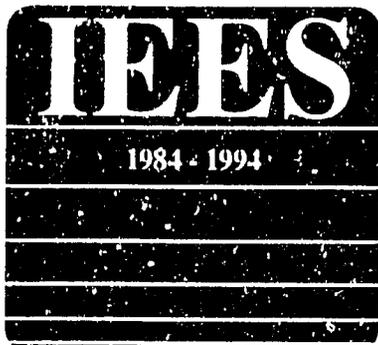

RESEARCH REPORTS

Headmasters' Beliefs About Their Role in Improving Student Performance

January 1992



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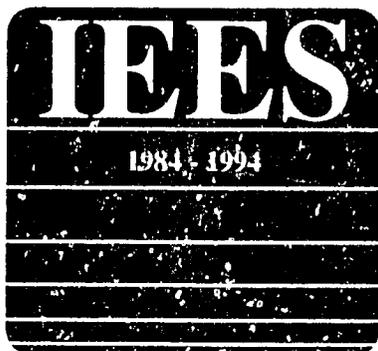
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David W. Chapman
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Abstract

This study investigated the extent junior secondary school headmasters (N = 88) in Botswana differed in their beliefs about the impact of their activities in instructional supervision, school management, and school-community communications on student achievement and, second, the extent that groups of headmasters who differed in these beliefs also differed in the way they viewed the dynamics of their school. The three groups of headmasters identified, based on their pattern of beliefs, differed significantly in their perception of school dynamics. Implications for headmaster selection, headmaster training, and decentralization of educational management are discussed.

Headmasters' Beliefs About Their Role in Improving Student Performance

Effective school leadership has been identified as an essential ingredient in school quality and efficiency in both developed and developing countries (Plank, 1987). Particularly in Third World countries, headmasters are powerful gatekeepers, mediating the impact of central Ministry of Education policies on their school, shaping the educational and social transactions within the school, and interpreting school priorities and activities to the local community. One reason for the frequent failure of educational reform initiatives in the Third World is the disregard commonly shown for the role of school-level administrators in those reform processes (Plank, 1987). Moreover, headmasters' influence is likely to increase, given the growing emphasis on decentralization of decision making and financing to the school and community level which is now a part of many educational reform initiatives.

However, educational planners seeking to more effectively involve headmasters in education reform efforts work at a disadvantage. Surprisingly little is known about headmasters' perceptions of their job, what actions headmasters believe encourage greater student learning, or the specific interventions that might be implemented to support and assist headmasters to do a more effective job. The ignorance has a cost. Many interventions intended to raise student achievement require the support or active participation of the school administrator in some way. That support is mediated by headmasters' beliefs about the impact of their actions. A better understanding of how headmasters regard the efficacy of their activities in improving educational quality is a prerequisite to effectively introducing educational reform initiatives that require headmaster support. It is also essential input to the

design of pre- and in-service training programs intended to strengthen management capacity at the school level.

The presents study investigated the extent that junior secondary school headmasters in Botswana (southern Africa) believed their activities in three domains of headmaster responsibility--instructional supervision, school management, and community relations--contributed to improved student performance. Secondly, it investigated the extent that headmasters differing in these beliefs also differed in the way they viewed the operating dynamics of their school. The study was grounded in self-efficacy theory, discussed later.

Headmasters' Role in the School

Headmasters have four main roles within the school--school management, instructional supervision, school-community relationships, and school-Ministry communications. The relative emphasis across these functions differs by country, but the mix within any particular country is nearly always argued in terms of its contribution to improving educational quality and efficiency at the school level. While many of these arguments are offered to justify decisions made on other grounds (such as financial expediency), there is research supporting the importance of headmaster activities in each of these areas for student performance (Plank, 1987; Pinter, 1988; Douglas, 1988).

School management: In most countries, headmasters' central responsibility is school management which, at minimum, involves determining staffing needs, scheduling classes, ordering textbooks and instructional materials, and maintaining records required by the Ministry. To the extent that headmasters control the flow of inputs essential to student learning, their failure to perform these tasks can impede student achievement. On a day-to-day basis, one of their most direct influences on student achievement is through their impact on teacher and student attendance.

For example, female achievement was observed to be higher in Liberian primary schools that had strong headmasters (Kelly, 1984). Those headmasters were more effective in persuading parents not to let daughters skip school to assist their mothers on market days, thus providing those girls with more instructional time than girls in schools with less forceful headmasters.

The extent that headmasters realize the contribution of their management activities to student achievement depends a great deal on their own beliefs about how students learn. For example, if a headmaster underestimates the importance of instructional materials in student learning, procuring them in a timely way may not be seen a potent way to improve students' performance. If the importance of direct instructional time is not understood, headmasters may not regard enforcement of teacher and student attendance policies as contributing to student achievement.

Instructional supervision, in many Sub-Saharan countries, has traditionally been the job of the Inspectorate, a branch of the Ministry of Education. Headmasters were not expected to help their teachers improve their pedagogy. In settings in which headmasters traditionally have been seen only as local school managers, they may lack the mandate and tradition that would support their operation in this role. Moreover, in highly centralized education systems, headmasters seldom have authority to hire or fire teachers or the leverage to ensure that any instructional supervision they do offer would be heeded.

In recent years, this pattern has given way to a more proactive role for the school administrator. The Government of Botswana, for example, is attempting to decentralize decision making in the education system through a variety of measures. Top ministry officials have recommended that greater authority be extended to regional and district Education Officers, including the authority to appoint and discipline teachers, control transfers and leaves, and recommend special curriculum for the region (Sephuma, 1991). It is likely that these changes will also lead to

greater involvement of headmasters in decision making. In most current educational reform efforts it is expected that the headmaster, as the supervisor closest to and most aware of the day-to-day performance of the teacher, will play an important role in instructional supervision (see for example, Government of Liberia, 1988). This expectation is often a consequence of poor communications and inadequate transportation budgets which preclude effective operation of the Inspectorate.

While the expectation that headmasters will help teachers improve their teaching seems plausible, headmaster selection often operates on criteria other than their knowledge of pedagogy or the quality of their own performance as teachers. Seniority, stature in the local community, and political connections may be dominant factors. Those selected may lack formal training in supervision, may not themselves be effective teachers, and may not command sufficient respect of other teachers in the school to operate effectively in this role. Further, by the time teachers have the stature and connections to be selected as headmasters, they may be so socialized into established patterns of doing things that they become the least likely people to lead others to improved practice (Lortie, 1975). It is quite plausible, then, that headmasters may not see their a role as instructional supervisor, for reasons both of inadequate training and lack of a clear mandate. In turn, they may not see actions they take in this domain to lead to improved student performance.

School-community relationships: The headmaster plays a primary role in representing school goals, activities, and achievements to the local community. Their relationship with their local community is important for three reasons that can impact on student achievement. First, headmasters with strong community ties can do much to elicit parent encouragement of their children's learning experience, particularly as parent interest signals to their children that the activities of schooling should be taken seriously. Second, the involvement can provide a way that parents,

who may not themselves have much schooling, learn what they can do to reinforce their children's school experience, for example, insisting their children attend school regularly and do their homework.

Third, in many developing countries, communities may supplement teachers' salaries through cash or food contributions, build furniture, maintain school facilities, and contribute to the purchase of instructional materials. Headmaster ties to the community are important in eliciting this direct financial support. Indeed, the new emphasis in many development projects on decentralization of educational financing depends heavily on the effectiveness of the headmaster in creating and maintaining positive school-community relations. Since the relationship between community involvement in the schools and student achievement tends to be more indirect than the links between instructional supervision or school management and achievement, headmasters may not realize how their actions in this role can influence student performance.

School-MOE communications: Headmasters operate as a linking agent between school and the Ministry. They communicate Ministry of Education (MOE) policies to the teachers and represent school activities and achievements to the Ministry. Their role in both directions can impact the quality of the education students receive.

The design of large-scale interventions to improve education increasingly are increasingly grounded in data based analyses. The ability of the central MOE to effectively planning for education often depends on headmasters providing accurate and timely school data to the Ministry and effectively implementing activities and procedures initiated by the MOE. Consequently, a high priority issue on many education development efforts is the improved collection, analysis, and use of quantitative data in decision making, largely from a belief that better information will lead to better resource allocation which, in turn, can lead to improved

performance of the education system (Chapman, 1990). At the same time, there is widespread skepticism about the quality of the national level education data available in many countries. Recent research on education data quality and flow in five Third World countries found that government officials and educators alike thought the primary source of error was introduced at the school level. Both groups attributed low data quality to headmasters' failure to accurately record data and to correctly report the data they did have (Chapman, 1991). It is probable that if the data are wrong, interventions to improve education will be mistargeted, and student performance may suffer. On the other hand, the manner in which school data contribute to national level decisions is often invisible to headmasters. Many do not see how the energy they invest in record keeping and reporting contributes to the educational experience of the children in their school.

Problems in information flow from the Ministry back to the headmaster can have even more direct impacts on student performance. National policies intended to improve education performance generally depend on changes occurring at the school level, changes that typically the headmaster is charged to implement. Without that cooperation, even the best of national policies can do little to improve education. The extent, then, that the headmaster encourages implementation of new programs and practices intended to improve educational quality may contribute directly to student performance.

Nonetheless, headmasters may not assign much importance to this role. This arises from general satisfaction with the level of student performance already being achieved within the school, from skepticism about the likely impacts of the initiatives being disseminated, or from a desire to protect the teachers from initiatives that might prove unpopular. Whatever the reason, it leads headmasters to discount the importance of their role and underestimate the impact of their actions in this domain on raising student performance.

Performance Efficacy

Implementation of educational reform ultimately relies on thousands of micro-decisions of individuals comprising the educational system. New pedagogical techniques, instructional strategies, and learning technologies only succeed to the degree that the individuals who staff these activities allow them to (Chapman, 1990). To understand educational reform, it is necessary to consider the dynamics that mediate people's willingness to change their day-to-day behaviors in ways that support a new program or practice. One of these dynamics is an individual's sense of performance efficacy (Bandura, 1977; Fuller, Wood, Rapoport and Dornbusch, 1982).

Performance efficacy, as it is used in this study, refers to headmasters' perceived expectancy of increasing the level of student achievement through their actions in the school. It is the conviction that their actions will lead to the desired end, that they are capable of improving student achievement through their deeds as headmaster. Individuals differ in their efficacy beliefs. Educators may share a commitment to raising student achievement, yet differ markedly in their beliefs about which activities will lead to that end. Headmasters' efficacy beliefs, then, mediate their choice of actions they are willing to undertake to improve student learning (Jatulus, 1989). Consequently, performance efficacy is an important link between organizational efforts to implement innovations and individuals' participation in those innovations (Fuller, Wood, Rapoport and Dornbusch, 1982). These beliefs are particularly important in mediating individuals' behavior in new, novel, or threatening situations, characteristics that often typify large-scale, centrally dictated educational reform efforts.

Efficacy can be learned. Headmasters' beliefs about the efficacy of alternative actions in raising student achievement are strongly shaped by their accumulated

experience of working in the schools. These beliefs shape how they evaluate new events and opportunities and influence the extent headmasters are willing to implement new programs, procedures, and practices in their school. Headmasters' experience with school dynamics shape their efficacy beliefs which, in turn, shape the way they subsequently view the flow of events around them. The relationship is non-recursive, each influences the other.

This cycle can be broken by targeted interventions that offer "new learning." Such training has to ensure that headmasters have both the skills necessary to act in the desired ways and understanding of the links between the behaviors and the desired achievement outcome. Either factor alone is incomplete. However, while skill acquisition involves only new learning, efforts to increase headmasters' understanding of the efficacy of various practices often involves undoing prior learning, which is based on accumulated experience and interpretation of the operating dynamics of the school. Examining the differences in those school dynamics among headmasters who differ in their efficacy beliefs can provide us with a better understanding of the factors that shape headmasters' sense of efficacy. Only as these beliefs and relationships are understood can interventions be designed in ways that build on and accommodate these dynamics.

The present study investigated the extent that Botswana junior secondary school headmasters differed in their beliefs about the impact of their actions in three areas—instructional supervision, school management, and school-community communications—on student achievement. Secondly, the study investigated the extent that headmasters differing in their beliefs about the efficacy of their actions in raising student achievement differed in the way they viewed the dynamics of their school.

The Botswana Context

Instructional supervision in Botswana's junior secondary schools is supposed to be provided at the Ministry level by Education Officers who visit schools and at the school level by headmasters. However, in practice Education Officers have tended to serve more of an inspectorate (than an instructional supervision) role, assuring that Ministry regulations are being met. Headmasters, in turn, are primarily seen as managers of the schools' administrative affairs--ordering textbooks, keeping records, and maintaining discipline. In the last five years the MOE has been trying to emphasize the importance of the headmaster in instructional supervision, but the idea has not been widely accepted and is still not explicitly stated in the headmasters' official job description. In part this is because headmasters are not necessarily selected on the basis of their teaching skill, have virtually no training in instructional supervision, and do not always feel competent to judge teachers' abilities, particularly in subjects outside the headmaster's own area of specialization (Chapman, Burchfield, and Snyder, 1991). Recent in-service training has encouraged headmasters to give more attention to instructional supervision and offered suggestions about strategy headmasters might use. Still, it is a relatively new idea, one with which many headmasters are still uncomfortable.

The Study

In 1990 there were 125 Community Junior Secondary Schools in Botswana. Seventy-eight percent of the headmasters in these schools were male, 72 percent were Batswana, and 18 percent were expatriate. During the Fall of 1990, headmasters in all of these junior secondary schools were asked to complete the Botswana Junior Secondary Headmaster Questionnaire (JSHQ). Questionnaires were distributed during a series of regional headmaster conferences (held semi-annually) and headmasters were asked to complete the questionnaire before

departing or, if time did not permit, to mail their completed form back to the Headmaster Advisor in the Ministry of Education. A total of 88 completed questionnaires were received, for a response rate of 70 percent.

The JSHQ consisted of 225 items, adapted from earlier work of Chapman and Snyder (in press), Snyder, Fuller and Allen (1988), and Snyder, Chapman and Fuller (in press). It collected headmasters' self-ratings of their skills, attitudes, and beliefs about teaching, their activities as headmasters, and their perceptions of the dynamics of their school. As part of the JSHQ, headmasters rated (on a seven point scale) the extent they believed their performance of key activities related to instructional supervision, school management, and community relations would have an effect in improving student achievement in their school. A cluster analysis was then computed for each of these three areas to determine the extent that there were discernable groups of headmasters which differed in their beliefs about the consequences of their actions in these areas on student achievement. Based on headmaster membership in the groupings indicated by the cluster analyses, three groups of headmasters were identified. A discriminant analysis was computed to determine the extent that headmasters who differed in their beliefs about the impact of their actions on student achievement varied in the way they viewed the operating dynamics of their school.

Results

The first cluster analysis identified three groups of headmasters, based on their beliefs about which of their *instructional supervision* activities contributed to higher levels of student achievement. Groups were distinguished by statistically significant

differences in how they regarded all nine dimensions of instructional supervision included in the analysis. (These dimensions are presented later in Table 1). Headmasters in the first cluster (N=57) assigned greater importance (than either of the other two groups) to their efforts in assisting teachers to use new instructional techniques, implementing new curriculum and using the curricular materials available in the school, preparing lesson plans, writing tests, and evaluating teacher performance as means of raising student achievement (Table 1). Cluster 2 consisted of only one headmaster, characterized by an extreme belief that the headmasters' actions had little or no impact on students' academic achievement. Headmasters in Cluster 3 (N=30) believed that headmasters' actions have significantly less impact on student achievement than did those headmasters in Cluster 1, but indicated a higher belief in their impact on achievement than did headmasters in Cluster 2. Overall, respondents in Cluster 1 believed their actions as headmaster could impact student achievement, those in Cluster 3 were far more pessimistic.

The second cluster analysis identified three groups of headmasters, based on their beliefs about the extent that their *school management* functions contributed to higher levels of student achievement. Groups were distinguished by statistically significant differences in the extent to which they believed their performance in all seven management activities could contribute to higher levels of student achievement (Table 2). Headmasters in the first cluster (N=73) assigned greater importance (than the other two groups) to maintaining student discipline, determining the need for and obtaining instructional materials, determining staffing needs, scheduling activities, managing school finances, and ensuring that teachers keep accurate records. Cluster 2 consisted of only one headmaster, who assigned more importance than most other headmasters to managing school finances but assigned little importance to maintaining discipline. Respondents in Cluster 3 (N=14) shared a belief in the positive impact of maintaining school discipline, but

assigned less importance to the impacts (on student achievement) of the headmaster's role in scheduling, ordering materials and supplies, and managing school finances. Respondents in both Clusters 2 and 3 assigned the highest rating to maintaining student discipline as a means of influencing achievement.

The third cluster analysis was conducted to identify groups of headmasters, based on their beliefs about the extent to which their *relationships with parents and the local community* could contribute to student achievement. However, virtually all headmasters grouped together in cluster 3 (N=85), in which headmasters thought that their actions to encourage community members to provide financial support to the school would have an important positive effect on student achievement. Cluster 1 consisted of only three headmasters and Cluster 2 included only one. These four headmasters generally thought their efforts in community-school relations would have little or no effect on student achievement.

Table 3 shows the cross-membership of headmasters on the clusters defined by their beliefs in the efficacy of instructional supervision and in the efficacy of school management in improving student achievement. Most headmasters who believed that their instructional supervision of teachers could lead to improved achievement were also positive about the impact of their school management on student performance. This group of headmasters (63% of those responding) seemed to hold a generalized view that headmasters could make a meaningful difference in the performance of students in their school. Headmasters who believed their instructional supervision of teachers had less impact on student achievement were split on their beliefs about the impact of their school management on student performance. Specifically, 19 headmasters who were pessimistic about the impact of their instructional supervision activities were still positive about the impact of their school management activities on student achievement while 10 were pessimistic about the impact of their efforts in either area. Very few headmasters (N=4) who

believed that instructional supervision of teachers did make a difference in student performance thought school management was unimportant in achieving that goal.

Overall, more than 90 percent of the headmasters in the analysis fell within three groups, based on the importance they assigned to headmasters' instructional supervision of teachers and school management activities in raising student achievement. Most respondents (63%) believed that headmaster performance in both types of activities could improve student achievement. Another quarter of the respondents thought instructional supervision could make a difference, but doubted the impact of school management activities. About 12 percent of the headmasters doubted the efficacy of their efforts in either area.

The second phase of the analysis examined the extent that the operating dynamics of junior secondary schools differed across the three groups of headmasters. Given the limited degrees of freedom available, this phase of the analysis was conducted in two steps. First, one-way analyses of variance were computed to determine the extent headmasters in the three groups differed on each of 33 items describing school dynamics. Those items on which there were statistically significant differences between groups were then entered into a stepwise discriminant analysis, which provided a multivariate assessment of the extent these items, taken together, differed across headmaster groups. One impact of this two stage procedure was to inflate the amount of explained variance in the discriminant analysis, since the analysis began with items on which there were known differences. This procedure was judged appropriate since the study was conceived as an exploratory effort to isolate the most important correlates.

Headmasters differing in their beliefs about the efficacy of their instructional supervision and school management activities in improving student achievement differed significantly on 13 of the 33 items on school dynamics. A stepwise discriminant analysis using these 13 items to predict group membership yielded two

significant functions which together accounted for 65 percent of the variation in group membership (Table 4). The first function had a chi square of 52.48 and a canonical correlation of .67 ($p < .0001$). The seven variables which entered the analysis explained 48 percent of the variation in group membership. Primary discrimination was between the headmaster group most positive and the headmaster group least positive about the impact of their supervisory and management efforts in improving student achievement. Headmasters who thought their activities in both these domains helped improve student achievement were more likely to believe they could get help from the Ministry of Education staff, that they were effective in helping teachers improve their teaching, and that teachers in their school made good use of the instructional materials available to them. Headmasters least positive about the efficacy of their efforts in these two areas were less likely to believe they could get help from Ministry staff or that they were effective in helping teachers improve their teaching. However, they were more likely to believe they had time to get their work done and were more inclined to ask the opinions of teachers about administrative matters.

Primary discrimination on the second function was between the two headmasters groups which assigned low value to instructional supervision but differed on the value they assigned to school management as a means of improving student achievement. This function had a chi square of 11.70 and a canonical correlation of .41 ($p < .02$). The seven variables in the analysis explained 17 percent of the variation in group membership. Headmasters who assigned greater efficacy to school management were more likely to think they had a strong community outreach, more likely to involve teacher in administrative decision making within the school, and more prone to believe they could get help from Ministry of Education staff. Headmasters pessimistic about any of their efforts leading to improved student performance felt less time pressure in their work, thought they did

more soliciting of funds in the local community, and felt less effective in helping teachers improve their teaching.

Discussion

Junior secondary headmasters in Botswana differed significantly in their beliefs about the efficacy of their instructional supervision and school management activities in raising the achievement of students in their school. Three headmaster groups were identified--those assigning high efficacy to both their instructional supervision and school management, those high in school management/low in instructional supervision, and those assigning low efficacy to both areas.

Headmasters differing in the efficacy they assigned to instructional supervision and school management activities differed significantly in their perceptions of school dynamics. In particular, headmasters pessimistic about the efficacy of their supervisory and management efforts, as a group, lacked confidence in both their ability to help teachers improve their teaching and in their ability to get help from the MOE. Headmasters who were optimistic about their impact saw virtually all their actions as contributing to that goal (achievement).

In both areas, supervision and management, respondents exhibited little discrimination about the relative impact of specific actions. Depending on the headmaster group, either all the behaviors within each set were highly valued in raising student achievement, or none of them were. This generalized pattern of responses suggests a lack of clarity on the headmasters' part as to the specific dynamics of the instructional process. The findings have important implications for current efforts of countries to decentralize educational management, for headmaster training, and for headmaster selection.

Decentralization: Decentralization is widely advocated as a way to help improve educational quality in developing country settings (Ross and Mahlck, 1990; Israel, 1987; Windham, forthcoming). In decentralization, greater authority and responsibility are given to district and school level administrators, thereby reducing centralized management. The assumption is that local personnel will better understand local conditions and will be able to manage and supervise school activities in a more responsive and relevant way. A secondary benefit is a cost savings, as fewer school inspectors are needed at the ministry level. In such shifts, headmasters typically are provided with training, but the training is often cursory, based on an assumption that, since most headmasters were once teachers, they already know (a) what classroom practices raise achievement and (b) how to supervise and influence other teachers' work. However, in this study, headmasters showed little ability to discriminate which management and instructional supervision strategies are likely to have the most impact on student achievement. While not doubting that local personnel may have a better grasp on local conditions, it is not clear that they have any better ideas of what school practices are likely to increase student learning. Decentralization may lead to a clearer fix on the problem, but not necessarily greater wisdom in knowing how to address it. Such a finding is consistent with recent work by Windham (forthcoming) who argues that decentralization may only be shifting the same problems to lower levels of the education system, levels that may have less capacity to deal with them than did the central ministry. One implication of this finding is that decentralization must be supported by a substantial amount of headmaster training. A second implication is that not just any training will do--what is needed goes well beyond what has typically been offered in most developing countries.

Training: While instructional supervision is probably the most important way that headmasters can influence student achievement outcomes, it is often the area in

which headmasters have the least experience or training. Lacking a wider range of alternative strategies for raising student performance (strategies that might come through training), they typically revert to their own experience as the basis for what they encourage in other teachers. One result is that headmasters, believing they are supporting good practice, sometimes operate to reinforce traditional patterns of teacher-centered pedagogy and may even suppress instructional strategies that could increase student learning. Even where they do not actively suppress innovative efforts, results of this study suggest they still may not be clear about what teacher practices they should be encouraging.

Headmaster efforts to figure this out are complicated by the generally indirect nature of the effects that administrators have on the instructional process. Headmaster actions to raise student learning can be both direct and indirect. While much of the research on headmaster effectiveness has examined the direct effects of headmaster behavior on student performance, more recent theoretical formulations suggest that most headmaster effects are indirect (Pinter, 1988). For example, Bossert, Dwyer, Rowen and Lee (1982) hypothesize that headmasters shape student learning by manipulating school level factors such as student time in classroom, class size, and teacher and student attendance. Ellett and Walberg (1979) argue that headmaster behavior, school conditions (including teacher and student behavior), context conditions (including parent and community behavior) and student outcomes are reciprocally related--each affects and depends on the other. While teachers may have a good sense of their direct effects on raising achievement, it does not necessarily follow that, upon their promotion to headmaster, they then understand the most promising mechanisms for indirect effect on student performance.

In the case of Botswana, the rapid growth of junior secondary school system has meant that a lot of teachers have been promoted into headmaster positions. For

many, this is an attractive career advancement. There are substantial rewards for becoming a headmaster, in particular, they receive considerably higher salaries than teachers. The opportunity to become a headmaster operates as an important incentive for teachers and is an important element in their job satisfaction (Chapman, Burchfield, and Snyder, 1991).

In Botswana, as elsewhere, headmaster training often is aimed at helping new headmasters understand the logistical processes associated with record keeping, ordering supplies, and scheduling, with some attention to strategies for working with teachers (e.g., how to run a faculty meeting). Little if any attention is given to helping headmasters understand what direct and indirect actions on their part would be most likely to raise student performance. This is partly because raising student achievement is not an explicit goal of headmasters and partly because the mechanisms to effect this end are not well understood. Advancement to headmaster may be seen more as promotion to a position of management than of leadership.

As Botswana moves toward greater decentralization, headmaster effectiveness increasingly will be defined in terms of educational outputs (with student performance a central one). The challenge in training is threefold. The first is explicitly incorporate student achievement as an outcome within the effective influence of headmasters and as a goal for headmasters to work toward. The second challenge is to identify a range of headmaster actions that can influence student performance. That will come only through country-specific research, reflection, and experimentation. The interventions eventually selected have to be low-cost, acceptable within local community norms, and result in improved student outputs. Headmaster training, for example, might examine school-level teacher incentive systems. The third challenge is to target the training appropriately. As these findings show, headmasters differ widely in their notions of what actions on their

part can make a difference. Training aimed at those who think everything they do raises performance may require a different strategy from that aimed at those who think that nothing they do matters. The Ministry of Education in Botswana is already addressing all three of these challenges through a program of classroom and school level research (under which the present study was supported) and by increasing the involvement of headmasters in the development of instructional policies and the supervision of instruction (Mullaney, Kopong, and Frencken, 1991).

Shifting greater management and instructional supervision responsibility to headmasters and improving headmaster training should not relieve the central ministry from continued efforts to assist headmasters in promoting higher student performance in their school. While results highlight the need for headmaster training, one of the most important findings of the study is that training is not a substitute for continued MOE support of the headmaster. A key finding is the importance of MOE support in combination with headmasters having skills in management and instructional supervision. Both are necessary; one should not too quickly be traded-off against the other.

Headmaster Selection: It is widely assumed that a good teacher will make a good headmaster. Effectiveness as a teacher, then, becomes an important criteria in the headmaster selection process. Effectiveness, however, is often evaluated in terms of social and professional relationships, rather than any careful examination of instructional practices, in part because those practices are not easily visible to ministry officials responsible for headmaster selection. Moreover, attempts to base promotion on teaching practice would probably not work well, since recent research suggests there are few differences in pedagogical behaviors across teachers in Botswana junior secondary schools (Chapman, Snyder, and Burchfield, 1991). Such widespread similarity in practice is probably held in place by societal beliefs about appropriate teaching behaviors. Whether or not subsequent research supports

current practices as effective, the lack of variation reduced their utility as a criteria in headmaster selection.

The present findings suggest that headmasters differ widely in their beliefs about their own efficacy in raising student performance. As Botswana moves in the direction of encouraging stronger school level leadership, education may be better served by headmasters who are optimistic that they can make a difference in improving student performance than by headmasters who start from a position of pessimism, even if they lack clear ideas of exactly what actions are most effective in reaching that end.

Notes

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Table 1

Cluster Analysis of Headmasters' Rating of the Impact of Instructional
Supervision Activities on Student Achievement

ITEM	<u>Initial Cluster Center</u>			<u>Final Cluster Center</u>			F Ratio
	Cluster	Cluster	Cluster	Cluster	Cluster	Cluster	
	1	2	3	1	2	3	
Number of headmasters in cluster	57	1	30				
supervise teaching staff	7.0	5.0	5.0	6.5	5.0	5.6	17.43
resolve conflict in the work setting	4.0	2.0	7.0	6.2	2.0	5.7	8.86
organize and implement staff development	6.0	6.0	5.0	6.4	6.0	5.4	12.94
oversee teachers' implementation of curriculum	7.0	6.0	4.0	6.5	6.0	5.3	24.46
assist teachers in using new instructional techniques in the classroom	7.0	0.0	4.0	6.4	0.0	4.8	82.36
assist teachers in using curricular materials available in the school	7.0	0.0	5.0	6.5	0.0	5.1	61.64
assist teachers in writing tests	7.0	0.0	3.0	6.0	0.0	4.3	48.95
assist teachers in making lesson plans	7.0	0.0	3.0	6.0	0.0	4.0	66.09
evaluate teachers' performance	7.0	5.0	6.0	6.4	5.0	5.6	11.29

Table 2

Cluster Analysis of Headmasters' Rating of the Impact of
School Management on Student Achievement

ITEM	<u>Initial Cluster Center</u>			<u>Final Cluster Center</u>			F Ratio
	Cluster	Cluster	Cluster	Cluster	Cluster	Cluster	
	1	2	3	1	2	3	
Number of headmasters in cluster	73	1	14				
ensure that teachers keep accurate records on student attendance and achievement	7.0	4.0	5.0	6.2	4.0	5.4	8.28
prepare timetable for planned activities	7.0	1.0	4.0	6.2	1.0	4.6	32.06
determine staffing needs	7.0	1.0	7.0	6.5	1.0	5.6	41.88
determine material and supply needs	7.0	5.0	3.0	6.4	5.0	4.5	45.03
obtain materials and supplies needed	7.0	4.0	3.0	6.5	4.0	5.1	27.11
manage the school's financial resources	7.0	7.0	4.0	6.4	7.0	4.8	22.03
maintain student discipline in the school	7.0	0.0	7.0	6.7	0.0	6.4	78.22

Table 3

Cross Tabulation of Headmasters' Membership in
Clusters Defined by Instructional Supervision
and School Mangement
(reported as number of headmasters)

		School Management		
		Cluster 1	Cluster 2	Cluster 3
Instructional Supervision	Cluster 1	51	1	4
	Cluster 2	1	0	0
	Cluster 3	19	0	10

Table 4

Discriminant Analysis to Predict Differences Among Headmaster Clusters

Operating Dynamic of School	Mean	St.Dev.	Discr Funct Coeff		Item-to Scale Corr	
			Funct 1	Funct 2	Funct 1	Funct 2
Teachers make good use of the instructional material available to them.			.24	-.38	.28	-.21
I have time to get my work done.			-.74	.73	.23	.49
I can get help from the Ministry of Education staff.			1.14	-.14	.63	.14
I ask the opinions of teachers about administrative matters.			-.37	-.42	.17	-.36
I am effective in helping teachers improve their teaching.			.82	.43	.52	.15
Asking for financial support from the local community is part of my job.			.11	.59	.27	.06
I have conversations about school activities with community members who do not have children in school.			.01	-.81	.35	-.41
Teachers listen to my ideas about how they can improve their teaching.					.48	-.01
I am very clear about what duties and responsibilities a headmaster is supposed to carry out.					.42	.00
Teachers in this school keep in close contact with parents in the community.					.38	.08
Parents or children in my school like the way I do my job as a headmasters.					.33	-.07
I know the strenghts and weaknesses of teachers in my school.					.31	-.03
I am able to get more instructional materials ans supplies whenever they are needed.					.28	.07
I have a good relationship with teachers in my school.					.16	.09
Canonical Correlation					.67	.47
Chi Square					52.48	15.46
Significance					p<.0001	p<.02
F Ratio between pairs of groups		F Ratio				
Group 1 with Group 2		4.24***				
Group 1 with Group 3		5.85***				
Group 2 with Group 3		3.06**				