CONTENTS

Education and Training Outcomes: University Graduates in Zimbabwe during the 1980s
P. Bennell and M. Ncube 107

The Evaluation of Teacher Professional Competencies in Former Non-White Namibian Schools
Donton S. J. Mkandawire and Chipo Marira 124

Nature of Science (NOS) in Science Education: Possibilities and Constraints in a Developing Country, Zimbabwe
Overson Shumba 154

Schooling and the Drought in Zimbabwe: The views and Reactions of Primary School Senior Teachers
Rob Pattman and Tamuka Shumba 190

Problems of Conducting Educational Research in Zambia
Choshi D. Kasanda 206
SCHOOLING AND THE DROUGHT IN ZIMBABWE: THE VIEWS AND REACTIONS OF PRIMARY SCHOOL SENIOR TEACHERS

Rob Pattman and Tamuka Shumba
Department of Education
Masvingo Teachers College

Abstract

This report presents the findings of a questionnaire survey carried out among a group of primary school senior teachers with at least 10 years teaching experience who attended an in-service course at Masvingo Teachers' college in 1992. The survey sought their views about the effects of the drought on the demeanour, behaviour and performance of pupils in their schools, and the measures, if any, which they had taken and would want Central Government to take to alleviate the problems their schools were experiencing as a result of the drought. According to the accounts of our respondents the impact of the drought on schooling was most serious in the rural areas. Respondents teaching in rural areas were more likely, than their urban counterparts, to report drought-related attitudinal and behavioural changes in pupils, curricular changes, higher absentee rates, higher proportions of children coming to school on empty stomachs and travelling long distances, and measures which the school had taken to alleviate the effects of the drought. Our respondents were unanimous in advocating forms of Government intervention, usually related to the setting up of supplementary-feeding schemes. This suggested that all our respondents, urban and rural, viewed the drought as having a negative impact on their schools, and potential solutions to the problem as being beyond the scope of local school or community based initiatives which lacked Government funding. Some indicated feelings of frustration with what they perceived as Government inactivity. Some reported feeling estranged from the community as a result of the drought, while others suggested that the drought had enhanced staff-community relations.
Respondents

Thirty (30) of our 38 respondents were based in schools in Masvingo Province and were distributed as follows: ten in Masvingo town, five in Gutu, three in Mwenezi, three in Chiredzi, four in Chivi, three in Bikita and two in Zaka. Of the remaining eight respondents three taught in urban areas namely Karoi, Marondera and Chitungwiza and five in rural areas in Binga, Mukwirimisa, Makonde, Kadoma and Mazowe.

Background

Our interest in the topic was aroused during our supervision of students on teaching practice in primary schools in Bikita. Our students and other members of staff working in these schools spoke to us about the impact of the drought upon the health, performance, behaviour and attitudes of pupils and the school curriculum. And we observed and were struck by the thinness and apparent lethargy of many pupils. We wanted to investigate more systematically and more generally the ways the drought was affecting schooling. Our research, we thought, should be descriptive, reporting the perceived impact of the drought on our subjects' schools, and also, the action they were taking and the action they wished to be taken by Central Government to deal with the problems their schools were experiencing as a result of the drought.

Methodology

Initially we relied upon classroom observation and informal conversations with some teachers for clarification of problems of schooling caused by the drought. We then devised a questionnaire which was administered to 120 subjects, the total number of teachers attending an in-service course for senior teachers at Masvingo Teacher's College. 38 subjects responded. Inspite of the low response rate, which was largely attributable to the intensity of the in-service course giving subjects little free time during the day to address the questionnaire, we felt that 38 completed questionnaires could provide a reasonable basis for discussion of how primary school senior teachers in the Masvingo province are experiencing the effects of the drought on schooling. Our aim was to investigate how the respondents were defining, interpreting and responding to drought induced problems,
so, our questions were deliberately open-ended to encourage them to "speak for themselves", to give their point of view. While we recognised that in some of the questions, we were asking our respondents to speak on behalf of pupils (notably Questions 2 - 5), we nevertheless felt these were useful questions to ask, if only to provide an insight into our subjects' interpretations of the predicament of their pupils.

RESEARCH FINDINGS AND DISCUSSION

Perceived attitudinal and behavioural changes in pupils

We asked our subjects whether they had observed any significant attitudinal and behavioural changes in pupils inside and outside the classroom as a result of the drought. We also asked whether they thought the general performance of pupils had been affected by the drought. Twelve of our respondents (six from Masvingo town, one each from Marondera, Seke, Kadoma, Karoi, Gutu and Chiredzi) responded negatively to these questions. Four respondents, all from urban areas, made no comments. Almost all those in rural schools (22 out of 25) reported observing such changes. Pupils were described as having become weak, sleepy, inactive, sick, lethargic, inattentive, naughty and indisciplined.

The following is a sample of some of their comments, with the location of the respondent’s school in brackets:

- Some sleep or are dozy in lessons. (Gutu)
- Pupils look weak and rather humble. (Mukwirimisa)
- A weak body, a weak mind, children can’t work for long hours (Mwenezi)
- Most pupils are lethargic-passive at sports (Chivi)
- They are often sick because of starvation, cannot be attentive. (Mwenezi)
- We have a few cases of children who collapse early morning, and after being asked why, the child shows that he or she is hungry. (Masvingo Town)
- Children who are severely hit by the drought have deteriorated in performance because of lack of
concentration, in some cases they are subject to illness. (Chiredzi)
-Many children cannot do extra-mural activities. (Chivi)
-Pupils seem to be wild. (Gutu)
-They are coming late and absenting themselves. (Bikita)
-On a very hot day children dismiss themselves for their homes. (Mwenezi)
-Pupils are inactive. They look for any fruit available. (Zaka)
-Pupils sneak off at break time. (Chiredzi)
-Pupils are becoming naughty and greedy. (Mwenezi)

We understood from informal conversations with some of our respondents that an example of the "naughty and greedy" behaviour mentioned above might be the theft of food which some pupils had brought to school. We wondered how widespread this was and what action, if any, teachers took against hungry children who stole food from other children. Most respondents reported the theft of food as a drought induced problem in their schools. Those who didn't tended to be located in urban schools. The range of reactions and responses of teachers to children stealing food was wide. Some of these are presented here:-

-We encourage sharing, give them parts of our food. (Mwenezi)
-If discovered we usually give them our own food. (Mwenezi)
-We tell them not to steal; when hungry ask from a friend. (Zaka)
-Administration counsels thieves to beg instead of stealing. Some children are warned that one day they will steal poisoned food. (Hurungwe)
-Advise parents to prepare food for children. (Gutu)
-Just a reprimand. (Chiredzi)
-Call the child who steals and talk to him that it is bad to do so. (Marondera)
-If found he/she is warned or beaten. (Masvingo Town)

The most dramatic accounts of attitudinal and behavioural changes in pupils were given by respondents in rural areas.
How respondents interpreted and coped with these changes was to some extent illustrated in their various reactions they reported to children who stole food from other children. Some respondents reported not punishing "offenders," some as giving reduced punishments, some as giving moral advice and warnings and some as administering punishment without taking into account "mitigating circumstances." For a few of our respondents, stealing food was defined in such a way that the onus was put not simply on the potential offender not to steal but on the child with food to share.

Of the urban respondents who indicated that the stealing of food was a problem, their responses tended to be more punitive than those in rural areas, possibly because they were less likely to attribute it to hunger.

**Pupils coming to school on Empty Stomachs**

We asked subjects to estimate the proportion of pupils coming to school on empty stomachs and the proportion of pupils bringing food with them to school. Of course the figures they gave are only rough approximations and (especially, those relating to pupils coming to school on empty stomachs) are based on guesswork. While, then, we can not treat these figures as factual evidence, they nevertheless provide an insight into the degree of pupils' hunger as it is viewed by the respondents.

With regard to the proportion of pupils coming to school on empty stomachs, 54 percent of the estimates were fifty percent or more, with those from respondents in rural schools tending to be higher than those from respondents in urban schools. Of the 14 respondents who estimated seventy-five percent or more of their pupils coming to school on empty stomachs, three were from Gutu, two from Masvingo town, three from Chiredzi, two from Mwenezi, one from Chivi, one from Bikita, one from Makonde and one from Mukwirimisa. Of the five teachers who estimated fewer than twenty percent pupils coming to their schools on empty stomachs, three were from Masvingo town, one from Kadoma and the fifth one from Binga.
Only six respondents estimated more than fifty percent of their pupils taking food with them to school, and of these, four were based in Masvingo town. Eleven respondents estimated that ten percent or less of their pupils took food to school. Those respondents who gave high estimates for the proportion of pupils coming to their schools on empty stomachs tended to give low estimates for the proportion of pupils taking food with them to school. For example, of the four respondents who estimated that ninety percent or more of their pupils came to school on empty stomachs, three of these estimated that less than five percent of pupils took food to school.

The implication, then, according to these estimates, is that the vast majority of children in some schools eat nothing when they wake up in the morning and all the time they are at school. How teachers adjust psychologically and practically to a situation such as this is an important topic, we feel, which could be effectively explored in future interview-based research.

The figures above are an indication of the seriousness with which many of our respondents (especially those in rural areas) viewed the effects of the drought on their schools.

**Distance Covered by Hungry Pupils from Home to School**

We asked subjects to estimate what proportion of their pupils lived over three kilometres from school. About half the respondents gave figures of at least fifty percent of the pupils living three kilometres from school and the highest estimates tended to be those from schools in rural areas. Of the eight estimates of more than seventy percent pupils living over three kilometres from school, four were from Mwenezi. Six of these respondents had estimated that at least seventy-five percent of their pupils came to school on empty stomachs and four of them had estimated that ten percent took food to school.

In assessing the impact of the drought on schoolchildren, it is important to take into account not only calorie consumption but energy expended in travelling to school. It seems that children from rural schools had to travel the furthest distance, and that children going to some schools were
particularly handicapped by a combination of low calorie intake and long distances to travel. In informal conversations with some of our respondents it was often the combination of these factors rather than lack of food alone which was cited as the cause of hunger at school.

**Absenteeism Rate**

We asked our respondents whether the drought had increased the absenteeism rate, and, if so, by how much. We also asked them to specify the drought-related causes of absenteeism. Sixty-five percent of them replied positively giving figures which ranged from three to fifty percent. Of the respondents who claimed that the absenteeism rate had been unaffected by the drought, eight were based in Masvingo town, one in Seke, one in Mazowe, one in Gutu and one in Chivi. Figures of over twenty percent were given by seven respondents from schools in Bikita, Chiredzi, Mwenezi and Bindura. The specific drought related causes of absenteeism were identified as follows:

- hunger and sickness
- pupils sent to queue for water
- retrenchment of parents
- no food to take to school
- no uniforms
- sent to sell vegetables
- no money for building fund

Some of the drought-related causes of absenteeism mentioned above may be interdependent. The child who’s hungry and sick is unlikely, for example, to have money for the building fund, and it may well be that his or her parents are not in paid employment, having been possibly retrenched as a result of the drought. If the child has no food to take to school or no money for the building fund, her or his parents may feel she or he is more gainfully employed selling vegetables or standing in a queue for water.

**Curricular Activities Affected by the Drought**
We asked what, if any, areas of the curriculum had been badly affected by the shortage of food, and whether any curriculum changes had been made in the light of the drought. Only 10 out of the 38 respondents claimed that their curriculum had been unaffected by the drought (five of these being based in Masvingo town.) The worst hit area of the curriculum was reported to be Physical Education (P.E.) with some schools (in Mukwirimisa, Mwenezi, Chiredzi and even Masvingo town) dropping the most demanding sporting activities like running, netball, and football.

"We've omitted P.E. and netball as we are afraid pupils may faint during lessons" (Masvingo town). One respondent reported that P.E. was held indoors (Mwenezi), and another remarked that although sports were still held "some children did not turn up." (Chiredzi)

Curricular activities which demanded physical work such as education-with-production, and environmental and agricultural science had particularly suffered. In some schools (in Gtutu, Chivi, Mwenezi) education-with-production and agricultural science had been cancelled altogether or only the theory was taught. Some respondents from Masvingo, Bikita, Zaka and Mwenezi, specifically mentioned gardening as an activity which was no longer feasible because of lack of water for plants and because of the physical energy expended in gardening. Afternoon lessons which could consist of sporting or study activities were reported by a number of respondents as having been badly affected; in fact, one respondent from Bikita went so far to say the formal legislation should be introduced to ban afternoon sessions.

It may be that some respondents feel caught in a dilemma between doing what they think is in the interests of their pupils and meeting officially prescribed educational goals. Should they tamper with the curriculum, and, if so, by how much? Should they abandon practical components in subjects like P.E. and agricultural science? Should they abandon all afternoon lessons? Should they reduce the number of morning lessons? If children are too tired and hungry to expend physical energy or even to concentrate, the arguments for dropping certain activities or subjects would seem compelling both on health and educational grounds.
Measures taken by Schools

We asked what measures, if any, their schools had taken to deal with the effects of the drought. Only 10 out of the 38 respondents replied that "nothing" had been done while the rest indicated that some measures had been taken. Eight of these 10 respondents were based in schools in urban areas. A number of schools (in Chivi, Zaka, Binga, Chiredzi, Mukwirimisa and Hurungwe) had applied to Welfare Services requesting the provision of supplementary feeding such as "maheu" and milk as part of the measures they took. Only one respondent (from Hurungwe) reported assurances had been given that these would be forthcoming. Requests for food had also been made to charities and donor agencies by schools in Mwenezi and Zaka, with apparently no success so far. As one respondent from Chiredzi said,

Applications for feeding have been lodged with different organisations - the education authority, politicians, charities, the local council - no response yet

Three respondents, however did report on feeding schemes which the schools had organised for their children. One from Bikita reported that his/her school gave children maheu in return for a $1 subscription. The other organised to buy milk for children (Gutu), bought them food, (Bindura). Some schools (in Gutu and Chiredzi) had attempted to encourage parents to give children food, and others had organised P.T.A. meetings to discuss how to raise money for food. We discussed, one respondent from Masvingo town commented, how to find money to buy maheu like seeking donations or cutting firewood for selling. The facts that so many respondents, especially in rural areas, reported that their schools had taken measures to deal with the effects of the drought is an indication of the perceived seriousness of its impact on schoolchildren.

All the measures which respondents cited were related to supplying children with food. Not a single respondent waiving the school building fund. Yet having to pay the school building fund had been identified by some respondents as a drought-related cause of absenteeism.
The Drought and Staff - Community Relations

A number of respondents commented on how staff - parent co-operation in dealing with the effects of the drought had improved school-community relations. As one respondent from Binga remarked,

> the community realises the staff are part of it and are concerned with the Welfare of their children.

Another from Seke pointed out that the drought had brought out a greater parental involvement in school affairs, especially, relating to needs. And respondents from Gutu and Chiredzi emphasized that parents were helped by teachers when need arises. The view that drought had led to an enhancement of school-community relations was by no means universally held. Sixteen respondents felt that these relations had been unchanged and six, indeed, pointed to a worsening of relations, referring to increased absenteeism, lack of parental visits to the school "due to gold panning to earn a living" (Chivi), "teachers being told to stop watering their vegetable" by members of the community (Chiredzi), and the demands schooling was imposing on diminishing parental resources. In responses to this last point one subject from Zaka commented that in his/her school, children were allowed to attend school without uniforms. In informal conversations with respondents we discovered that the relative affluence of teachers - the ability of teachers to buy food which was well beyond the means of the majority of the community, could also be a source of tension between teachers and the community.

A commonly observed sociological phenomenon is that at times of social crisis such as water or famine a sense of communal solidarity develops. People identify themselves as fellow sufferers, as having a common enemy or problem and rally together to provide mutual self support and to mitigate the severity of the crisis. Evidence of a "community spirit" developing between staff and parents was given by some respondents. But, as suggested by the account of the respondent, the drought had not only failed to promote a sense of unit between teachers and the community but had actually led to a deterioration in school - community relation. This, we feel, is likely to happen if parents are unable to identify teachers as fellow sufferers, and schools are perceived by parents as institutions
which are unconcerned with the physical needs and well being of their pupils and the limited resources and suffering of parents. We feel that schools may come to be seen by parents and pupils essentially as institutions which increase their suffering, and unless schools are able to adopt a positive and effective measures such as the setting up of supplementary feeding schemes to mitigate the suffering, it may well be that the drought will lead to a deterioration in school-community relation.

Proposals for Government Intervention

We asked if there were any measures which they would like to see Central Government take in response to the effects of the drought on schooling. All respondents replied with specific proposals. The most frequently mentioned proposal was for Government intervention in the establishment of feeding programme at schools, with one respondent urging that they be implemented with "immediate effect." Government sponsored supplementary feeding schemes at schools should, at least, according to respondents, provide maheu and milk at break. One respondent from Gutu suggested that

schools should be allocated drought relief in terms of money. Then that money could be used to buy milk, beans, mealie-meal, fish, fruit and vegetables for children to eat at lunch time and at least $10 per child.

Another respondent linked the continued suffering of malnourished children in schools to an inequitable distribution of resources:

Central Government should provide food at schools daily rather than neglect the situation while members of parliament enjoy huge salaries at the expense of the nation.

Other commonly expressed proposals related to the distribution of food to needy communities. One respondent from Zaka suggested, "Government should help to set up local development projects with monthly payments with which parents can purchase food, clothes and money for upkeep". Another from Hurungwe called for "the intensification of the food-for-work programme which so far has not
started in our district." One respondent from Masvingo town suggested a possible linkage between food-for-work programme and the setting up in schools of supplementary feeding schemes for children.

Public works through food for work should be assigned tasks to carry out at all affected schools such as water fetching for school use and preparing food (supplemented) for children's feeding programmes.

Some respondents wanted Government to assist in the sinking of boreholes at schools in badly hit areas. Obtaining water was reported as a problem which seriously affected the running of the school by about half the respondents (most of whom were based in Gutu, Chivi, Mwenezi, Zaka or Bikita). For example, one respondent reported that "children ask for permission to look for water in classes" (Gutu), another that "teachers leave early to fetch water at 3.00p.m." (Chivi), and another that "teachers walk about seven kilometres for water and queue like everyone else" (Mwenezi) One respondent simply said "Pupils go thirsty" (Zaka).

Some respondents in urban areas called for at least the temporary suspension of school fees to enable parents to feed their families. Government intervention was also called for to control escalating prices of mealie-meal. Because of the cost and scarcity of mealie-meal, seven respondents (from Gutu, Chivi, Marondera, Bikita, Masvingo town, Zaka and Seke) speculated that a small proportion of their pupils (estimated at between five to ten percent) ate nothing when they returned home in the evenings.

The fact that respondents were unanimous in advocating forms of Government intervention indicates, we feel, an awareness among them of the limitations of school or community based initiatives which do not receive financial support from the Government. There were indications in some of the responses of frustration with perceived Government inactivity. It would be interesting to pursue in interviews the extent to which various teachers experience feelings of frustration or helplessness, how they cope with these and the effects, if any, such experiences may have on their attitudes towards Central Government in particular and their general political outlooks.
Conclusion

Our aim was to allow our subjects, senior teachers in urban and rural schools, to speak for themselves about schooling and the drought. Given their everyday responsibilities providing for the welfare and education of their pupils and their roles as administrators and spokes-people for their schools, we felt they were well qualified to talk about the topic.

According to their reports, schooling in the rural areas was particularly badly affected by the drought.

Eighty-eight (88%) percent of the respondents from rural areas reported attitudinal and behavioural changes in pupils compared with fifteen (15%) percent of respondents from urban areas.

Fifty-six (56%) percent of the respondents from rural areas and fifteen (15%) percent of teachers from urban areas estimated seventy-five (75%) percent or more of their pupils coming to school on empty stomachs.

Thirty-two (32%) percent of the respondents from rural areas and none from urban areas estimated that seventy (70%) percent or more of their pupils lived over three kilometres from school.

Twelve (12%) percent of the respondents from rural areas compared to sixty nine (69%) percent of respondents from urban areas claimed their absentee rate had been unaffected by the drought.

Ninety-two (92%) percent of respondents from rural areas (and one hundred (100%) percent of respondents from rural Masvingo Province) compared to thirty-eight (38%) percent of respondents from urban areas reported that their schools had taken measures to deal with the effects of the drought.

In conclusion we would like to highlight some of the main findings of our study:-
1) Taking the above percentages as indicators of the seriousness of the drought as experienced and interpreted by our respondents, we can conclude that the impact of the drought on schooling has been felt most by teachers in rural areas.

2) Nevertheless all our respondents - urban and rural - felt that their schools had suffered as a result of the drought, all suggesting various forms of Government intervention to alleviate the suffering.

3) According to our respondents' accounts, Central Government action needs to be taken to mitigate the effects of the drought in the form of funding and providing milk, the cost of mealie-meal, and the suspension of fees for schools in urban areas, and of increase food for work projects in rural areas.

4) The unanimous advocacy of proposals for Government intervention (in spite of the local initiatives which some respondents' schools had taken) indicates a sense that effective or ultimate solutions to the problems caused by the drought on schooling are beyond the scope of independent action by schools and communities.

5) Some respondents expressed feelings of frustration at perceived Government inactivity and a sense of helplessness and inadequacy in their everyday interaction with hungry, demotivated, sick and frequently absent children. Some respondents, also, felt increasingly estranged from the community because they were perceived by parents as relatively affluent and as representatives of institutions which were imposing unreasonable and unrealistic demands upon their dwindling resources.

6) Other respondents suggested that community-staff relations had been enhanced as a result of teachers being perceived to be joining with parents to mitigate the impact and seriousness of the drought on school children and their families. We feel that enhanced community-staff relations are likely to prevail if schools are seen to meet the physical needs of hungry children by putting on supplementary feeding schemes. This, as our
respondents have indicated, requires the intervention of Central Government.

7) We recognise that fuller insights into how some of our respondents interpret and experience and adjust to the effects of the drought on their schools could be provided by interview-based research.

We also recognise that different groups, for example, pupils and parents and even junior teachers, with different relationships with the school and different experiences of the drought, might have given very different accounts of schooling and the drought. A more complete understanding of schooling and the drought would need to elicit these accounts, to investigate, for example, how hungry pupils perceive the problems.

APPENDIX

QUESTIONNAIRE

1. Please specify the district in which your school is located.

2. About what proportion of pupils come to school without anything to eat?

3. About what proportion of pupils live over 3kms from school?

4. About what proportion of pupils take food with them to school? What sorts of food do they bring to school?

5. About what proportion of pupils do you think eat nothing in the evening?

6. Has the drought increased the absenteeism rate? If so, by how much? Please specify the drought-related causes of absenteeism.
7. Is there a problem of obtaining water at your school? If so, how does this effect the running of the school?

8. Have you observed any significant attitudinal and behavioural changes in pupils inside and outside the classroom as a result of the drought? Please elaborate.

9. Do some children steal food which others have brought to school? If so, what action, if any, do you, and other teachers in your school, take?

10. What areas in your curriculum have been badly hit by the shortage of food? Please elaborate on changes that have been made in your curriculum in the light of the drought.

11. Do you think the general performances of pupils has been affected by the drought? Please elaborate, giving illustrations.

12. What measures, if any, has your school taken to deal with the effects of the drought on your pupils?

13. Do you think relations between the staff at your school and the community have improved or deteriorated? Please explain why.

14. Are there any measures or policies which you would like to see Central Government enact which might alleviate the problem schools are experiencing as a result of the drought? If so please elaborate.