



Participatory Materials Development in Rural Zambia

Justin Lupele
Rhodes University Environmental Education Unit, South Africa

Abstract

The World Wide Fund for Nature Zambia Education Programme (WWF ZEP) has been implementing and supporting environmental education activities in selected rural communities in Zambia for more than ten years. These activities have been developed in support of recent environmental policies in Zambia. The aim of these programmes has been to develop the capacity of communities to manage natural resources sustainably in context, and to identify alternative strategies of resource management and use in order to alleviate poverty. This paper provides insight into ways in which community members in Chieftainess Chiawa's area (a community context in rural Zambia) participated in the development of learning resources in response to environmental issues that affected their livelihoods. Members of this community firstly identified the environmental issues affecting them, their causes and effects. They then explored ways of mitigating these issues by developing posters that would be used in a community environmental education programme. The posters were developed through participatory processes, using an action research orientation and process, with support from WWF ZEP. A number of insights associated with participatory materials development processes in community contexts emerged from this research. They include the role of the existing social and political structures, ethnicity, language and literacy, local knowledge, the roles of different actors, and decision making and power relationships in a community context.

Introduction

In 1985 the Zambian government adopted the National Conservation Strategy (NCS) (GRZ, 1985) as the principle policy that would guide sustainable use of the country's natural resources. The focus of the strategy was on the central role natural resources play in enhancing development. As a follow-up to the NCS, the Ministry of Environment and Natural Resources was created in 1991 and a number of statutory instruments aimed at safeguarding the environment were enacted. They include the Zambia Wildlife Authority Act No. 12 of 1998 (GRZ, 1998) the Forestry Act No. 7 of 1999 (GRZ, 1999a) and the Fisheries Act Cap 2000 (GRZ, 1999b). Central to these pieces of legislation has been the idea of 'community participation' in the planning and implementation of programmes that are meant to enable communities to improve their livelihoods (ECZ, 2001). As a result of these laws, a number of governmental and non-governmental institutions have been grappling with the idea of

involving local communities in the conceptualisation and implementation of community capacity building programmes.

Between 2001 and 2002, the WWF ZEP embarked on a participatory materials development project within an action research framework in two community contexts – Nalusanga and Chiawa (Lupele, 2002). As an education officer in charge of resource material development on the programme at the time, I took a lead in the participatory materials development processes in the two communities. Both Nalusanga and Chiawa are located in Game Management Areas (GMA), which are areas adjacent to national parks or buffer zones (Tilley, 1995). The project's aim was to explore and articulate the relationships between community-based environmental education and participatory materials development in the WWF ZEP context. The project also aimed to clarify participatory materials development processes by identifying the roles of different 'actors' in these processes and to identify and analyse the contextual and other factors that may influence development and use of environmental education materials in rural communities. These aims were explored through a number of action research inquiry cycles in the two communities. This paper, however, focuses on the participatory materials development process in the Chiawa community only.

Methodology

As stated above, the participatory materials development process in Chiawa was framed within an action research orientation. The choice of this approach to participatory materials development was influenced by, among many others, Kemmis and McTaggart (1988), Carr and Kemmis (1986) and Lotz (1996) who argue for action research as a form of self reflective enquiry that can help to improve the rationality and justice of practitioners' own practice.

Each cycle comprised three complex and often interwoven phases of planning, action and reflection (Lotz, 1996). The subsequent cycles emerged from the reflections of the action taken in the preceding cycles. For the purpose of this paper I limit my discussions to cycle two and four of the participatory materials development process in Chiawa. The entire project, however, involved five cycles of inquiry as summarised in Table 1.

These five cycles were developed as one case study. As indicated above, a similar case study of the Nalusanga community was developed. These two case studies formed part of a broader study on participatory materials development in community contexts in rural Zambia (Lupele, 2002).

Table 1. Cycles of inquiry in the Chiawa participatory materials development process

Cycle of inquiry	General Focus of the Cycle
<p>Cycle 1: Contextual profile development</p>	<p><i>Development of a contextual profile:</i> Contextual data related to the historical, social and ecological aspect was generated to build a broader picture of the community profile (see Lotz-Sisitka & Janse van Rensburg, 2000).</p>
<p>Cycle 2: Identification of issues and themes</p>	<p><i>Materials development workshop:</i> Community members worked together to identify issues and themes that formed the basis of the materials developed for their own use.</p>
<p>Cycle 3: Early artwork</p>	<p><i>Illustrations:</i> An artist illustrated the posters based on the art briefs developed by the community members.</p>
<p>Cycle 4: Trialling of the materials</p>	<p><i>Trialling workshops:</i> Community members in five villages participated in the trialling workshops to help refine the draft materials.</p>
<p>Cycle 5: Materials in use</p>	<p><i>Induction workshop:</i> Community members used the final materials to develop strategies of how they would use the materials on a large scale.</p>

Materials development workshop

The first materials development workshop brought together 14 participants drawn from four of the five zones of the Chiawa community area. Participants included four government workers, two teachers, one officer from the judiciary and a community development officer. We started the four-day workshop by exploring the meaning of the term ‘environment’ as understood by the participants. This was a difficult task as the local vernacular translation of the term ‘environment’ literally means ‘all things created by God’, creating meaning which is focused on the biophysical attributes of the environment. Through raising questions about factors that contribute to the degradation of the biophysical base of the ecosystem, workshop participants and I (as facilitator) were able to clarify a broader understanding of the term environment, which encompassed economic, political and social aspects. By using examples, community members considered how different economic, political and social decisions impacted on their environment. Through this process, there emerged some debates about who was causing environmental degradation in Chiawa. Many participants, for example, blamed the government for paying more attention to the plight of wild animals than people (referring to national resources that are allocated to conservation activities). Having explored these understandings of what was meant by ‘environment’, the participants worked in two groups to identify a range of environmental issues affecting their daily lives and livelihoods. These discussions indicated that most community members drew on their experiences of their day-to-day lives to identify these issues (see Table 2 below). These included problems affecting agricultural activities, hunger,

drought, social stability and problems associated with wild game as they related to poaching and problem animals which invaded and destroyed property in the villages. Problem animals were seen as the cause of hunger in the area as hippos and elephants often destroyed crops in the field. Each group recorded the identified problems on flip chart papers, in either English or the local vernacular – *Goba*. Due to the similarities in the environmental issues identified by the two groups, they were clustered and summarised into 37 themes as shown in Table 2 below.

Table 2. Environmental issues in Chiawa as identified by community members

<p>Pollution, hunger, bush fires, poor sanitation, poor housing, land disputes, loss of respect for shrines, vandalism, garbage, witch craft, lack of clean safe drinking water, poor distribution of water points, impacts of the liberation war, drunkenness, poverty, soil erosion, overgrazing, poaching, poor rainfall, artificial floods, illiteracy, destructive methods of fishing, poor methods of farming, high temperatures, deforestation, problem animals, early marriages, HIV/AIDS, malaria, land shortages, poor road infrastructure, Kariba dam floods, waste disposal, depletion of fish resources, encroachment, prostitution and broken homes.</p>

The 37 themes were further analysed and prioritised into the 12 most pressing issues. The criteria for prioritisation was based on selecting environmental issues (out of the 37) that the group felt were most pressing and needed immediate attention (Lupele, 2002). The final 12 included the following: artificial floods caused by the opening of the Kariba dam floodgates, destructive methods of fishing, early marriages, garbage, hunger, water pollution, poor methods of farming, vandalism of communal infrastructure, poor sanitation, drought and poverty. Many of the prioritised issues had a link to poverty alleviation and hunger. This is probably due to the fact that Chiawa is in a drought-prone area. It often depends on relief food from government and development aid agencies.

The 12 issues became the basis upon which ten draft posters were developed. The choice of developing posters was arrived at after a lengthy debate on the merits and demerits of producing pamphlets, booklets or posters. Due to the high level of illiteracy in the community, as was evident in the contextual data collected during the first cycle of inquiry, it was agreed that posters would be accessible to a wider audience. It was also agreed that the posters would only have headings, but that the illustrations should be developed in such a way that they could generate discussions amongst community members. The participants worked in four groups to explore each of the twelve environmental issues in terms of causes, effects and possible solutions or responses. These were presented in the form of art briefs (descriptions of visual impressions). The art briefs were subjected to critical reviews during plenary sessions when each of the groups presented theirs for discussion. New ideas and suggestions for changes were made by the group collectively. I guided the presenters, by asking for clarity and providing suggestions for a logical sequencing of the art briefs, which in essence represented pictures. A process of critical review continued throughout the process, as members discussed each topic in their groups. In some instances, the reviews erupted into tense situations as participants blamed one another for being the cause of particular environmental problems. With each review, the quality of materials

and presentations improved. Participation also improved as more and more people looked at the process with a critical eye, reflecting on what had been missing and the order and sequence of the presentation. A number of women (whose ideas are often said to be suppressed by men in most rural areas of Zambia) participated actively in the discussions. At the end of the third version of the posters, an art gallery was mounted. All the posters (in the form of art briefs at this stage) were mounted on the wall for participants to view and critique before they were refined in readiness for illustrating by an artist.

Trialling workshops

An artist was commissioned by WWF ZEP to illustrate the posters (using the community art briefs as a guide), and a set of draft posters were produced. This was followed by trialling workshops in which the draft posters were critically reviewed and discussed in four of the five villages in Chiawa. The workshops set out to gather the opinions of community members on the draft materials with a view of improving them. Trialling workshops also helped to extend the level of participation to those who were unable to participate in the initial workshop. A total of 36 community members participated in the four trialling workshops. Participants engaged in peer teaching by discussing environmental issues using each of the posters. The use of posters in this way brought out new dimensions which had been missed out or misinterpreted by the artist. For example, in one poster the artist used tennis (instead of soccer as explained in the original art brief) to illustrate healthy children playing. This illustration was discarded for the original idea of soccer because most people in the area had not encountered the game of tennis. A focus group was constituted to help with the translation of the poster titles from English to *Goba*. The group, however, argued to retain the English titles, and added *Goba* translations as subtitles. This was decided after realising that the majority of the people could not read and write *Goba* as it is a colloquial language, not used in the schooling system (Zambia has 73 different languages, only seven are used in the formal school curriculum).

After the trialling workshop WWF ZEP was only able to produce four of the ten draft posters due financial limitations. These were posters on river gardens, poisoning, poaching and vandalism. The posters were distributed for use to community members. A snap survey conducted three months after the materials had been distributed revealed that community members had used the materials in different situations such as during church meetings, court sessions over land disputes and community club meetings (Lupele, 2002).

Issues Associated with Participatory Materials Development

A number of issues associated with participatory materials development emerged from this case study. They include the role of the existing social and political structures, ethnicity, language and literacy, local knowledge, the roles of different actors, and decision making and power relationships in a community context. These are discussed in more detail below.

Sensitivity to existing social and political structures

One of the crucial issues that emerged in working with the Chiawa community (this could be

true with any other rural community in Zambia) was the importance of being accepted by the community. We went to Chiawa a few months after another NGO had been chased away by the local community. This revelation made us uneasy about the participatory materials development process we were about to start in the area. We started the process by identifying some of the key institutions and individuals who could provide the required support. The institution of the Chieftainess and the traditional royal establishment was vital in this respect. I did not have problems working in the area as WWF ZEP had been invited to the area by the Chieftainess, after seeing other successful education programmes the project had done in other areas. We did, however, need to consolidate this support by establishing contacts and relationships with the local leaders.

In addition to consultations with the traditional leadership, we also needed to consult the political leadership constituted by the civic leaders. They asked to be involved and consulted throughout the materials development processes. They helped particularly with broadening participation by mobilising workshop participants. Crucial to the process was the support of the local people themselves. Ordinary community members could have made my work difficult if they did not support WWF ZEP activities in the area. Judging by the enthusiasm and levels of participation in the process, the materials development project was accepted as theirs.

Through this study, it was clear that one needs support from nearly all the potential participants in participatory materials development processes. Often, NGOs working in rural communities concentrate on soliciting support from the traditional leadership. While these could easily give anyone permission to work in particular communities, they have limited powers to control how individuals participate in development programmes. WWF also needed the support of the government (through the Zambia Wildlife Authority) to operate in the Chiawa game management area. All GMAs in Zambia fall under the jurisdiction of the Zambia Wildlife Authority under the Zambia Wildlife Act No. 12 of 1998. Establishing the kinds of support needed for the project was aided by the contextual profile developed in the first inquiry cycle.

Sensitivity to ethnicity, language and literacy

Zambia has 73 tribes, each with its own dialect. For political and administrative purposes, these have been grouped into seven principle languages. In the materials development process in Chiawa, we faced the challenge of which language to use. Common sense dictated that I would work in any of the seven official vernaculars. This research, however, underscores the importance of being more sensitive to the issue of language-in-context in the development of educational programmes.

Giroux (1987) notes that language plays an active role in knowledge construction, organisation of experience and legitimatising the social practices available to various groups in society. The Chiawa community members would not have participated in the process of developing posters as well as they did if I had insisted that they use a particular language. In order to enable the participants to generate information based on their experiences, I encouraged them to use any language they were comfortable with. This decision was informed by the community contextual profile developed in the first cycle of inquiry. The profile revealed

that there were three main languages spoken in Chiawa at household level. These were mainly *Chinyanja*, *Goba* and a bit of *Soli*. The flexibility in language usage helped participants to bring forth new innovations and share their experiences. Worth noting is the fact that, in some instances, the few people who were privileged to speak and write *Goba* wanted to dominate those who could not. Those who were not considered indigenous language speakers were 'intimidated' during the translation session. Used in this way, literacy and language becomes a condition for engaging in struggles around relations of power (Giroux, 1987).

In this study, those who strongly advocated the use of *Goba* in Chiawa were, it seemed, preoccupied with preserving their cultural identity. They envisioned that if the materials were developed in *Goba*, they would help their children learn the language, since it is not one of the official vernaculars used in schools. Although many people in Chiawa could speak *Goba*, very few could read and write the language. It was for this reason that the group agreed to retain the English titles as main titles with subtitles in *Goba*. The process of translating the English titles into *Goba* subtitles was a challenging one. Some of the English terms such as 'poaching' (which was only known as hunting by the locals) and 'vandalism' were difficult to translate into short phrases for subtitles. The translation of the term vandalism to '*kuparadza*' by the chief's traditional adviser, for instance, was highly contested as most of the people were not familiar with the term. It took some months before colleagues from WWF Zimbabwe who were *Shona* speakers confirmed the translation (*Goba* is a dialect of *Shona*).

Drawing on local knowledge

The community members participating in the process exhibited wide-ranging knowledge of the environmental issues affecting them. They identified the environmental issues based on their own experience of the trends and changes in the availability of natural resources in their area over time. Through posters, they made suggestions of how some of the environmental risks and issues facing the community would be alleviated. This perhaps disproves the assumption that people in rural communities lack knowledge about their local environment and associated issues. In the process I did not assume a role of 'teaching' the community about the environmental issues in Chiawa. The process provided a forum for local people to exchange ideas, through critical reflections, on the existing environmental issues in the area. I was, however, able to contribute to the dialogue around the different issues.

The flexible open process that was created by the use of an action research orientation provided learning opportunities to tackle real issues affecting the community. A departure from this open process to situations where materials are developed by outsiders and delivered to the community might not have embraced aspects of local knowledge. However, this does not imply that all went smoothly. Local knowledge was subjected to contestation as the community members discussed and debated some of the causes and solutions to environmental issues and risks. The fact that community members differed on some of the local knowledge provides evidence that local knowledge, just like technical knowledge, has its own shortcomings. In a complex community context such as Chiawa, it would be difficult to assume that one would work with one form of knowledge only. In this study there were a number of misconceptions advanced by community members that needed the perspectives provided by technical experts.

On the other hand, technical knowledge coming from extension workers, teachers or the artist was at times out of context with the prevailing reality in the community. Unless these different ways of knowing are brought into dialogue in community contexts, working with one form of knowledge or one way of knowing may prove problematic in participatory materials development processes.

The artist's technical advice and knowledge on what was possible and impossible to illustrate, for example, blended well with the local community members' perception of some of the responses to environmental issues. The process of materials development also drew a lot on the experience and expertise of the community extension officers, such as the community liaison officer from Zambia Wildlife Authority, the community social welfare officer and teachers.

Looking back at how I elicited the local knowledge, I realise that the participants may have brought out many dimensions of the valued features of their community and life had I used an open-ended question, instead of concentrating on environmental problems. The focus on environmental issues was mainly influenced by WWF ZEP's planning framework, involving a predetermined logical framework of outputs and activities. The discourse in the logical framework is to identify problems, and then engage local communities in their resolution, as a development process. Pretty (2002) notes that the conventional way of asking people to state their problems and likely solutions often results in missing the finer details about their connectedness to a place, as they concentrate on looking at the problems.

The roles of different actors

The participatory materials development processes in Chiawa involved working with different people. They included local community members, government workers such as teachers working in the area, traditional and political leaders, technical experts such as the artist, and colleagues in the WWF ZEP. Each of the actors in the materials development process had a role to play. Some actors assumed different roles in different circumstances in the life of the study. The roles of different actors sometimes became complex to the point where they conflicted with each other. However, each of the actors had a principle role to play, among many others. The artist had the supportive role of translating the community art brief into illustrations that depicted what the community members had in mind. The Chieftainess played a pivotal role in ensuring that the materials development process succeeded by encouraging her subjects to participate. I played several roles, including facilitating and coordinating the process. Some community members were good at leading discussions and enabled their colleagues to view issues from a different perspective. The roles of different actors working together and contributing to the process of materials development enabled 'participation'. What this means in the community participation process, is that there are often many actors and each in them has a specific role to play (which often only becomes apparent in the situation). Unless this is acknowledged, most community participatory programmes are bound to fail when facilitators assume that all community members participate at the same time, in the same way and to the same extent. There is need to have a clear vision of who could participate in a given process, and what they would bring to the participatory process; but at the same time there is a need to be flexible, and allow 'space' in the process for people to define their own (often unexpected)

contributions in context.

The question of who participates and on what terms was raised by different stakeholders, including the traditional adviser to the Chieftainess, in the early stages of the project. Although the materials writing workshop involved a number of people from Chiawa central, we were criticised for working mostly with members of one (extended) family. It turned out that most of the people in the area were from the royal family and were viewed as one family by those who did not belong to the royal family. Those who shared the same totem were also viewed as belonging to one family. This seems to suggest that communities are bound through many factors such as tribe, totems and kinship. As the process proceeded, I increasingly became more sensitive to the traditional and social bonds that held people together. It is therefore important to take these traditional and social bonds into consideration if 'participation' is to be seen as an open-ended democratic process.

Decision making and power relationships

In this study, participation also included the processes of decision making and sharing of power. The participants had to decide, for example, on the type of material they wanted to develop during cycle two of the inquiry process. People were free to debate issues because the participatory materials development processes created a favourable atmosphere for debate and free thought. Slocum *et al.* (1995) note that to promote social change through participatory processes, it is essential to understand how to address the way in which power is distributed and wielded in the local community. In this case both traditional and civic leaders whose voices had often dominated past community gatherings seemed to have accepted the idea that everyone's point was important. We managed to do this by emphasising the fact that everyone's contribution was very important and that no one should feel intimidated. With this assurance, even some of those who had been silent gradually opened up.

The notion that women are often left out in the decision making processes in most rural communities did not apply to Chiawa as women were often the opinion leaders. This may have been related to the fact that the traditional ruler was a woman and the fact that most government institutions such as schools, the clinic, the Zambian Wildlife Authority, the community development and social welfare structures in the area were headed by women. This could have raised the confidence of the women of Chiawa over a period of time. This research cannot claim to have broken the power gradients that existed in the community, but as far as materials development processes are concerned, every effort was made to ensure that different participants had an equal chance of making a contribution.

Conclusion

The term participation is highly contested and sometimes misapplied in development work, education and materials development (Russo & Lotz-Sisitka, 2003). This paper has demonstrated that 'community participation' in policy initiatives involves careful consideration of the different interests and roles community members play in a participatory process such as participatory materials development. These roles are not static, but change with time as people assume new roles or change existing roles. Due to the dynamic nature of roles and interests, participatory materials development processes in Chiawa were 'kept open' to allow for these changes. Through the action research orientation, action from one cycle of inquiry to the next was determined by the reflections on the preceding phase. New roles of actors emerged or changed from one phase to the other. The study also illuminates that there were actors such as the Chieftainess who did not take part in the actual development of materials but whose support and influence played a vital role in enabling 'community participation'. The fact that the project was endorsed by the chieftainship allowed community members to participate freely (even though their 'freedom' to participate appeared to be reliant on the power and authority of the Chieftainess).

In my experience, there exists an assumption that materials should be produced in the local language. Such arguments stem from the belief that 'a community' is homogeneous and speaks, reads and writes the same language. In a country such as Zambia with 73 dialects, this assumption needs to be challenged through a better understanding of how languages play out in a community. This study demonstrates that although people may be able to converse in a particular language, they may not be able to read and write the language. With little understanding of the Chiawa context, one could easily be convinced that the materials should have been produced in *Goba*, the local vernacular. As it turned out during this research, most people could not read and write the language. A compromise had to be made to include both English and *Goba* titles on the posters.

The other dimension of participatory materials development processes, brought out in the Chiawa case, was the emphasis on local knowledge. Participants were encouraged to voice their environmental concerns and identify ways in which they could contribute to the development of solutions (through planning the content of the materials they would use in community based education interactions). In the final production of the materials, and in dialogue with community members, local knowledge was merged with technical knowledge from technical experts such as community extension workers and teachers who were part of the participatory materials development process.

The study underscores the importance of understanding the local context with all its ambivalences and uncertainties if 'community participation' goals are to be achieved. Local factors such as existing social and political structures, ethnicity, language and literacy levels, and traditional and social relationships, among other factors, shaped the way in which materials were developed and how people participated in the process. Although the results from this study may be said to be specific to the Chiawa community, there are lessons with respect to the complex nature of 'community participation' in policy processes (through education) that may be drawn on in settings elsewhere.

Notes on the Contributor

Justin Lupele is a Course Development Coordinator in the SADC Regional Environmental Education Programme. He previously worked as an education officer with WWF Zambia, where he took a lead in developing environmental education resources for schools and rural communities. For the past ten years, he has been involved in the writing of environmental science textbooks for primary schools in Zambia. He is also a freelance features writer on environment and development for local and international publications. Lupele holds a Master of Education (Environmental Education) from Rhodes University and is currently undertaking PhD research into networking and course development processes. Email: J.lupele@ru.ac.za.

References

- Carr, W. & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. Geelong: Deakin University Press.
- ECZ (Environmental Council of Zambia). (2001). *State of the Environment in Zambia 2000*. Lusaka, Zambia: Environmental Council of Zambia.
- Giroux, H.A. (1987). Literacy and the pedagogy of political empowerment, in Freire P. & Macedo, D. (Eds.), *Literacy: Reading the word of the world*. London: Routledge. pp.1–27.
- GRZ (Government of the Republic of Zambia). (1985). *National Conservation Strategy*. Gland: IUCN.
- GRZ (Government of the Republic of Zambia). (1998). *Zambia Wildlife Authority Act*. Lusaka: Government Printers.
- GRZ (Government of the Republic of Zambia). (1999a). *Fisheries Act Cap 2000*. Lusaka: Government Printers.
- GRZ (Government of the Republic of Zambia). (1999b). *Forestry Act*. Lusaka: Government Printers.
- Kemmis, S. & McTaggart, R. (1988). *The action research planner* (3rd ed.). Geelong: Deakin University Press.
- Lotz, H. (1996). The development of environmental education resource materials for junior primary education through teacher participation: The case of the We Care Primary Project. Unpublished doctoral thesis, University of Stellenbosch, Stellenbosch, South Africa.
- Lotz-Sisitka, H. & Janse van Rensburg, E. (2000). *Learning for sustainability contextual profile*. Johannesburg: Learning for Sustainability Project.
- Lupele, J. (2002). Action research case studies of participatory materials development in two community contexts in Zambia, Unpublished masters thesis, Rhodes University, Grahamstown, South Africa.
- Pretty, J. (2002). *Agri-Culture: Reconnecting people, land and nature*. London: Earthscan.
- Russo, V. & Lotz-Sisitka, H. (2003). *Development, Adaptation and Use of Learning Support Materials*. Howick: SADC REEP.
- Slocum, R., Wichart, L., Rocheleau, D. & Thomas-Slayter, B. (Eds). (1995). *Power, process and participation tools for change*. London: Intermediate Technology.

Tilley, P. (1995). (Ed.). *Our efforts, our rewards: Administrative management design for game management areas*. Ministry of Tourism National Parks and Wildlife Service, ADMADE programme, Lusaka, Zambia.