Pakistan Journal of Social Sciences 10 (2): 105-111, 2013
ISSN: 1683-8831

The Role and Capacity of School Governing Body and School Management Team and Their Support for Teaching and Learning of Mathematics and Science Subjects

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Abstract: The establishment of the School Governing Boards (SGBs) and the School Management Teams (SMTs) in South Africa was to ensure that educators, parents, learners and non-teaching staff actively participated in the governance of the schools and provide an adequate environment for teaching and learning. In this study, researchers report the findings of a study conducted in the year 2012 at one school in Mpumalanga Province to assess the support given by the SGB and SMT in the teaching and learning of science and mathematics subjects at the school. The sample of the study consisted of the SGB and SMT members, mathematics and science educators and students. Structured interview schedules were used by researchers to collect data. The findings showed that there was poor communication between the SGB, the SMT, educators, students and parents. There was also some disagreement among SGB and SMT members on issues regarding their responsibilities, school security, school finance management and school meetings. The challenge also faced by the school was associated with lack of sufficient teaching and learning materials, quality instruction, little help to students at school and at home to effectively support the teaching and learning of science and mathematics. The SGB and SMT did not provide necessary teaching and learning materials such as textbooks, lab equipment, calculators, computers, exercise books and study guides for effective instruction of science and mathematics subjects. To achieve the set objectives at the school and effectively support the teaching and learning of science and mathematics at the school, it was recommended that the SGB and the SMT create smooth communication mechanisms and set some strategies to attend issues raised in the study. Communication with parents/guardians should encourage them to support their children at home and reduce the number of house duties to give them more time to study and work on assignments. The SMT in consultation with the SGB and the department of education should find ways of providing short courses or in-service workshops to educators in topics that the educators found difficult to teach. The SGB and the SMT should provide necessary learning materials for effective teaching of mathematics and science subjects at the school.

Key words: School management team, school performance, parental involvement, support to study, SGB

INTRODUCTION

Since, the establishment of the School Governing Bodies (SGBs) in South Africa in 1996, all public schools are required to have SGBs of elected members as part of their management and governance structures (Republic of South Africa, 1996). The SGB comprises of school parents (who are the majority), educators, learners and the principal who is the ex-officio (Karlsson, 2002; Republic of South Africa, 1996; Van Wyk, 2004) while the School Management Team (SMT) includes the principal, deputy principal and heads of departments or senior educators (Heystek, 2004). The rationale for the establishment of democratic structures of school governance is to ensure that educators, parents, learners and non-teaching staff actively participate in the governance and management of schools with a view of providing the right environment for teaching and learning (Van Wyk, 2004). The South African Schools Act No. 84 of 1996: sec 16, describes SMT and governance as two separate teams with different responsibilities (Heystek, 2004). The first team is the professional management team which is responsible

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for teaching and learning and support activities. The second team is the SGB which is responsible for governance or the strategic management of the school.

Consequently, the SGB is the strategic director of the education business at the school while the SMT is the implementer of the strategies recommended by the SGB. The SMT is expected to maintain efficiency and effectiveness of the organisational arrangements at the school such as the approved national curriculum and the welfare of learners, educators and support staff (Republic of South Africa, 1996). The SGB has the responsibility of planning and budgeting, setting objectives, oversight, organising and staffing and resource allocation. The SGB is also required to ensure that the school has skilled educators and support staff; ensure that educators have the right environment to work in and adequate learning and teaching material to cover the national school curricula; management as the quality assurer and ensure efficient and effective use of resources for the development of young learners (Republic of South Africa, 1996). The two teams share the responsibility for the total welfare and success of the school and therefore, they are interdependent of each other because of the nature of their membership composition. The relationship between the SBG and the SMT is one of the most significant variables that determine success in their roles and the school performance (Bush and Heystek, 2003). It is therefore imperative for the SMT and the SGB to understand their respective roles at the school to avoid confusion and sour relationships. According to Sister (2004) there are misunderstandings about the roles of the SMT and the SGB which are often due to lack of capacity among SGB members.

Quite often rural public schools in South Africa have SGB and SMTs that have no capacity due to lack of education, leadership and managerial skills among the parents who are the majority. This is partly due to the fact that majority of the elected SGB members are school dropouts who did not get adequate education. And although SGB members receive training when they are elected to serve in school governing bodies, the department of education only provides limited initial training soon after their election but it is not continuous (Heystek, 2004).

Research conducted by Bush and Heystek (2003) in Gauteng Province reported that school principals demonstrated their anxiety about carrying their managerial functions and their need for training to help them to perform more effectively. This is because school principals are often appointed on the basis of their teaching records rather than their potential to lead with little or no formal leadership training afterwards (Bush and Oduro, 2006). As a result of inadequate managerial training, the capacity of the SGB and the SMT to govern and manage the school has an impact on the performance of schools in South Africa. For example, Creese and Earley reported that SGBs have a direct impact on teaching and learning in schools because they are involved in the appointment of school staff, especially senior staff members.

The aim of the study was to investigate the governance and management at one selected school as a case study and their impact on teaching and learning of mathematics and science subjects. The study assessed the understanding of respective roles and the capacity to support the teaching and learning of mathematics and science subjects, namely: life science, physical science, agricultural studies, mathematics, mathematical literacy and geography at the school. Therefore, the objectives were to assess whether the SGB and the SMT understood their respective roles or not and to assess whether the SGB and the SMT were capable of supporting the teaching and learning of mathematics and science subjects or not.

MATERIALS AND METHODS

Study area: The study was conducted at one school in the Mpumalanga Province of South Africa. The school has about 253 learners, 9 educators, 1 admin clerk, 2 general assistants and 2 kitchen helpers as of 2012.

Participants: The participants included the SGB and SMT members. All elected members of the SGB and the SMT were identified as potential respondents. The SMT consisted of six members, namely: the school principal and three heads of departments for commerce, languages and science and two senior educators (one of the heads of departments was also the deputy principal). All six members of the SMT were available for interview but only two SGB members (the chairman and an ordinary member) were available for interview. Three SMT members were females and three were males. The home languages of the SMT and the SGB members included Xhosa, Pedi, Zulu and Ndebele.

Procedure: A survey was conducted at the school in April/May 2012. Face to face interviews were conducted using structured interview schedules. Two separate interviews for the SGB and the SMT were used to capture responses during the interviews. The interviews for the SGB and the SMT contained 36 and 40 questions, respectively. The interviews contained open-ended, multiple choice and dichotomous questions.

Appointments for interviews were made with the participants prior to the interviews. The interviews were conducted in the school boardroom and another office. Two researchers (an interviewer and a scribe) were involved in interviewing each respondent. Audio recorders were also used to assist scribes to capture the proceedings of the interviews.

Data analysis: Quantitative data from multiple choice and dichotomous questions were analysed using Statistical Package for Social Sciences (SPSS Software Version 16) while qualitative data from open-ended questions were analyzed by coding and memoing (Babbie, 2010). The analytical procedures for qualitative data included seven phases:

- Data organization
- Data immersion
- Generating categories and themes
- Data coding
- Offering interpretations through analytic memos
- Searching for alternative understanding
- Writing of the report (Marshall and Rossman, 2011)

RESULTS AND DISCUSSION

The demography of the members of the SMT: The age group of the SMT ranged from 41-60 years. The majority of them (about 67%) were between 41-50 years and the remainder (33%) were between 51-60 years. About 50% of them had university education and the other 50% had college education. The home languages of the respondents included Ndebele, Pedi, Zulu and Xhosa. However, although the level of education suggested that the school had qualified staff that was capable of running the school more efficiently, the reality was that all of them were trained as professional educators but not as managers. They are expected to perform managerial functions such as planning, organizing, activating and controlling even without managerial skills that was a big challenge for the SMT. In addition, only one member of the SMT reported that she had experience in the same management position while the other five members did not have any experience in the management positions they occupied. Consequently, they asked for short courses and training workshops in management to help them to improve their managerial skills.

The roles of individual members of the SMT: According to the South African Schools Act No. 84 of 1966 (Republic of South Africa, 1996) and the main role of SMT is to administer school activities. The school principal is responsible for the overall school administration of learners, educators, administrative staff, general workers and kitchen helpers. The deputy principal assists the principal with the same activities mentioned above. Heads of Departments (HODs) are responsible for monitoring the registration of learners, coordination of integrated management system, mediation of educators and SMT and monitoring of teaching and learning of subject streams which they lead. For example, the HOD for science subjects is responsible for monitoring of teaching and learning of agricultural science, physical science, life science, mathematics, mathematical literacy and geography while the HOD for languages is responsible for monitoring of teaching and learning of English and African language and literature. Senior educators are responsible for the administration of cultural and sporting activities, management of learner support material and moderation of assessment preparation (question papers and mark sheets).

However, the survey revealed that members of the SMT did not understand their respective managerial roles as shown by their responses to various questions. There were disagreements about the management of school security, finance, fundraising and audits. The SMT thought that these were not part of their responsibilities. Some of them thought that security at the school was adequate while others thought that it was inadequate. They also thought that the provincial department of education was responsible for school security. Yet some members of SMT were not aware of the previous fundraising events and audits at the school while others did. All this showed that members of the SMT did not understand their respective roles, probably due to lack of managerial training.

The role of the SGB at the school: When participants were asked whether they were fully aware of their roles as elected SGB members at the school, they confirmed they were aware of their roles. They reported that they were inducted after being elected as SGB members and they also received training afterwards. They described their roles as: governing the school and its properties (e.g., school budget and teaching materials); maintaining good relationships between educators and parents and between the school and educators; helping the school to improve results; improving school infrastructure; supervising the feeding scheme at school ensuring that learners eat properly; disciplining learners and educators; preparing budgets for teaching materials and school development and ensuring that everything at the school ran smoothly.

However, according to the South African Schools Act No. 84 of 1996 (Republic of South Africa, 1996) the SGB is the strategic director of the education business at the school. It has the responsibility of planning and budgeting, setting objectives, oversight, organising and staffing and resource allocation. It is also required to ensure that the school has skilled educators and support staff; ensure that educators have the right environment to work in and adequate learning and teaching material to cover the national school curricula; management as the quality assurer to ensure efficient and effective use of resources for the development of young learners. So far, the SGB showed that they only understood some of their roles because they did not mention important roles such as: setting of objectives, oversight, organising and staffing and resource allocation.

Communication between the SGB and the SMT: The survey found that poor communication between the SMT and the SGB and among members of the SMT contradicting responses given by the SMT and the SGB on issues regarding their responsibilities, school security, finance and school meetings were indications of poor communication among the members. Both the SGB and the SMT were asked whether they held meetings and consultations to discuss matters pertaining to the well being of the school. Five SMT respondents answered that they held meetings and consultations once a month while one respondent said that they usually held meetings twice a month. These responses showed signs of communication breakdown between the SMT and the SGB. Another discrepancy was evident when the SMT were asked how often they engaged educators in meetings or discussions. Three respondents said that they engaged educators in meetings or discussions once a month one respondent said twice a month and two respondents said that they held meetings and discussions with educators whenever. The mixed responses regarding school meetings raised a concern as to whether the SMT held meetings regularly or not. It showed that there was lack of communication among members of the SMT regarding the number meetings with SGB and meetings with educators per year.

Two members of SMT said that the HOD was responsible for keeping records of meetings while one respondent said it was the deputy principal and the other three respondents indicated that other members were responsible for keeping records of meetings. If members of the SMT were not sure about the person responsible for keeping records, one would wonder whether the team ever read minutes from the previous meetings to follow up on issues that were discussed. Signs of poor communication were also identified with regard to school finance and security.

The school is one of no fee paying schools in Mpumalanga Province which means that learners do not pay school fees and therefore, the school depends on the provincial department of education for funds in order to function. However, although the school depends on government funds, it was reported that the provincial department of education distributed funds to the school very late in the year in most cases. This affected school activities which required funds on regular basis. And if the school depended on funds from department of education; it was the responsibility of the department to ensure that allocated funds were used appropriately.

However, when the SMT was asked whether the school has ever been audited by the provincial department of education, their responses varied. Four respondents said that there had been audits before and the outcomes were good while two respondents said that there had never been an audit at the school. The mixed responses indicated lack of clear communication between members of SMT. It also showed that educators have not been mentored in their roles because all respondents were expected to know about critical issues that affect the school.

It was also reported by some respondents that under some circumstances when government funds were delayed, the school raised funds through donations. One respondent said that sometimes the school sent letters to companies to ask for donations. However, other respondents indicated that no fundraising had ever taken place at the school although learners were sometimes asked to donate whatever they could on selected Fridays and parents were also asked to make contributions in addition to the sale of vegetables from the school garden. That was yet another illustration of lack of communication where some respondents were less informed than others. As a non-fee school, there should have been more visible provincial government support to ensure adequate resources, especially because many of the learners were orphans who were supported by resource-poor grandparents and other relatives (Mbajiorgu *et al*., 2012). The school was required to liaise more with the provincial government for adequate support.

The capacity of SGB and SMT: Since, there were only 2 members of the SGB (the chairman and one ordinary member) who were available for the interview the normal statistical inferences do not apply. Their age group was between 30 and 40 years and both had served as SGB members for <5 years. They both had college education

and they lived in the same township. Both SGB members had children schooling at the school. The SGB members said that they received training after they were elected in the governing body. However, although they received the training, they were not well prepared to govern the school. That was evident when they said that they needed more short courses and training workshops to help them to improve their governance in the school.

That was not commendable because lack of managerial skills and experience to execute SGB roles have been identified as major problems in South Africa public schools (Van Wyk, 2004). That was due to the fact that SGB members in South Africa are only provided with limited initial training when they are elected (Heystek, 2004). Based on these findings, it was clear that SGB was elected and expected to govern the school without proper training to enable them perform their role.

Therefore, SGB members at the school did not have full capacity to govern the school. The problem is expected to continue in the coming years considering that SGB members are only elected to serve for 3 years. Their term expires even before they start learning how to govern the school and new member have to start learning from scratch. SGB respondents also emphasised more on incentives such as honoraria payments, personal computers and training workshops for financial management skills, among the things they needed to enable them to perform much better.

Challenges facing teaching and learning of mathematics and sciences: The SGB and the SMT reported that the challenges in teaching and learning of mathematics and sciences at the school were more due to lack of resources such as: teaching aids and learning materials for science subjects (standard textbooks, study guides, stationary, chemicals, tools and equipments); lack of skilled science educators; lack of education excursions; lack of infrastructure (library); lack of collaboration among educators to improve their skills; demotivated science learners; lack of parental support and motivation; low pass rates in science and mathematics subjects compared with other school subjects and bad attitude towards mathematics and physical science.

Lack of resources for teaching and learning mathematics and science subjects at the school was not surprising as reported by Makgato (2007) problems such as lack of access to teaching and learning science and mathematics materials and lack of infrastructure such as a library should have been addressed by the department of education since the school is a public school that depends on government for resources. It was a concern to see that the department of education did not provide the school with the required resources and yet it expected the school to produce good results.

However, it was the responsibility of SGB to ensure that the department of education provided the school with the necessary resources that were required for teaching and learning (Bush and Heystek, 2003). The school had a shortage of educators and as a result geography and accounting subjects were being phased out starting from Grade 10-12. The SGB had referred the matter to parents and requested for donations after spending 50% of its budget on hiring temporary educators. Despite that it was still the responsibility of the SGB to recommend the appointment of additional educators to the head of department of the provincial department of education (Van Wyk, 2004).

The school had many challenges because the Mpumalanga provincial department of education did not provide the school with adequate science teaching resources as required by SASA and the Education Law and Policy Handbook (Republic of South Africa, 1997). It also showed lack of liaison between the SMT, the SGB and the local circuit and curriculum manager. The school was one of the schools that performed very poorly every year especially in mathematics and sciences. It raised the question of whether the circuit and curriculum manager was capable of picking up the problems or not? That could also have been due to lack of capacity on the part of the SMT to plan, budget and articulate school needs at SGB meetings as they were expected to do.

Considering that mathematics and sciences are more practical oriented subjects, learners were not properly exposed to practical experiments because the school lacked resources to conduct certain experiments as required by the curricula? It affected the learning of these subjects which was evident because majority of the learners indicated that they struggle with mathematics and sciences. For example, in 2010 the Matric pass rate for physical science was 0%. The availability of resources to conduct practicals as required by the curricula for sciences would enhance the understanding and application of scientific knowledge (Department of Education, 2001). That was also evident from science learners in Soshanguve secondary schools who indicated that the teaching of sciences could be better if learners were shown what was taught practically, e.g. by mixing of chemicals for example would be much easier to understand than when it was taught theoretically in class (Makgato, 2007).

One of the major challenges as reported above was that the SMT believed poor results at the school were due

to the fact that mathematics and science educators did not have adequate skills to articulate the curricula. The academic qualifications of science educators might also have contributed to their lack of teaching skills for science subjects. About 80% of the educators had national diplomas which were obtained under the old curriculum while they were expected to teach the new curriculum. Some of the educators were not trained in mathematics and science education but they were required to teach mathematics and sciences at the school. That was also reported to be an endemic problem in most South African schools where majority of educators are qualified as professional educators but their training in mathematics and sciences was reported to be inadequate.

SGB and SMT support for teaching and learning of mathematics and science subjects: In order to support the teaching and learning of mathematics and sciences at the school, the SMT and the SGB have come up with some strategies which include:

- Engagement with the Mpumalanga provincial department of education to provide the school with the required materials for teaching and learning of Mathematics and sciences
- Encouragement of team work among mathematics and sciences educators
- Encouragement of parents to see the importance of their participation and support of their children's education
- Seeking of donations to purchase science teaching and learning resources
- Encouragement of more discussions at SMT level
- Encouragement of mathematics and sciences educators to enrol for qualifications or attend training workshops to strengthen their knowledge which will help to improve their teaching and understanding of subject contents
- Outsourcing of subject experts from tertiary institutions to help with the teaching of science subjects
- Soliciting for sponsorship from private companies to hire additional educators and buy teaching and learning resources for mathematics and sciences

Encouraging team work among educators could help teaching of mathematics and sciences. This is supported by Sister (2004) reported that team work in schools could assist sciences educators to help each other in making every endeavour to succeed. However, their strategy of outsourcing experts from tertiary institution may demoralize mathematics and sciences educators.

It is fascinating that SMT are working hard to ensure that school challenges regarding teaching and learning of mathematics and sciences. Their strategies requires them to unite and channel the challenges to the relevant stakeholders such the department of education, potential private donors and tertiary institutions. The SMT should translate these suggestions into concrete plans and forward them to SGB for inclusion in strategic planning and budgeting for the next financial year. The need for extra teaching sessions is perceived by the SGB as an antidote to lack of skills by science educators. It raises a major concern that educators are either not using the time allocated for teaching efficiently or the time allocated is not enough. The introduction of vocational subjects such as typing, arts, etc. has also been suggested as an alternative for students who are struggling with mathematics and sciences. Improvement of admission criteria is also perceived as a way of addressing poor pass rates in these subjects because the school redeems learners from other schools especially in grade 10.

CONCLUSION

The survey found that poor communication between the SMT and the SGB and among members of the SMT were the major problems at the school to achieve stipulated objectives. Contradicting responses given by the SMT and the SGB on issues regarding their responsibilities, school security and finance and school meetings were indications of poor communication at the school. The disagreement among SMT members on school security on whether it was adequate or not and the provincial department of education was responsible for school security or the school principal was a clear indication that members were not sure about their respective roles at the school. And if both parties did not know their respective roles at the school, it then meant they did not have the capacity to support the teaching and learning of mathematics and science subjects at the school. The observations on poor communication and contradicting from members and the implementation of some activities at the school without coordination raised some doubts whether the SMT and SGB were inducted into their roles when they were appointed. The SMT team was trained as educators and not as managers and they acknowledged that they needed training in SMT to develop their managerial skills. This revelation meant that the current SMT did not have the ability not only to

support the teaching and learning of mathematics and science subjects but also in other subjects at school until they underwent proper training as school managers.

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