (Firestone, Schorr & Monfils, 2002).

Klein, Hamilton, McCaffrey and Stecher (2000) in their article "what do test scores in Texas tell us?" observed that in the past decade, several states have begun using the results on state-wide tests as the basis for rewarding and sanctioning individual students, teachers, and schools. Although testing and accountability are intended to improve achievement and motive staff and students, concerns have been raised in both the media and professional literature about possible unintended consequences of the programs. To investigate whether the dramatic mathematics and reading gains on the Texas Assessment of Academic Skills (TAAS) represent actual academic progress, these gains were compared to score changes in Texas on another test, the National Assessment of Educational Progress (NAEP). The study further found out that the use of the scores obtained might encounter a plethora of problems that would undermine the interpretation of the scores obtained. Some of the problems include the following: (1) students being coached to develop skills that are unique to the specific type of questions that are asked on the state wide exam (i.e., as distinct from what is generally meant by reading, mathematics, or the other subject tested.); (2) narrowing the curriculum to improve score on the state examinations at the expense of other important skills and subjects that are not tested; (3) an increase in the prevalence of activities that substantially reduced the validity of the scores (4) results being biased by various features of the testing program (Klein, Hamilton, McCaffrey & Stecher, 2000). Chacko (2002) made an attempt at examining the public examination test items in statistics in terms of the skills tested and how these match with the syllabus and assessment objectives as well as the suggested methodologies. The results revealed the fact that the test items focus on routine tasks, which encourages rote learning. There was a lot of repetition in the tasks tested, which could be due to the limited content in Statistics. The results support the fact that non-routine problems rarely appear in classroom teaching. The responses of the students also suggest that statistics is taught as something that handles numbers but the contextual aspect of these numbers had not been brought to the attention of students, hence their problems to see it differently. Concepts

learned, without the ability to apply these in life problems, do not make one literate in the area, which is applicable to these students (Chacko, 2002).

Level of Teacher's Knowledge of Skills Necessary for the Society and Skills Necessary for One to Pass Examinations

Nenty, Adedoyin and Major (n.d.) found out that though teachers and teacher trainees in Botswana agreed that the nature of classroom assessment practices can contribute significantly to the attainment of high quality of education in Botswana, their perception of the quality of current practices in classroom assessment as a means of attaining high quality of education was not significantly high. They confirmed that their current level of classroom practices contribute significantly to the current level of quality of education in the country. They blamed the low level of classroom assessment practices on lack of adequate training on classroom assessment, and agreed that most teachers lack the skill to enhance quality of education through classroom assessment practices.

Similarly, Lobner (1997) found out that the education and training system in South Africa is highly fragmented, lacking any strategic framework or national norms and standards to guide training. This has resulted in many ill-conceived programs that produce poor results. The training experience has, in the main, failed to contribute to sustained employment and income generation. "Life skills training add value to technical training" was the main conclusion to be drawn after looking at the broad application of life skills programs and their evaluation. Orientation for the world of work needs to be carried out on a broad basis in order to reach a substantial number of people. Therefore, a few key players should concentrate on training trainers, teachers groups or community leaders. Trainers are often not aware of other services which might complement their own training and therefore often do not refer their trainees. In order to reach a substantial number of trainees, the public structure should work through a variety of training providers and concentrate on the promotion of life approaches as well as the development of curricula and training material.

According to Bassey (1997), despite the changing demographics, teachers lack the knowledge and the preparation needed to work with diverse populations. About 40 percent of the pre-service teachers responded that their training did not prepare them to teach in diverse environments. This means that teachers should be aware of the cultural contexts that shape not only their own but their students way of knowing as well.

METHODOLOGY

The study adapted a survey design which was both descriptive and inferential. A six point-likert scale questionnaire was used to collect data from teacher about their perceptions on; the theories that guide their teaching and other items solicited opinions on knowledge of skills deemed essential for societal development. The questionnaire was administered to a sample two hundred and seven (207) teachers in Senior Secondary Schools from three different subjects. The questionnaire was designed to determine the level to which these teachers perceived their classroom teaching practices as a desirable means of ascertaining quality education, whether their teaching is influenced by the syllabus or past examination papers. Teachers from ten (10) Senior Secondary Schools Selected randomly completed the questionnaire. Other items in the likert scale determined their reference when setting classroom tests and finally whether there are knowledgeable about skills necessary for societal development. Responses to the questionnaire items were scored and some were added up to operationalize the variables called for in the hypotheses. Finding out from teachers the theories that guide their teaching required the instructional validity. Nine items addressed teaching to the exam, while six addressed teaching to the syllabus. Two items

solicited opinions on knowledge of skills deemed essential for self and societal development. A total of thirty two (32) items made the questionnaire. The researcher got permission to involve English, Mathematics and Science teachers in this study from the Ministry of Education, Division of Teaching Service Management. The data was coded and entered into SPSS for analysis.

DATA ANALYSIS AND INTERPRETATION OF RESULTS

The first null hypothesis was that there is no significant perceived difference in the level to which teachers teach to the syllabus and to which they teach to the examination and this was tested using a dependent t-test. This was done by comparing the means of the two items. The teachers’ mean perception of the level they teach to the examination was found to be 35.19, SD=6.54, while that of teaching to the syllabus was 27.02, SD=4.95. When compared, this gave a t-value of 20.0 which (with df =206) was found to be higher than the critical t-value of 1.65 at an alpha level of 0.05 (see Table 1). Since the mean of teaching to the examination is higher than the mean of teaching to the syllabus, it was concluded that teachers teach significantly ($\rho < .05$) more to the test than the syllabus.

Table 1. Dependent t – test of the differences between the levels to which teachers teach to the test and teach to the syllabus in Botswana Senior Secondary Schools (n = 207)

Variable	Mean	SD	SEM	r	Mean of Differences	SD of Differences	SE of Mean Differences	t	$\rho <$
Teaching to Exam	35.19	6.54	0.45						
Teaching to Syllabus	27.02	4.95	0.34	.510	8.17	5.85	0.41	20.08	.000

The second hypothesis in the null form speculated that on the basis of the perception of the teachers’ in Botswana Senior Secondary Schools content of the tests and examinations they set is not significantly influenced by the content of the syllabus. To test this research hypothesis, a population t – test analysis of single mean was done by comparing the observed mean from respondents to the expected population mean (μ). This gave a t- value of 13.09 which (with df = 205) was found to be higher than the critical t – value of 1.65 at an alpha level of .05 (see Table 2). On the basis of the perception of the teachers in Botswana senior secondary schools content of the tests and examinations they set are significantly ($M = 17.35$, $SD = 3.67$, $\rho < .05$) influenced by the content of the syllabus.

Table 2. Population t – test of Teachers’ Perception of Test Development Skill of the Syllabus in Botswana Senior Secondary Schools (n = 206)

Variable	Observed Mean	Expected Mean	SD	SE	MD	df	t	$\rho <$
Level of Testing to the Syllabus	17.35	14.00	3.67	0.26	3.35	205	13.09	.000

The third null hypothesis speculated that teachers in Botswana Senior Secondary Schools do not have a significant level of knowledge of skills necessary for development in the society. One sample population t – test analysis was done to test the hypothesis. This was done by comparing the observed mean from the respondents to the expected population mean (μ). This gave a t – value of 9.73 which (with df = 206) was found to be higher than the critical t – value of 1.65 at an alpha level of .05 (see Table 3). Thus based on the perception of teachers in Botswana senior secondary schools, they have a significant ($M = 4.36$, $SD = 1.27$, $\rho < .05$) level of knowledge of skills necessary for development in the society.

Table 3. Population t – test Analysis of Teachers’ Perception of Level of the Knowledge of Skills Necessary for Development in the society in Botswana Senior Secondary Schools (n = 207)

<i>Variable</i>	<i>Observed Mean</i>	<i>Expected Mean</i>	<i>SD</i>	<i>SE</i>	<i>MD</i>	<i>df</i>	<i>t</i>	<i>ρ <</i>
Teachers knowledge of Skills Necessary for Development	4.36	3.50	1.27	0.09	.857	206	9.73	.000

DISCUSSION

Classroom teachers in Botswana confirm the theoretical speculation that classroom teaching practices contribute significantly to the quality of education provided to learners. Teachers are therefore aware of the skills necessary for societal development and contribution of teaching behavior development towards quality of education.

When making a criterion-referenced interpretation, it is critical that the content area covered by the test—the domain—be described in detail. It is also important that the test questions for that domain cover the important areas of the domain. In addition, there should be enough questions on the topic to provide the students ample opportunity to show what they know and to minimize the influence of errors in the scores. It is the extent to which these are carried out effectively that classroom teaching practices can contribute positively to the enhancement of quality of education. A classroom teacher has to make assessment part of his or her teaching because it is through assessment that he or she can tell if any learning is taking place, to what level and the quality of it.

When adequate classroom teaching practices are lacking, the likelihood of attaining high quality education is less. Teachers teach to the test which narrows instruction and this means that the curriculum is not followed hence quality education and production of school leavers who can make it as they progress is less likely to be achieved. For instance, concepts learned, without the ability to apply these in life problems do not make one literate in the area. On a positive note, reward in teaching is the satisfaction of contributing to children development and this is a positive note since teachers confirmed that they are aware of the skills necessary of societal development and therefore possess adequate training that will enable them to impart knowledge to students.

CONCLUSION AND RECOMMENDATIONS

From the findings of the study, it is concluded that though Botswana teachers see classroom teaching practices as a significant factor through which quality of education in Botswana could be enhanced. Based on the findings of the study, it is recommended that classroom teaching practices should be improved to facilitate improvement in the quality of education. To achieve this, all teachers should perceive classroom teaching practices through following the curriculum/syllabus as a means of enhancing quality of education in Botswana schools and they should be motivated to do so. Further research is also needed to determine why teachers teach to the test.

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