Contextual Factors in the Assessment of the Effect of School-based Management on School Effectiveness

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KEYWORDS Education, Schools, Development Plans, Management

ABSTRACT School-based management has become a reality in South African education, and South African education legislation as well as education policy documents all bear this out. This policy framework for decentralised decision-making is also embedded in the South African Schools Act 84 of 1996. School-based management is therefore not a fad or a cosmetic change, but an enduring phenomenon in South African schools. In spite of its widespread implementation, the assessment of the impact of school-based management on school effectiveness has received little attention. This article, based on a descriptive and narrative literature study, offers a dynamic perspective on the assessment of effect of school-based management on school effectiveness in South African schools and provides policymakers, researchers and educators a glimpse on some of the more prominent contextual influences in the assessment of school effectiveness in general.

I. INTRODUCTION

During the past 20 to 30 years there has been a major shift towards allowing educational institutions world-wide greater self-management and self-governance in a drive to improve and reform schools (cf. Cohen et al. 1972; Cohen 1982; Conley et al. 1988; Gurr 1996; Dimmock and Wildley 1999; Gray 2004). This trend has become evident in a variety of forms in countries such as Australia, Canada, New Zealand, the United Kingdom and parts of the United States of America (cf. Murphy and Beck 1995; Johnston 1997; Gray 2004; Taylor and Bogotch 2004; Petty and Green 2007)

This trend has also been reflected in South African educational circles over the last two decades. The National Department of Education’s Report of the Task Team on Education Management Development (DoE 1996), as well as education legislation such as the South African Schools Act of 1996 (RSA 1996) focus on, among other things, the need for educational managers to be able to work in democratic and participatory ways to build relationships in sustainable communities and to ensure the effective delivery of education. At the core of these policy initiatives and legislation is the idea of a process of decentralised decision-making in the nation’s schools and school governing bodies and in “a significant process of democratisation in the ways in which schools are governed and managed” (DoE 1996: 27).

Globally, school-based management is such a widespread phenomenon in education and so relevant and important for South African education that former Education Minister Pandor reassured the education fraternity of the government’s commitment to the self-management and the self-governance of South African schools. In addressing the media, she referred to school-based management as “a mega-trend and the way to participate” (Star 2008: 8) in education and urged all stakeholders in education to participate in school management and governance.

In spite of its widespread practice and implementation, only limited attention has been paid to the assessment of the impact of school-based management on issues such as school effectiveness. There is, according to Brouillette (1997: 569), “no set of shared assumptions about the actual evaluation of school-based management and its impact on school effectiveness”. To date, most of the evaluative work on school-based management and school effectiveness has, according to Giles (2005), been conducted as part of policy research, and has tended to focus on monitoring implementation guidelines and using this information to identify features of successful school development plans. From an evaluation perspective, the logic of this approach is to learn what successful school management teams do in terms of effective school development plans and then to implement the same plan to increase school effectiveness. There
are however other, more contextual ways to measure effectiveness in the schooling system. This brings us to the problem statement and aim for this study.

The search for effective schools is one of the main educational reform initiatives taking place in many countries today (cf. Petty and Green 2007). The critical question to be addressed in this study is: Which contextual factors can be used to enable us to assess the success or impact of school-based management on school effectiveness? Academic output measures have been widely used in the past as a contextual factor to identify good practices in schools. There is, however, a need for further contextual measures of school effectiveness which capture more of the school processes and measure the broader range of outcomes. Some studies (cf. Creemers 2002) have indeed identified such measures, but the lack of a recognised set of indicators or contextual factors has precluded their widespread use. These contextual factors may, however, help to provide a wider range of measures for school success and effectiveness, thus better capturing what schools do.

The main aim of this study is therefore to analyse and discuss some of the contextual factors that play a role in the assessment of school effectiveness. Before addressing this aim, the methodology used and the concept of school effectiveness will firstly be discussed.

II. METHODOLOGY

This article, descriptive and narrative in nature and based on a literature study, offers a dynamic perspective on the assessment of school effectiveness and concludes with the conceptualisation and analysis of three different, divergent approaches to measure or assess the impact of school-based management on effectiveness in the school context.

III. RESULTS

The study of school effectiveness has, according to Sun et al. (2007), two distinct aims: firstly, to identify factors that are characteristic of effective schools, and secondly, to identify differences between education outcomes in these schools. One of the touchstones for effective schools is therefore the impact on learners’ education outcomes.

Researchers into school effectiveness, however, continuously aim to clarify the dilemma with regard to learners’ education outcomes (cf. Sun et al. 2007; Petty and Green 2007). The choice and use of outcome measures has been open to debate in many areas of education research. A long-standing problem in this regard has been to find ways to measure learner progress or achievement that identify the school’s contribution separately from other factors such as learner ability, background and the school’s socio-economic environment. Parallel with this has been a call for schools to be more accountable, which in many cases leads to school effectiveness being judged on academic results, while other contributing factors are ignored.

As a result, academic outcomes, usually measured by examination results, have continued to dominate, while other outcomes measures as contextual factors have been neglected or used to a lesser extent. Gray (2004: 187) stated in this regard: “Examination results are a measure of academic learning but do not give the whole picture with regard to the effectiveness of a school academically, and give little information about other outcomes”.

Apart from the fact that researchers are not always sure what output or category of school effectiveness too measure, the definition of school effectiveness may also vary from one person or source to the next. Are we defining technical internal effectiveness or societal external effectiveness? Another problem is that school effectiveness is often confused with an aspect such as school efficiency. To clarify the above, each term and category of school effectiveness should first be correctly conceptualised and defined.

For the purpose of this study, the term ‘school effectiveness’ refers to the “ratio of output to non-monetary inputs or processes” (Cheng 1996: 36) and includes, among other things, the number of textbooks, classroom organisation, professional training of teachers, teaching strategies and learning arrangements. The term ‘school efficiency’, on the other hand, can be regarded as the “ratio between school output and monetary input” (Cheng 1996: 37), with monetary input being one thousand Rand or Rupees per learner per annum, for example.

Furthermore, we can distinguish between internal and external school effectiveness (Cheng 1996). Internal school effectiveness can be
regarded as the school’s technical effectiveness if its outputs are limited to what happens in or just after schooling (for example learning behaviour, acquired skills and changes in attitude), while external school effectiveness can be regarded as the positive impact of the school’s outputs on society or on individuals’ lives (for example social mobility, earning power and work productivity).

The assumption that there is a direct correlation between these two categories of school effectiveness (internal and external) is often problematic and misleading, since a school with a high degree of internal technical effectiveness may not necessarily have a high level of external societal effectiveness. In other words, effective teaching and learning in schools may not necessarily lead to high productivity if these skills are found to be outdated later in life. Ignorance of this complicated relationship and an overemphasis on one category of effectiveness over another is to be avoided (Cheng 1996; Petty and Green 2007).

The reality, also, is that every school has to pursue multiple and contradictory goals because it works within multiple environmental constraints and time frames. Because of its limited resources, it is very difficult for a school to maximise its effectiveness in order to achieve its goals. In the process of pursuing multiple goals, every school experiences different pressures from the environment, and therefore each school develops different priorities and goals. An effective school in that it can respond to change by reprioritising the goals it wishes to pursue (Hall 1987; Sun et al. 2007).

A school may not be able to maximise its effectiveness in terms of all criteria at the same time, but it will be able to create harmony among all criteria in the long run. Cheng (1996: 41) have stated in this regard: “School effectiveness may be the extent to which a school can adapt to internal and external constraints and achieve its multiple goals in the long run”. In other words, it is possible for the different categories of school effectiveness to be compatible with each other and eventually to work in harmony if schools can learn, adapt and develop.

It is clear from the discussion above that the formulation, definition and measurement of school effectiveness are complex issues. The question remains: what category of school effectiveness (what school inputs and outputs) should be measured, and how should school effectiveness be correctly defined? From an organisational perspective, there are many different contextual factors or indicators for the conceptualisation, formulation and measurement of school effectiveness. The following seven contextual factors form the basis of the first approach to be discussed and are based on earlier research into the issue of school effectiveness (cf. Cameron and Whetten 1983; Nadler and Tushman 1983; Cameron 1984; Hall 1987; Caldwell and Spinks 1992; Cheng 1993, 1996):

- **The Goal Factor**: This indicator assumes that there are clearly stated and accepted goals for measuring school effectiveness, and that a school is effective if it can accomplish its stated goals with given inputs. These goals are quantifiable and can be measured against predetermined criteria such as the objectives in school development plans and academic achievement in the matriculation examination. This indicator is widely used in schools for evaluation purposes, but its usefulness is limited because it depends on the quantifiable, which is often impossible to pin down in school contexts.

- **The External Resource Factor**: This indicator assumes that because scarce and valued resource inputs are needed for schools to be more effective, the acquisition of resources replaces goals as the primary criteria of effectiveness. An example of this indicator is financial support from outside the school. This indicator is limited by its overemphasis on the acquisition of inputs from external sources and its failure to look at the efforts made by the school itself to maintain its effectiveness.

- **The Internal Process Factor**: This indicator assumes that a school is effective if its internal functioning is effective. Internal school activities are often taken as criteria for school effectiveness. This indicator includes aspects such as leadership, communication channels, participation, adaptability and social interactions in the school. Some of the disadvantages of this indicator are that it is difficult to monitor and that it overemphasises the means of obtaining school effectiveness.
The Satisfaction Factor: This indicator defines an effective school as one in which all the stakeholders are at least minimally satisfied. It assumes, therefore, that satisfying the needs of the principal, teachers, management team, school governing body, learners and the public is the school’s main task. Satisfaction is, according to this view, therefore the basic indicator of effectiveness. This indicator may not be appropriate if the demands of the stakeholders are in conflict with each other.

The Legitimacy Factor: According to this indicator, a school is effective if it can survive undisputed and legitimate its marketing activities. This indicator is applicable, however, only if the school has had to strive for legitimacy in a competitive environment.

The Organisational Factor: This indicator assumes that environmental changes and internal barriers to school functioning are inevitable and that a school is effective if it can learn how to make improvements and adaptations to its external and internal environments. This line of thinking supports the current emphasis on school-based management and strategic management in schools. This indicator may include aspects such as an awareness of community needs and an environmental analysis.

The Ineffectiveness Factor: This indicator assumes that it is easier for stakeholders to identify and agree on the criteria of school ineffectiveness than on the criteria of effectiveness. It is easier to identify strategies for improving school effectiveness by analysing school ineffectiveness rather than by analysing school effectiveness. This means that a school is effective if there is an absence of characteristics of ineffectiveness. This indicator includes aspects such as conflicts, problems, difficulties, weaknesses, poor performance and poor results.

These seven ‘original’ contextual factors in the evaluation of school effectiveness, together with the two categories of school effectiveness earlier discussed (that is internal and external), can consequently be integrated with each other to provide a complete and consistent assessment approach to school effectiveness from seven different perspectives (Cheng 1996).

The ‘contextual factors-field’ of the approach represent the seven indicators for school effectiveness described above. It is presumed that they are consistent, compatible and in harmony or equilibrium with each other. The ‘category-field’, of the approach, on the other hand, represent the two categories of internal technical school effectiveness and external societal school effectiveness. These two categories are also consistent, compatible and in harmony or equilibrium with each other. In terms of the concept of harmony, there are two levels that contribute to maximising school effectiveness.

On the one level, ‘category-harmony’ indicates the extent to which the two categories of school effectiveness are consistent and in harmony with each other. A high level of harmony in the category field indicates that the higher the effectiveness in one category, the higher the effectiveness in the other category. Of course, this implies that the lower the effectiveness in one category, the lower the effectiveness in the other. Ensuring harmony between the two categories of school effectiveness is therefore very important in pursuing maximum school effectiveness (Cheng 1993, 1996).

The second level of harmony can be described as ‘model-harmony’, referring to the extent to which the seven different indicators’ conceptions of school effectiveness are compatible and in harmony with each other. A high level of harmony in the model field indicates consistent and compatible, or at least not conflicting, indicators of effectiveness. If the indicators are, however, not in harmony with each other, there is the potential for conflict between them.

Different people with different concerns and conflicting values may use different indicators for the measurement of school effectiveness. If the chosen indicators are in harmony with each other, they can be integrated. This approach will provide then a complete and consistent evaluation tool for school effectiveness from different perspectives and may be used to ensure the harmony of indicators and categories of effectiveness in order to maximise school effectiveness. If the chosen indicators are, however, not in harmony with each other, there is the potential for conflict between them. This serves as an indication that they can’t be integrated and that school effectiveness can’t be maximise (Cheng 1996).
A concern or shortcoming in using this approach is that different stakeholders, such as teachers, with different concerns, perceptions and conflicting values, may use different indicators for the measurement of school effectiveness. Another major concern with this approach is that it can distort the system it attempts to measure. A common example of this is a teacher who employs methods that are not pedagogically appropriate (that is, teach for the exam or test only in order to get good results for the school), while ignoring other, wider aspects of the educational process. In such a scenario, the most effort is put into getting borderline learners to pass tests and examinations, while almost ignoring other, more capable competent learners. This concern is, however, less likely to lead to counterproductive results. Such a teacher, it could be argued, attempting to improve results, is most probably also improving the standard of education and therefore also the effectiveness of the school.

In summary: The first approach is based on seven different indicators for the conceptualisation, formulation and measurement of school effectiveness. It should help the school to adapt to its internal and external environment by maximising the categories of school effectiveness conceptualised by the seven different indicators used in the approach.

A second, alternative approach will consequently be proposed which is entirely different from the first approach. This approach focuses on the different roles of the school management team in school-based management in pursuing school effectiveness, and does not include the various indicators and categories of school effectiveness as conceptualised in the first approach.

As a hypothesis, this approach describes, among other things, how school management teams can effect change in schools and improves their effectiveness through the process of school-based management. It consists of three interrelated components that serve as evaluation criteria, namely:

- **Team Capacity**: This criterion is characterised by features like sharing information, team member effectiveness, access to information, requisite knowledge and skills, participation in goal setting, participation in the development of strategies and a focus on complex rather than simple tasks.
- **Team Cohesion**: This criterion is characterised by cooperative, competitive and autonomous goal interdependence and productive controversy.
- **Team Effectiveness**: This criterion is characterised by the quality of decisions and the capacity to implement such decisions.

The criterion of team capacity refers to the professionalism of school management teams and the degree in which the school principal is capable of cooperating and exchanging ideas and information with the team. If school principals do not believe that school management team members are in control of their environment and capable of solving problems effectively, it is unlikely that they will relinquish their decision-making powers. According to Tjosvold and Deemer (1990), specific elements of this criterion are, inter alia:

- information sharing within the team and between the team and the school principal;
- team members’ perceptions of member effectiveness;
- access to information by team members;
- requisite knowledge and skills of team members;
- participation in goal setting by team members; and
- participation by team members in the development of task strategies.

The criterion of team cohesion refers to the school management team’s ability to deal with conflict situations. Members who can work with opposing points of view to improve the quality of decisions made are more likely to understand the source of the opposing views and to incorporate a range of ideas into any decision eventually made. This criterion also refers to members’ perceptions of team goals and the degree to which they experience cooperative, competitive or autonomous goal interdependence.

The specific elements of this criterion derived
from the two theories’ “cooperative goal interdependence” and “productivity controversy” (Deutsch 1990: 82). As far as cooperative goal interdependence is concerned, Deutsch (1990) theorised that when people such as school management team members cooperate, they believe that their goals (and rewards) are the same and therefore they relate positively to each other. When one person achieves a goal, it is more likely that others will also achieve theirs: one person’s success helps others to succeed. However, when people work in competition it is because they believe their goals to be negatively related. When one person reaches a goal, it is less likely that others will reach theirs; one person’s success therefore hinders the success of others. Similarly, when cooperating, school management team members are more likely to encourage others to be effective because their success is interconnected. When they are competing, however, people may actually work against each other to ensure their own success. This will obviously have a negative impact on the school-based management process and its contribution to school effectiveness.

Productive controversy, on the other hand, is a form of conflict that occurs when ideas, information and opinions are incompatible (Tjosvold and Deemer 1990). When controversy is productive, team members are more likely to understand opposing points of view and arguments, and this is likely to result in better decision-making. When controversy is unproductive, people express their opinions, but in a more closed-minded manner.

Tjosvold and Deemer (1990: 384) have reported that, in the case of unproductive controversy, team members often try to find “weaknesses in opposing arguments so they are better able to counterattack, undercut other positions, and make their own views dominate; relying on superior authority or other means to try to impose their solution”. As a result, controversy creates polarisation and results in a low-quality decision which only the winners are committed to implementing. This seriously influences school effectiveness in general.

Tjosvold and Deemer (1990) reported furthermore that work settings or situations with cooperative goals, but conflicting ideas and opinions, were most effective when one was trying to understand the conflicting points of view in assessing the effect of school-based management on school effectiveness. Information acquired in competitive climates is less likely to be assimilated into decision outcomes as a result of the predominance of closed-minded attitudes and a disregard for the source of information. In the case of cooperative climates, however, there is more respect for team members and their ideas and, although conflict may occur, different ideas are more likely to be considered.

The criterion of team effectiveness refers to the quality of school management team decisions and their ability to develop and implement task strategies to achieve the school’s goals and objectives. Specific elements of this criterion include the quality of decisions and the capacity to implement decisions (Black 1998).

The relationship between the three evaluation criteria were empirically tested by Black (1998) and explain how a school development plan is expected to work to improve change and school effectiveness. This perspective also illustrates the link between such a plan and its expected outcomes. According to Black (1998: 33), this perspective “has two components, namely a conceptual theory-test and an action theory-test, which are interdependent”.

The conceptual theory component of the perspective tests the hypothesis that the school development plan influences the behaviour of the target population. Based on the three components as discussed above, the conceptual theory is therefore the relationship between team capacity and team cohesion. Team capacity, as described by its set of specific characteristics, is posited to affect team cohesion (teams with greater capacity will be more cohesive).

The action theory component of this perspective tests the hypothesis that the school development plan results in particular outcomes (or outputs). In the case of this perspective, the action theory assumes that team cohesion, as described by the set of specific characteristics, results in team effectiveness. Teams with greater cohesion will therefore be more effective.

A concern with this approach is that it does not include or consider the various process indicators and categories of school effectiveness as conceptualised in the first approach. This could be problematic, as process indicators
have an important role to play in school evaluation, as “they provide timely diagnostic information to enable improvement” (Petty and Green 2007:70). Within the study of school effectiveness, such indicators may help to provide a wider range of measures of effectiveness than the usual outcome measures, thus capturing better what schools do. Another shortcoming in this approach could be its ‘logical approach’ (that is to learn what successful school management teams do in terms of effective school development plans and then to implement the same plan to increase school effectiveness) as the same plan could not always work and be successful in different schools.

In summary: The second approach focuses on the different roles of school management teams in pursuing school effectiveness. It should be able to measure the impact of the three evaluation criteria of team capacity, team cohesion and team effectiveness on school effectiveness and should be characterised by issues such as the school mission, the nature of activities and management strategies, the use of resources and human relationships.

In the most recent research on school effectiveness (cf. Sun et al. 2007; Creemers and Kyriakides 2008; Van Damme et al. 2008), the authors emphasise, among other things, aspects such as national goal setting in terms of learner outcomes (that is learner outcomes and school effectiveness is firmly bedded in its national context), pressure in the form of strong central control and school accountability, and strong support from the community as some of the contextual factors that influence the effectiveness of schools. The three main effectiveness factors, namely goals, pressure and support, will form the basis of the third and last approach to be presented, and specifically derives from recent work by Sun et al. (2007: 98–99) on this issue.

In this approach, the authors have identified three main contextual factors, namely goals, pressure and support as well as their related theoretical research areas as indicators for school effectiveness. This approach indicates, inter alia, that school effectiveness is firmly embedded in its national context, while national goals are twofold, namely goals for learners’ outcomes and goals for school improvement. A triangle was chosen as most suitable framework to indicate the relations in this approach as it symbolises the important relationship between elements: goals, pressure and support.

School effectiveness criteria for goals include national goal setting in terms of learner outcomes, while school effectiveness criteria for pressure include aspects such as strong central control, external evaluation and school accountability. Lastly, school effectiveness criteria for support include, inter alia, adequate time, financial and human resources as well as a culture of decentralisation.

Around the triangle, each of the three main contextual factors’ research areas add a continuous dynamic process element to the approach and indicate that the issue of school effectiveness can never be separated from the national context which provides goals, pressure and support. Although pressure and support are readily reconciled, they are also closely related. For instance, strong central steering along with external evaluation can contain elements of pressure as well as forms of support.

While school effectiveness emphasises the importance of evaluation, feedback, and reinforcement, evaluation is seen as the key to effective schooling (Creemers 2002). While Barber (1998) argued that governments should have control over national assessment and the national qualification framework, Creemers (2002: 344) stated the importance of this process by adding: “This is of central importance since it is through national assessment that schools across the country can gain a common language of standards and achievements to compare their performance with that of others”.

In summary: In this last approach, three main contextual factors, namely goals, pressure and support as well as their related theoretical research areas is used as indicators for school effectiveness. This approach, should, however, be firmly embedded in the national context and must embody a strong relationship between the three contextual elements of goals, pressure and support. It can therefore never be separated from its national context. This could be a concern with regard to the usefulness of this approach in certain settings.

**IV. CONCLUSION**

Based now on an analysis of the three approaches discussed above, it seems that an effective assessment approach for the evalua-
tion or assessment of school-based management on school effectiveness should have at least the following main characteristics:

- It should help the school to adapt to its internal and external environment by maximising the categories of school effectiveness conceptualised by the seven different school effectiveness indicators (as discussed in the first approach above). It should also be based on sound management principles that include an environmental analysis, systematic planning, appropriate staffing and directing, constructive evaluation, leadership and participation.

- It should be able to measure the impact of the three school management team evaluation criteria of team capacity, team cohesion and team effectiveness on school-based management outcomes and school effectiveness (as discussed in the second approach above). It should also be characterised by issues such as the school mission, the nature of activities and management strategies, the use of resources and human relationships.

- It should be firmly embedded in the national context and must embody a strong relationship between the three contextual elements of goals, pressure and support (as discussed in the last approach above).

V. RECOMMENDATIONS

There is an urgent need to integrate the recent research and developments on school-based management with research into school effectiveness and school improvement. The question of how to conceptualise school effectiveness and establish a school-based management approach to improve school effectiveness is becoming a major concern in current debates on educational reform. To date, much of the evaluative work on school-based management has focused on identifying the features of successful school management plans. However, the equivocal nature of school-based management research has repeatedly demonstrated that very similar plans, with virtually the same features, may have very different outcomes.

The purpose of this research was to provide a quantitative measuring instrument to assess the impact of school-based management on school effectiveness. In response, this article has proposed three different comprehensive approaches, each with its own indicators, for assessing school effectiveness. It must be emphasised that these approaches had been introduced in this study without any empirical evidence. This may be regarded as a shortcoming in this study and is a prospect for future research. It can also be added that another shortcoming in the article may be the fact that the study could not precisely predict the expected outcomes in terms of educational quality with regard to each of the approaches introduced in this research.

However, the approaches discussed build on previous evaluation research as indicated earlier. The results suggest the usefulness and validity of these approaches in measuring school effectiveness, which will lead to further research both refining and applying these approaches.

South African education has already made the shift from external control to school-based management. The most important issue now is how to help schools to implement these management reforms and establish an effective framework for school-based management evaluation. This change has created many meaningful challenges and opportunities for schools in their pursuit of school effectiveness. The development of school-based management and its evaluation should contribute to this process.

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