

June 2017

Trained and Untrained Elementary School Principals in Malawi

K.P. Binda
binda@brandonu.ca

P.S. Mzumara

Follow this and additional works at: <http://ir.lib.uwo.ca/cie-eci>

Recommended Citation

Binda, K.P. and Mzumara, P.S. (2017) "Trained and Untrained Elementary School Principals in Malawi," *Comparative and International Education / Éducation Comparée et Internationale*: Vol. 21 : Iss. 1 , Article 5.
Available at: <http://ir.lib.uwo.ca/cie-eci/vol21/iss1/5>

This Reviewer List is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Comparative and International Education / Éducation Comparée et Internationale by an authorized administrator of Scholarship@Western. For more information, please contact tadam@uwo.ca.

Job Performance of Inservice Trained and Untrained Elementary School Principals in Malawi

*K.P. Binda
and
P.S. Mzumara*

Malawi experiences numerous problems in its educational system, one of which is school administration. A needs assessment study and subsequent development program by the Malawi Institute of Education and Brandon University were jointly implemented to upgrade skills of school administrators for enhanced internal efficiency.

This study was designed to ascertain the effectiveness of the program. A 2x2 ex post facto randomized block design was employed to measure the job performance of trained and untrained principals. One hundred and eighty-one subjects were surveyed with a questionnaire containing validated 5-point Likert-type items. Using Two-way ANOVA, trained school administrators were found to be significantly different from untrained principals in terms of clinical supervision and leadership behavior while organizational climate of the schools showed little difference under the two types of leadership. External factors related to political, economic and social environments in Malawi were believed to be quite powerful in neutralizing the effects of training on the organizational climate of schools.

Le système éducatif du Malawi est confronté à de nombreux problèmes dont celui de la gestion scolaire. Le Malawi Institute of Education et The Brandon University ont mené une étude de besoins et ont élaboré un programme de développement professionnel pour améliorer les compétences des gestionnaires scolaires afin d'accroître l'efficacité interne du système. Cette recherche fut élaborée pour mesurer l'efficacité du programme de développement professionnel. Quelques 181 sujets répondirent à un questionnaire utilisant l'échelle de Likert. Les gestionnaires ayant suivi un programme de formation se démarquent de façon significative des gestionnaires non formés dans les domaines de la supervision clinique et du leadership. Toutefois, on retrouve très peu de différences dans le climat organisationnel entre les écoles gérées par ceux qui ont reçu une formation et ceux qui n'ont pas reçu de formation. Les auteurs estiment que des facteurs externes reliés à l'environnement politique, économique et social au Malawi sont suffisamment puissants pour neutraliser les effets de la formation sur le climat organisationnel des écoles.

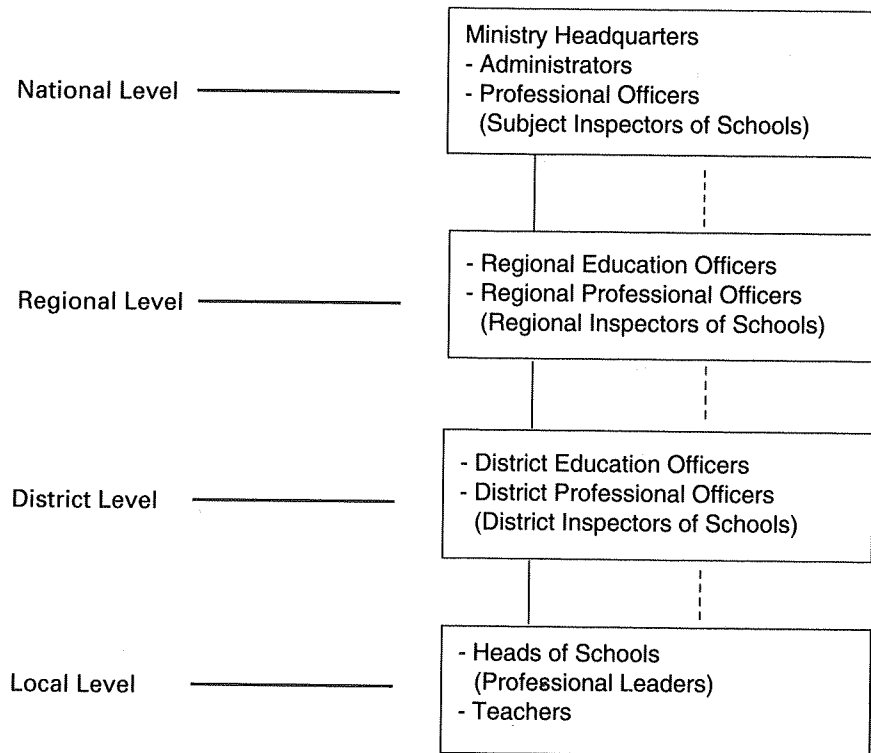
Malawi, like many other developing countries, experiences serious problems in its education system. Concerns have been expressed about declining standards in the schools with inadequate numbers of trained teachers. Statistics show that about 17% of teachers are unqualified. There are high student-teacher ratios — the national average being about 65:1 with a large number of pupils repeating grades, i.e., about 50% by grade 8, the end of primary education (Ministry of Education and Culture, 1987). Malawi has one of the highest repeater rates in Africa; drop-out rates are also very high, a factor that is comparable to those in Latin America (The Inter American Development Bank, 1989).

The rapid expansion of primary school enrolment in the Sub-Sahara in the 1980s (Ogbu & Gallagher, 1991), and particularly in Malawi created new problems such as inadequate classrooms and instructional materials,

insufficient poorly trained staff, and poor professional leadership from both principals and inspectors. Notwithstanding the declining economic situation in the country, the pressing problems pointed to an urgent need for improvement in the system.

Accordingly, the 1985-1995 education plan gave special attention to "the improvement of physical and human resources" (Ministry of Education and Culture, 1985, p. 2). In view of the problems, the Malawi Institute of Education (MIE) cooperated with Brandon University (BU) to conduct a needs assessment study (1984) and jointly deliver inservice training programs for primary school heads (referred to here as principals or PSHs) and district inspectors of schools (DIS). These officers operate at the local level in a rigid bureaucratic structure. (See Figure 1). The training program was planned and implemented jointly by MIE and BU staffs. The Ministry of Education in Malawi also cooperated in this venture. This joint effort was aimed at developing an appropriate indigenous technology to fit the contextual realities of the country. This collaborative, interactive strategy has support in the literature (UNESCO, 1980; King, 1984).

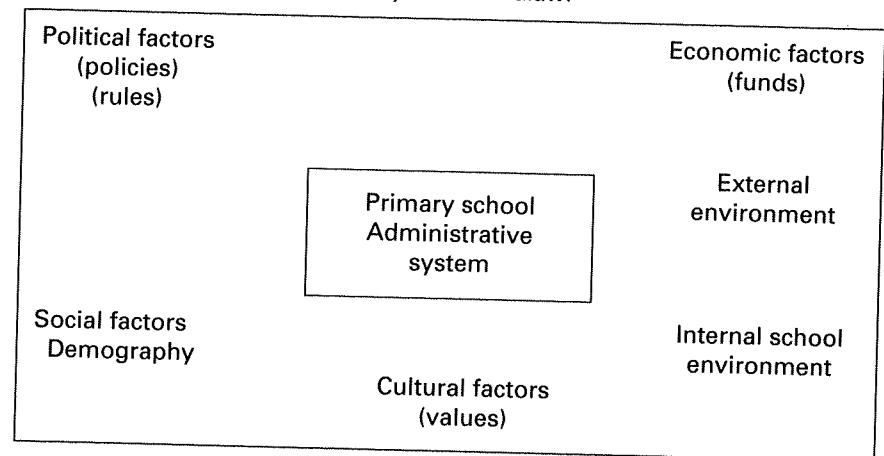
Figure 1
Administrative Structure of Malawi Primary School System



In addition to the rigid bureaucracy Malawi, like other countries in Sub-Saharan Africa (Harber, 1989), has a centralized, system of education that prescribes performance at the local level. Professionals, therefore, work according to the requirements of the system in existence. However, external constraints noted by Lam (1985) and McGinn et al. (1979) strongly influence behavior in Malawian schools and, therefore, mediate the behavior of principals and teachers. External constraints such as those described below affect school administration in a number of ways.

Principals operate in a centralized system where politics at the national and local levels impinge on their administrative behavior. Influential local leaders often pressure principals to operate schools according to the communities' values and wishes (Chilambo, 1987). Principals, as resident community members, cannot ignore these demands. Economic and demographic pressures result in large classes and almost no teaching resources. Principals are required to teach classes when teachers are absent as there is no provision for substitutes (Chilambo, 1987). Community pressures for producing "passes" in the secondary school entrance examination creates system inefficiency; emphasis is placed on teaching for examinations which may have no relationship to local problems. These mediating factors as shown in Figure 2, all combine to influence school administration at the local level.

Figure 2.
Mediating Factors in the School System in Malawi



With inservice training, the expectation is that the district inspectors of schools and principals will utilize their newly acquired knowledge and skills to improve the administration and management of schools under their jurisdiction, as well as to provide instructional leadership for their staffs. Gross, Giaquinta, and Bernstein (1971) state that "it is management responsibility to develop an overall strategy for change [as] management is in

the position to command an overall view of the organization and of the complex set of forces that influence it" (p. 212).

Elementary school principals are drawn from the ranks of teachers who themselves are poorly trained; many have only two years of high school education. As a result, the principals are not fully prepared to organize and manage schools effectively, particularly in an era of rapid change; moreover, they have little opportunity for additional training while in service (Binda et al., 1990, p. 7). District Inspectors drawn from the ranks of the principals are likewise in the same predicament; they lack the confidence and skills for promoting new ideas and instructional leadership training which they are required to do. It is with this perspective that the MIE-BU training program was undertaken.

The MIE-BU in-service training program encompasses three main components designed to meet the needs of the school system in Malawi.

- 1) Educational Foundations (120 contact hours) includes: Educational Psychology (40 hours), Curriculum Development (40 hours), Contemporary Issues (20 hours), and Measurement and Evaluation (20 hours).
- 2) Curriculum Studies (80 contact hours) includes two of the following primary education content areas: Arithmetic (40 hours), Cichewa (40 hours), English (40 hours), Science and Health Education (40 hours), Agriculture (40 hours), History and Civics (40 hours), Geography (40 hours), and Needlecraft and Home Economics (40 hours).
- 3) Educational Administration, Inspection (Evaluation), Supervision, and Inservice Teacher Education (160 contact hours). This component includes the development and implementation of a field-based project relevant to current issues in the participant's school.

The first and second curricular areas outlined above are designed to compensate for deficits in the educational background of trainees, as well as provide relevant professional training for the principalship. The last component is intended to provide training for educational leadership and school administration.

Purpose

Since 1984, over 400 administrators have participated in the three year inservice courses and have been in the workplace, but little is known about the effectiveness of their training or the extent to which the graduates are implementing the acquired skills. Therefore, the purpose of this paper is to compare job performance of trained and untrained principals in order to ascertain whether the training program is making any significant difference in the performance behavior of trained administrators. This information is of significance for making decisions about current and future training programs.

It is hypothesized that trained principals should perform significantly better than their untrained counterparts. It is also hypothesized that trained urban principals should perform significantly better than the trained rural principals.

Professional Development Rationale

Most elementary school principals in Malawi are insufficiently trained to manage schools or to provide instructional leadership, and they have little opportunity for additional training while in service. Yet, Wideen and Andrews (1988) note that without professional staff development, schools will be devoid of new ideas, skills, or programs that lead to educational improvement. Staff development has been defined by Fenstermacher and Berliner (1985) "as the provision of activities designed to advance the knowledge, skills and understanding . . . in ways that lead to changes in thinking and behaviour" (p. 283).

Staff development for principals and teachers is perceived to be crucial for carrying out changes for the development of quality education for children (Barth, 1986; Wilson, 1989). Fullan (1987) suggested that "staff development is synonymous with change," and that the "principal is critical because better staff development means better organization" (pp. 214-215). Fullan (1982) also observed: "Since the essence of educational change consists in learning ways of thinking and doing, new skills, knowledge, attitudes etc. it follows that staff development is one of the most important factors related to change" (p. 66). In the Malawian context, this is even more crucial if the educational problems are to be resolved.

Principals have been perceived to be very important in the execution of educational programs in schools. The evidence from school effects research and implementation studies of change shows the principal as a crucial middle administrator and instructional leader in the school system. Binda (1989), Hallinger, and Murphy (1985), and Jacobs (1991) among others have found principals' instructional leadership to be the key variable in school effectiveness. They note that in studies of successful schools, principals have been found engaged in clinical supervision and evaluation, monitoring students' progress, protecting instructional time, providing courses and inservices, and maintaining high visibility. Studies from the third world, for example, that of Monica Jacobs (1991) in Kwazulu Natal, South Africa and Heyneman and Loxley (1983) show that the quality of the principalship is crucial for school effectiveness and internal efficiency. Jacobs' case study of one black principal in a depressed rural area is particularly noteworthy as the school, under capable leadership, was able to achieve 100% passes in the High School exams surpassing the white schools with superior resources. Therefore, staff development that enhances the principals' skills in the areas noted above may also lead to school improvement.

Leadership behavior is also crucial for change to take place. Leadership style is the strategy that leaders use to influence the desired behavior of their followers. Researchers have conceptualized different styles of leadership behaviors such as authoritarian or autocratic, democratic, and laissez-faire styles. The authoritarian leader influences behavior by determining policies and work techniques; he remains aloof and impersonal. The democratic leader invites group participation in making decisions related to policies and is objective in his praise or criticism of members. The laissez-faire leader simply allows members freedom to do their own work and he has limited input into group behavior. None of these styles independently appears to be effective in influencing desired behaviors in any organization, including schools, though the behavior of successful leaders has included a mix of all the dimensions stated above. Hersey and Blanchard (1988) noted that a good leader behaves according to the demands of the situation at hand, a strategy noted by contingency theorists such as Lawrence and Lorsch (1967).

The type of organizational "climate" developed and fostered by a leader influences organizational effectiveness. School effects studies, for example, identified climate as a major factor contributing to school effectiveness. Simply put, the term refers to the day-to-day tone and quality — "warm," "open," etc. of the work environment and interpersonal relations of the members in the organization. Halpin and Croft (1962) identified six types of organizational climates which could be placed along a continuum, beginning with "open" climate of high esprit, through "autonomous," "controlled," "familiar," "paternal," and ending with "closed" climate, characterized by low morale and low productivity.

Various approaches to administration have influenced job performance and eventually school achievement. Hence, an understanding of the factors influencing such achievement and provision of training was found to be necessary for any educational development in Malawi. An evaluation of such training carried out in the context of this research paper is also necessary to ensure that the desired progress is being achieved.

Method

Subjects and Design

One hundred and eighty-one teachers from 24 urban and rural schools spread over the three administrative regions of the country constituted a stratified cluster sample. In each school six to eight teachers were randomly selected for participation in the study. Of the 24 schools selected, 12 were headed by "inserviced trained" principals and the other 12 by "untrained" principals.

A 2x2 randomized ex post facto block design was used with between-subject factors of location (urban and rural) and treatment (trained and

untrained). It was observed that location was an attribute variable that exerted influence on job performance. For example, urban schools were better staffed than rural schools where principals had a heavier teaching load than their colleagues in urban schools. The design, therefore, compared trained and untrained principals as follows:

trained urban	versus	untrained urban
trained rural	versus	untrained rural
trained urban	versus	trained rural
untrained urban	versus	untrained rural

Trained and untrained Primary School Heads (PSHs) were compared on the following variables tested in this study and were covered in the MIE-BU inservice training program.

- 1) Supervision and Evaluation of Instruction:
 - Clinical supervision
 - Monitoring student progress
 - Protecting instructional time
 - Promoting staff development
 - Maintaining high visibility
- 2) Leader Behavior Description:
 - Initiating structure (Goal centered, e.g., emphasis on meeting deadlines).
 - Consideration (Employee centered, e.g., finding time to listen to subordinates' problems).
- 3) Organizational Climate:
 - PSH's behavior
 - Aloofness (head's formal and impersonal approach to administration; follows rules and policies)
 - Production emphasis (very directive, close supervision; work must be done)
 - Thrust (head "moves the organization" by example not close supervision)
 - Consideration (considers the social needs of staff)
 - Teachers' behavior
 - Disengagement (opposition to the task at hand)
 - Hindrance (feeling that the Head demands too much unnecessary work)
 - Esprit (level of morale, feeling of accomplishment etc.)
 - Intimacy (friendly atmosphere among staff; indicative of teachers' social needs and satisfaction).

Instruments

A five point Likert-type questionnaire with 62 items suitable for the study was developed to measure three main constructs covered in the training

program: (1) Supervision and evaluation of instruction (24 items), (2) Leader behavior description (21 items), and (3) School organization climate (17 items). The questions measuring the first construct were adapted from Hallinger and Murphy (1985). The Leader Behaviour Questions framed around "consideration" and "initiating structure" behaviors were adapted from the Leader Behaviour Description Questionnaire (LBDQ) (Hersey & Blanchard, 1988). The school organizational climate questions were adapted from the Organizational Climate Description Questionnaire (OCDQ) (Halpin & Croft, 1962). Supervision and evaluation of instruction constitute a major aspect of the principalship and, as mentioned earlier, leader behavior determines school climate and eventually school effectiveness. The final instrument was scrutinized by 12 Malawian administrators and 10 primary school teachers and found to be suitable for the purpose of the study. The instrument was further piloted in an urban and rural school in Malawi and found to be consistent with the observations of the Malawian administrators who scrutinized the instrument.

The questionnaire was structured around the three clusters or concepts outlined above. Each cluster of questions was designed to elicit data on the principals' application of the skills taught in the inservice course. To detect the underlying factors from the 62 items in the questionnaire, a Varimax rotated factor analysis from the Statistical Package for the Social Sciences (SPSS-X), program was employed. Only factors with eigen-values greater than one were included. The questionnaire was also subjected to a reliability test using the SPSS - X program. The alpha reliability coefficients were .91 for the 24 items in supervision; .43 for the 21 items in leadership; and, .83 for the 17 items in climate. The lower coefficient alpha associated with leadership was thought to be influenced by contextual constraints such as culture and local politics.

Data Collection

Data were collected by one of the researchers who travelled to the various sites for this purpose. The research questionnaires were explained to the subjects who then filled them out and returned them to the researcher. This procedure was utilized to lessen the anxiety level of the respondents in a centralized and hierarchical education system and also to insure a higher rate of return.

Methods of Analysis

Two-way ANOVA was employed to find out whether training and setting of the schools had a significant influence on the principals' job performance. Furthermore, t-tests were used to compare the mean scores of trained and untrained principals on every item.

Results and Discussions

Results

Results are reported and interpreted in terms of the three major constructs tested in the study: (1) Supervision and Evaluation of Instruction, (2) Leader Behavior Description, and (3) Organizational Climate.

The Two-way ANOVA (Table 1) showed differences between trained and untrained principals in clinical supervision, staff development, and leader behavior (consideration), but no differences in leader behavior (initiating structure), and organizational climate. Similarly, there were no significant differences between the leaders' behavior of trained and untrained school principals (i.e. aloofness, production emphasis, and thrust). Additional t-tests revealed no significant differences between the behaviors of teachers working under trained and untrained Heads (i.e. disengagement, hindrance, esprit, and intimacy). On the ANOVAs, two-way interaction of training and school location yielded no significant interaction effects, contrary to what was predicted.

The findings are summarized as follows:

1. There is a significant difference in the supervision and evaluation of instruction between trained and untrained Heads. Trained Heads supervise instruction more often than the untrained Heads.
2. There is a significant difference in the staff development thrust between trained and untrained Heads. Trained Heads provide more staff development training than untrained Heads. Presumably the trained Heads have the skills and are more confident to provide inservices.
3. There is a significant difference in the consideration behavior of trained and untrained Heads. Trained Heads seem to exhibit high levels of consideration behavior in their leadership styles.
4. There is no significant difference in the initiating structure behavior of trained and untrained Heads.
5. There is no significant difference in the organizational climate of schools headed by trained and untrained Heads.
6. The organizational climate can be described as autonomous because of low levels of disengagement, hindrance, production emphasis, and thrust.

Table 1
Two-way ANOVAs for the Three Constructs and Organizational Climate Profile

(1) Supervision and Evaluation of Instruction

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	17.443	1	17.443	22.728	0.000
School location	0.623	1	0.623	0.812	0.369
Two-way interaction	0.037	1	0.037	0.049	0.825
Explained	18.177	3	6.059	7.895	0.000
Residual	135.071	176	0.767		

Staff Professional Development

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	13.602	1	13.602	16.943	0.000
School location	0.792	1	0.792	0.986	0.322
Two-way interaction	0.025	1	0.025	0.032	0.859
Explained	14.492	3	4.831	6.017	0.001
Residual	141.296	176	0.803		

(2) Leader Behavior Description

Initiating Structure

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	0.540	1	0.540	1.835	0.177
School location	1.338	1	1.338	4.549	0.034
Two-way interaction	0.753	1	0.753	2.560	0.111
Explained	2.650	3	0.883	2.650	0.111
Residual	51.786	176	0.294		

Consideration Behavior

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	1.134	1	1.134	8.343	0.004
School location	0.193	1	0.193	1.423	0.234
Two-way interaction	0.005	1	0.038	0.845	0.845
Explained	1.342	3	0.447	3.293	0.022
Residual	23.914	176	0.136		

(3) Organizational Climate

Teachers' behavior

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	0.472	1	0.472	2.265	0.134
School location	0.108	1	0.108	0.516	0.473
Two-way interaction	0.568	1	0.568	2.724	0.101
Explained	1.142	1	0.381	1.827	0.144
Residual	36.676	176	0.208		

Headmasters' behavior

Source of Variation	Sum of Squares	D.F.	Mean Square	F	P
Training	1.096	1	1.096	2.188	0.141
School location	0.003	1	0.003	0.005	0.943
Two-way interaction	1.619	1	1.619	3.233	0.074
Explained	2.717	3	0.906	1.808	0.147
Residual	88.139	176	0.501		

Organizational Climate Characteristics in Terms of Teachers and Heads' Behaviors

Teachers' Behaviors

Group	Disengagement	Hinderance	Esprit	Intimacy
Trained urban	L (2.08)	L (2.08)	H (4.022)	M (3.13)
Untrained urban	L (1.68)	L (2.11)	M (3.55)	L (2.86)
Trained rural	L (2.24)	L (2.00)	M (3.51)	L (1.89)
Untrained rural	L (2.53)	L (2.01)	M (3.11)	M (3.01)

Heads' Behaviors

Aloofness	Production emphasis	Thrust	Consideration	Climate
L (1.10)	L (2.89)	M (3.19)	H (4.51)	Autonomous
L (1.39)	L (2.68)	L (2.82)	L (2.22)	Autonomous
L (1.89)	M (3.16)	M (3.30)	H (4.50)	Autonomous

Heads' Behaviors (cont'd)

Aloofness	Production emphasis	Thrust	Consideration	Climate
L (2.49)	L (2.45)	M (3.16)	L (2.10)	Autonomous

Key:

- L means low
- M means medium or average
- H means high

Discussion

The major hypothesis that trained principals should exhibit significant differences in job performance from their untrained colleagues was supported for the constructs clinical supervision, professional development, and consideration behavior. Nonsignificant differences for initiating structure and organizational climate are due perhaps to educational practices entrenched in the societal structure of Malawi. One of the predictions made at the outset of the study was that there would be a difference between the rural and urban principals in terms of training and performance. This difference did not materialize and seems to indicate that trained principals are showing more effective leadership than their untrained counterparts irrespective of location.

Environmental forces referred to earlier also influence education in Malawi. For example, the organizational climate in these schools, found to be not significant, can be described as "autonomous," a direct reflection of the contextual constraints and strong influences impacting upon the schools in such a manner that the effect of training was neutralized for this variable. Several studies from the third world, for example, McGinn, Schiefelbein, and Warwick (1979) have documented the mediating factors of politics and bureaucracy in the education systems of those countries.

While this study revealed that the MIE-BU inservice training program has impacted positively on the job performance behavior of trained principals, claims of causality can only be made on the basis of a true experimental design and the data must, therefore, be interpreted with caution. However, a survey by Chilambo (1987) noted that principals who received training improved their administrative behavior. Further investigation is required to determine how the environmental context influences principals' and teachers' behaviors and affects student performance. Also, the training program should be revised to include how aspects of contextual environment influence behavior. Senior administrators at the Ministry and Regional levels should participate in such programs so that they may be cognizant of factors that influence school administration; hopefully, this may lead to a better understanding of the educational bureaucracy and, eventually, educational improvement in Malawi.

In summary, this study found that training has made a significant improvement in the job performance of school principals in the crucial areas of clinical supervision and staff development. Principals are also showing more consideration and understanding for their staffs. Perhaps, with time, they may be able to effect grass-roots changes in the rigid centralized bureaucracy to make it more responsive to changing needs in Malawi.

References

- Barth, R.S. (1980). The principal and the profession of teaching. *The Elementary School Journal*, 86(4), 471-492.
- Binda, K.P. (1989). *Elementary school principals and the process of curriculum implementation*. Unpublished doctoral dissertation, University of Manitoba.
- Binda, K.P., Halamandaris, P.G., Lall, M., & Mzumara, P. (1990). *Educational technology transfer: Diffusion of an innovative training program to a third world country*. Paper presented at the Annual Meeting of the Canadian Society for the Study of Education (CIESC section), Victoria, B.C.
- Chilambo, M. (1987). *What activities keep primary school headmasters busiest*. Zomba: Malawi Institute of Education.
- Fenstermacher, G.D. & Berliner, D.C. (1985). Determining the value of staff development. *The Elementary School Journal*, 85(3), 281-314.
- Fullan, M. (1982). *The meaning of educational change*. Toronto: OISE Press.
- Fullan, M. (1987). Implementing the Implementation Plan. In M.F. Wideen & I. Andrews (Eds.), *Staff development for school improvement*. London: Falmer Press.
- Gross, N., Giaquinta, .B., & Bernstein, M. (1971). *Implementing organizational innovations*. New York: Basic Books.
- Halpin, A.W. & Croft, D.B. (1962). *The organizational climate of schools*. Chicago: University of Chicago.
- Hallinger, P. & Murphy, J. (1985). Assessing the instructional management behaviour of principals. *The Elementary School Journal*, 86(2), 217-243.
- Harber, C. (1989). *Politics in African education*. London: Macmillan.
- Hersey, P. & Blanchard, K.H. (1988). *Management of organizational behaviour: Utilizing human resources* (5th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Heyneman, S. & Loxley, W. (1983). The effect of primary school quality on academic achievement across twenty-nine high and low-income countries. *American Journal of Sociology*, 88, 1162-1194.
- Inter American Development Bank. (1989). *Economic and social progress in Latin America*. Washington, DC: IBD.
- Jacobs, M. (1991). Indigenous technological capability versus apartheid: A case study. *Comparative Education Review*, 27(1), 83-99.
- King, K. (1984). Science technology and education in the development of indigenous technological capability. In M. Fransman & K. King (Eds.), *Technological capability in the third world*. London: Macmillan.
- Lam, Y.L.J. (1985). Towards the construction of a school environment instrument: A conceptual framework. *Canadian Journal of Education*, 10(4), 362-381.
- Lawrence, P.R. & Lorsch, J.W. (1967). *Organization and environment*. Boston: Harvard Business School.
- McGinn, N., Schiefelbein, E., & Warwick, D. (1979). Educational planning as a political process: Two case studies from Latin America. *Comparative Education Review*, 23(2), 218-239.
- Ministry of Education. (1985). *Education development plan 1985-1995: A summary*. Lilongwe, Malawi: Author.
- Ministry of Education. (1987). *Education statistics*. Lilongwe, Malawi: Author.
- Ogbo, O.M. & Gallagher, M. (1991). On public expenditures and delivery of education in Sub-Saharan Africa. *Comparative Education Review*, 35(2), 295-318.
- UNESCO (1982). *Development of education in Africa: A statistical review*. Harare, Zimbabwe: UNESCO.

UNESCO (1980). International meeting of experts on the promotion of productive work in education. Secretariat Working Document, Final Report. Paris: UNESCO.

Wilson, J. (1989). The effectiveness of in-service education and training of teachers and school leaders. Amsterdam and Lisse: Swets and Zeitlinger.