

A PERFORMANCE-BASED
COMMUNITY PROJECT ABOUT
THE EFFECTIVE USE OF
ELECTRICITY

by

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ABSTRACT

Eskom has a programme called 'Electro-Wise'* which is described as addressing the problem of the use of electricity in the community. Such a programme, it is claimed, educates people to use electricity in a cost effective manner and as such empowers people to monitor their electricity use and take necessary precautions on the safe and effective way of using electricity.

The study seeks to challenge this view on the community education grounds that it tends to take for granted the process of educating the community (in an empowering manner) for empowerment. Furthermore, it undermines the method suitable for approaching adult learners * who have to be taught in an informal setting.

A brief introduction of what community education entails and what 'Electro-Wise' would be if it were based on the theories of community education, are presented.

The findings of an inquiry conducted to probe the community's views on what Eskom does to reach out to them in terms of electricity usage were examined in the context of community education. Some implications of these findings point out that partnership, trust, continuous dialogue and closeness between the community and Eskom are significant. Implications highlight, among other things, the importance of a grounded theory on which the future programme should be based.

* *'Electro-Wise' programme = is a programme which is meant to educate the community on the use of Electricity in a cost-effective manner.*

* *Adult learners = people in the community who are supposed to benefit from 'Electro-Wise' teaching*

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SECTION ONE

1.1 Overview

This essay intends to explore the programmes, which can help educate people to use electricity effectively. It focuses on the programmes Eskom's 'Electro-Wise'* produces in an effort to teach people how to use electricity effectively. Electricity use, referred to in this essay, implies electricity, which is generated and sold by Eskom. Eskom sells this electricity to the community. In this sense Eskom is a producer and seller of electricity and Soweto residents, among others, are consumers of electricity. As consumers Soweto people buy electricity from Eskom.

I emphasize the fact that to buy a commodity is one thing and to use it effectively is another. People who buy electricity from Eskom include people in Orlando West, in Soweto. This is the community on which this study focuses. The word 'community' in this essay is used as defined by Sergiovanni (1996:4). Sergiovanni defines the community as a social structure which "relies on norms, purposes, values, professional socialization, collegiality and natural interdependence".

Seeing that people in the community may share different purposes, values, norms and manners of socialization, it seems appropriate to say the community considered for this study unit conforms to Cohen's (1995) definition. Cohen defines the community as symbolic. The considered community is within other communities, and is characterized by shared symbols and activity and a specific boundary. This community that I am studying consists of 'electricity consumers,' symbolically bound by this characteristic.

As my essay proceeds I argue that the consumers of electricity, (community of Orlando West) needs to be educated to use it effectively. Education in this essay refers to adult education. In essence this kind of education means the way of empowering adult learners.

Education for empowerment changes or transforms people because it helps them to feel a sense of liberation and knowing that they can freely make responsible decisions on how they would co-operate with one another in solving problems which affect their lives adversely. For the purpose of this essay the process of empowering people takes into cognizance the notion that empowering involves 'conscientization' (as proposed by Freire, 1972) of the members of the community who might not be aware of the need to be educated for the reasons mentioned above.

Although the concept of education, especially that of adults in the community, is described by Eskom as empowering, I am of the opinion that they use empowering as a concept which has little to do with transformation of adult learners.

Since Eskom links education of the community to profit making, my concern is that one of the two receives priority over the other. It is tempting to think that since Eskom sells electricity, educating the community to use electricity may be a second priority, whilst Eskom concentrates on how best the profit can be made by educating people to pay their bills.

Presently, the programmes which Eskom's 'Electro-Wise' claims to be educational, mainly encourage people to pay for the electricity they use. Those who do not use electricity are encouraged to start using electricity at home. All this is done by Eskom without the input of the community itself. The education project is 'downloaded' onto the consumer community.

I therefore refute the idea that there are educational programmes, which are aimed at empowering the community, unless they are underpinned by a thorough grounded theory for educating the community in question. Hence *Section one* of my research essay introduces the procedures which will be followed in an attempt to ground the theory which can underpin the programmes to educate people in the use of electricity.

In *Section two* I argue for viable programmes which can help educate people in Orlando West how to use electricity effectively. Although Eskom's 'Electro-Wise' programmes are being used, they are designed by the trainers independent of the trainees' input. Trainers in this case design and produce 'Electro-Wise' programmes which are meant to educate the trainees to use electricity effectively.

There is an outcry for transformation in our communities, of which Orlando West is one. Since we claim to be democratic, people, including those of Orlando West, are free to voice their opinions openly about things that affect their lives, including those which do so adversely. One of the examples of things which affect these peoples' lives adversely, are escalating electricity accounts. This problem is complicated by a lack of understanding why these accounts keep escalating. Throughout our community, the lack of knowledge of how to use electricity effectively is shifting parameters defining communities' expectations and there is a demand that Eskom produces programmes which can educate people properly on cost-effective electricity use.

A community education programme such as 'Electro-Wise' is supposed to be characterised by a theory of adult learning that is both emancipatory and informative.

Section three comprises the field inquiry. It addresses the issues of data sources and methods of data generation that are appropriate for this inquiry. By appropriate methods and sources, I mean those which address the research questions adequately. They should also address the question of which phenomena and properties of social 'reality' might these methods potentially help me to address (ontologically). How or on what basis do I think they could do this (epistemologically)?

Section three goes on to explain how the data were generated, giving the details of the time, place and the research methods. It shows how data were generated and recorded. Finally I show how data were analyzed and categorized. I also show how the categories of data were eventually clustered.

Section four comprises the data categories. The discussion clarifies and emphasizes the links between categories. It goes on to argue the findings from the view of the theories grounding Community Education. The theories of Community Education referred to in this study, are those which stress the importance of dialogue between the teacher and the learner or (the trainer and the trainees) in the community context. The theories of Vella (1994), Freire (1972) and Mezirow (1990) are used in this section because all reflect aspects of the emancipatory dialogue between the learner and the teacher.

Finally this section explains how the findings inform the teacher and the learner or the trainer and the trainee. The trainers' paradigm was that of using the learning programmes according to their own hypotheses. The learners' paradigm is that of accepting what is given by the teacher without questioning it.

The recommendations which are forwarded are that people need to be involved in the policy making of the programmes which have to direct how they have to be educated on how to use electricity effectively.

This section concludes by showing that the investigation is not biased. The conclusion also explains the limitations of my study. It also explains why the findings relate to the aim of the study. The conclusion also gives the reasons for the trustworthiness of the study.

1.2 Background to the study

People of Orlando West appear not to use electricity effectively. This problem manifests itself in the manner in which they complain about their electricity bills. In addition to these complaints, people in this area experience a problem which relates to electricity overload in the area. The problem of electricity overload is evidenced by the tripping off of the switch of the sub-station which supplies this area.

The tripping off of the switch has been happening for several years, especially in winter. In the past two years there has been a slight improvement. The slight improvement was noted on the tripping off of the main switch. There was, however, no improvement in the way electricity bills were handled.

The major complaint from the people in this area are about their electricity bills. People complain a lot about the escalating electricity bills. The major complaint is that people do not understand the reason for escalation. Eskom, on the other hand, has provided booklets which give a break down of how the bills for each month are calculated and recorded. These booklets are called “Eskom Customer Package” (see Addendum 4), and are available at Eskom paypoints. This booklet (package) only guides people on how to read their account statements with understanding but does not advise them on the effective use of electricity.

In addition to this booklet (Eskom Customer Service Package), Eskom’s ‘Electro-Wise’ provides charts and booklets too. The charts show the electricity consumption of most household electrical appliances whereas the booklets give explanations and tables. The information is on how certain heavy household gadgets, (which are heavy on electricity consumption) should be used in a way that electricity consumption can be reduced.

The strength of the chart and information booklets is that they are both user-friendly and also detailed. Given a chance to analyze this chart and booklets, I think people may be in a position to say what advantages and disadvantages of using certain electrical appliances are. Furthermore people may be able to relate the electricity consumption to the type of electrical appliances they use. This may help the people budget for the electricity consumption per month.

The question which arises out of this is how people who are as busy as these in Orlando West, can afford time to make an accurate analysis of electricity consumption per gadget, per day, or week, or month. The second question is: how is it that even educated people in this community keep complaining about their lack of understanding of escalating

electrical consumption reflected in their bills, whether it is summer or winter? (People question whether this matter receives due consideration from Eskom.) If this matter had received Eskom's proper consideration, the company would have realised that they make assumptions about the learners.

Seeing that it is a question such as this one, which I consider to have necessitated this study, I have taken into account some assumptions which might have been made by Eskom in drawing 'Electro-Wise' programmes. At this stage I wonder if Eskom, in drawing 'Electro-Wise' programmes, thought of addressing people's needs as defined by them or not. I assume that Eskom wants to train good, 'quiet' consumers who would pay their accounts and save electricity, especially in overloaded times in winter. Furthermore, educational programmes, if they are to address people's needs, should be outcomes-based. At the beginning of the programme it should be clearly stated what outcomes are envisaged.

1.3 Purpose of the research

The aim is to investigate a selected sample of residents of Orlando West to find out about their use of electricity, and their application of skills assumed to have been learned from the 'Electro-Wise' brochures.

1.4 The importance of the study

I consider the study to be important because people have a problem with electricity usage and it needs to be investigated. Despite the fact that Eskom has 'Electro-Wise', which is supposed to address this problem, it seems that there are questions in the programmes which need to be explored. These could be based on some established theories, which need to be refined or unconfirmed. If the programmes used by 'Electro-Wise' are based on an established theory of learning, the question arises whether that theory is feasible. It is this question which necessitates the exploration of the phenomenon of the effective use of electricity.

As Strauss and Corbin (1991:37) put it “whenever someone explores a phenomenon in depth using qualitative methods, the assumption is that all of the concepts pertaining to a given phenomenon have not been identified, at least not in this population or place”. This is the kind of thinking I have engaged in while exploring the phenomenon of the ineffective use of electricity among professionally educated neighbours in Orlando West.

I think it is important to explore how the use of electricity has been handled by Eskom and the people of Orlando West in terms of effective usage. Seeing that people buy electricity every month, I think its effective usage is of prime importance. So the findings of the study may suggest how a programme on electricity use should be developed.

1.5 Research Strategy and Method

Research design

The research design is largely qualitative. Qualitative research for the purpose of this essay is broadly what Mason (1997: 4) proposes. She contends that qualitative research has one or more of the following features:

- * it is grounded in a philosophical position which is broadly ‘interpretative’ in the sense that it is concerned with how the social world is interpreted, understood, experienced or produced;
- * it is based on methods of data generation which are flexible and sensitive to social context, in which data are produced;
- * it is based on methods of analyzing and explanation building which involves understanding of complexity, detail and context.

For the purpose of this study qualitative research is regarded as suitable, because in addressing the question of how people can be educated to use electricity effectively and how educational programmes need to be designed, verbal responses to their context are needed. The education programmes should be informed by the findings obtained through data generation.

The strength of qualitative research in this sense lies in the fact that I will concern myself with the process of designing and using programmes to educate people how to use electricity effectively rather than simply considering the outcome of 'Electro-Wise' teaching. This kind of researching (Bodgan and Biklen, 1992:29) is beneficial in educational research in that it clarifies the claim that I am making, namely that people will not engage in a learning programme for which they have no real ownership.

I will use survey questionnaires and also conduct on-site observation in addition to the guided interviews. For the purpose of this study the techniques mentioned here will be used inductively. From the view of Bodgan and Biklen (1992) it is clear that if many techniques are used in collecting data, the theory which emerges from the analysis of that data "comes from many disparate pieces of collected evidence that are interconnected." Seeing that data in my case will come from people in my sample, through interviews and questionnaires, the links in the information will validate or dispute the claim.

Research strategy

Le-Compte and Pressles (1993:137) give guidelines on how research activities should be planned. They stress the importance of using the theory at each of the steps of the research. What they mean is that each and every step in research activities should be argued with some theoretical evidence. The sensitivity to the theory in qualitative research is stressed by Strauss and Corbin (1990) as well. For example, in the application of the strategy and methods suggested by the above-mentioned writers, I chose the purpose and the research questions based on my area of interest.

The research topic I chose addresses the question of uncovering the persons' experiences with the phenomenon of electricity usage. The participants and the settings are chosen according to the manner in which they can give me the information relating to the phenomenon in question, to the best of their ability.

The choice of data generation techniques in this study is based on the suggestions of Miles and Huberman (1994). In their theory they advise that the data generation strategy is selected because it can help generate the information which matters most. The development of an analysis strategy is based on the guidelines given by well-established theories of qualitative data analysis like, those of Miles and Huberman (1994) and Strauss and Corbin (1991). Analysis should proceed systematically and should be reported explicitly, using examples of data to illustrate the procedures.

1.6. The limitations of the study

The main focus of the study is the experiences, ideas and views the population in my study has about the effective use of electricity. In order to get this information all the participants chosen for a sample were interviewed and asked to fill in the questionnaire.

The limitation of the study is that one of the participants who were chosen for a sample could not make it in time. So the number ($n = 6$) of people whom I had intended interviewing ran short of one participant. I also had intended attending and observe one of the training sessions, which Eskom's 'Electro-Wise' run for the people in the community. These training sessions were suspended during the period I did my field-work. My missing the training sessions is one of the limitations of my study.

My study has strengths. One of the major strengths of the study is that I had no communication problems. Another strength is that all the interviews were conducted in a relaxed atmosphere. Even those interviewees who were visited in the evening, took their time answering interview questions.

1.7 Research questions

The research questions my study considers are as follows:

How does the community in Orlando West, Soweto, use electricity?

How are matters relating to the effective use of electricity negotiated among neighbours themselves and the community, with Eskom?

What is the interface between the electricity consumers and Eskom as a producer?

What is the nature of the implicit and explicit education of community members with regard to electricity as provided by Eskom?



SECTION TWO

TOWARDS A CONCEPTUAL AND THEORETICAL FRAMEWORK.

In the previous section I explained why I would argue that it is important to explore the ways in which people in Orlando West, in Soweto, can be educated to use electricity effectively. I also explained the context in which the concepts community and education will be used in all sections of my essay.

The first question I raise with regard to effective use of electricity comes out of the educational programmes, which Eskom presently uses to educate people in the Soweto Community. These programmes are obtainable from Eskom paypoints in Soweto. I shall start by focusing on the programmes which are available in the form of small booklets. Some of the programmes have been translated into different languages, but most of them are still in English only. For the purpose of this essay I shall concentrate on and refer to adults whose English competence is good. Such people can read and write English without any difficulty.

The questions I pose are about the programmes, which are written in English. Whose needs are they addressing as defined by whom? Such questions about learners' needs are captured by Jane Vella in her book *Learning to listen, learning to teach. The power of dialogue in adult learning* (1994). Vella advises that a viable learning programme should be drawn up by both the learners and the teacher. The learner and the teacher first engage in dialogue about the content and teaching strategy of the programme. Furthermore, if the learner and the teacher show mutual trust and closeness during the course of the dialogue, they both come up with an agreed upon document which serves the need of the learner as defined by them (the learners). If the teacher or trainer at Eskom head office, for example, draws programmes which are meant to address the needs of the learners (who are people in Soweto) and these needs are not defined by Soweto people, how can such programmes be viable?

Eskom trainers use phrases such as "empowering people in the community" by means of their programmes. Educational practices which are meant to empower people, are underlined by principles deduced from the liberatory theory of Paulo Freire (1972). I see the theory of Paulo Freire and Vella work quite harmoniously in that they both postulate that the learner and the teacher should show mutual respect in everything they do.

What characterises the lack of mutual respect between Eskom trainers and the people they intend training or teaching is the fact that Eskom programmes are drawn by the trainers with the assumption that they address the needs of the community. The manner of assessing what is done during short training sessions is by giving the trainees a test to retrieve what they were taught. This kind of education or learning does not allow the learners to look beyond what they have learned. Furthermore, assessment of just the work done may exclude the assessment of values and attitudes.

The question which arises out of this is: how can people change their habits, (ways of doing things) if their attitudes have not changed? Vella emphasises that the genuine change comes from the heart. To rephrase Vella's words: If you don't care for people, they may not care how much knowledge you have. This caring Vella talks about suggests that Eskom trainers should consult with people at different levels of the community in order to get their views on effective use of electricity. Let me turn, then, to the way I would argue about the way in which Eskom trainers view the community. I argue that Eskom trainers define the community boundaries (Cohen, 1985) in terms of language.

This definition manifests itself in the way the current programmes are drawn up. For example, there are presently programmes which are written in languages like Xhosa, Zulu and Sotho. By and large programmes are written in English. If Eskom trainers had taken into consideration that communities also have boundaries which are symbolised by relationships, norms and values, they would have asked the people in the community what they value in terms of electricity usage. For example, some people see the use of electricity as a way of solving pollution problems, and others see it as an expensive

commodity. The paradox in this example is that whether people use electricity, or coal, or paraffin, they directly and indirectly deplete a non-renewable source of energy, which is coal.

The question which arises from 'producer' and 'consumers' of energy is the question of the interface between the two. Eskom is the producer of energy in the form of electricity. Consumers buy electricity from Eskom, who has to look at the input and compare it with the output. In other words, Eskom needs to benefit by selling electricity to the consumers, which are, among others, Soweto people. In Sergiovanni's definition of the Community, Eskom is the *Gesellschaft*. This is characterised by being competition centered. For example, Eskom, like all business enterprises, compete for human resources and income among other things.

Another classic example is that in most cases you find companies like SPESCOM complaining to their trainee engineers that as soon as they finish their training, Eskom will come 'waiving BMW keys'. Sergiovanni (1994:26) clarifies the characteristics of the *Gesellschaft* by saying "In *Gesellschaft* a clear distinction is made between the two (means and ends), a distinction which communicates an instrumental view of human nature and society" (1994:26). This statement suits Eskom practices in that they involve training people to be efficient in producing and using electricity.

Training people in this sense is meant to 'give' people something that can benefit trainers in getting better positions and earn more money. In the same view Eskom benefits by improving the rate at which electricity is produced and bought. The other feature which characterises Eskom as a *Gesellschaft* is its egocentric nature. Egocentrism of Eskom manifests itself in the relationships, which exists between employers and the employees. The employees are employed on contract basis. Sergiovanni, in quoting May Rousseau, describes the nature of contract as "bringing people together in their external aspect" (1993:29).

The question which arises out of the relationships characterising the *Gesellschaft*, is: Does Eskom care about genuine relationships? When do people become genuinely united in genuine relationships? By human relationships, I mean relationships in which people are associated with each other simply because doing so is valuable as an end in itself. The association of this nature, if it involves learning and teaching, builds support. Sergioivanni (1994) argues that the knowledge gained under such conditions is valued and learned for its own sake. Sergioivanni stresses that association where people are selfless is a valuable ingredient of the *Gemeinschaft* which emphasises interdependence of participants as well as commitment. The *Gemeinschaft* in this view is the community of the mind.

The commonality between Allen and Martin's (1989) theory of "politics of practice" and Segioivanni's (1994) theory of community (*Gemeinschaft*) is that the community articulates to certain core social and educational values. I therefore argue that any educational programmes which take the community values for granted is likely to fail. The educational values and community interests have to be explored.

'Electro-Wise' may claim that its teaching messages are loud and clear because they are colourful and presented by people who know their 'stuff'. I believe most nonformal educational programmes do not necessarily address the day to day life realities. For example, Eskom's 'Electro-Wise' team draws up it's own objectives. These are not negotiated with people in the community. Furthermore, the 'Electro-Wise' "Merchandising Programme" (Information leaflet) and also "The electricity efficient lighting Programme" (Addendum 4) are also not negotiated with the community. For example, one of the objectives of introducing an "Electricity Efficient Lighting Programme", which is currently being developed, is that "It will promote the widespread use of compact fluorescent electricity efficient lamps in residential households" (Addendum 4).

This statement reflects Eskom's intention. The question that is not addressed by this intention is whether people's life realities can be successfully addressed. Will the

envisaged fluorescent light appeal to people's real needs and values? How can the light which is far more expensive than conventional globes appeal to the real needs of the people? The question of intention of the *Gesellschaft* as opposed to the realities of practices of the *Gemeinschaft* is evident in the use of televised 'Electro-Wise' Programmes. Allen and Martin (1989) argue for realities of practices which are reducible to the intentions.

This view, stresses (in the case of this inquiry) that televised programmes may not appeal to the community because some of them may not be in possession of TV sets or may not have time for TV shows. Another example is that whoever plans televised programmes or education programmes which are to be viewed from the cassettes or from television assumes that all the members of the community for whom the programme is intended, have access to a VCR or a television set or both, and will choose to watch these programmes. Furthermore, the notion of using technology for teaching-learning programmes successfully is questioned by Streibel (1998). He argues the possibility of technology's success in teaching, saying that technology teaching may not be in line with or relevant to the events of the time. He says this when he explains how important "the physical place" in a teaching learning situation is.

Day (1990), in Streibel (1998:33), raises a counter argument on the question of the physical place in teaching and learning, by pointing out that a successful programme, which includes the 'health-giving physical place', can be designed if it is suggested by people in the community. He emphasizes the importance of the physical place in a teaching situation by stating that people in the community are bound to their physical places. He calls such a community a 'historical community where wisdom sits in places'.

Can Eskom's 'Electro-wise' advertising programmes be infused with similar soulfulness or spiritedness, let alone wisdom? The notion of community may be included here, by extending the question in the following manner: Can communities respond to programmes, especially if the place where programmes are made are pre-determined?

I do not think so. Some people can transfer context and others cannot. Since social reality is continually negotiated through communication, the question arises why Eskom doesn't extend interactive responses of people who watch the programmes at any particular moment. Such interactive responses should be video taped in order to give 'Electro-Wise' some information on what to assess in them directly.

The question that arises and needs to be looked into, when one prepares a video programme on community education are: Can one have living relationships within a video programme? Living relationships referred to here are the ones which are the ingredients of the *Gemeinschaft* described earlier on. For Streibel (1998), living relationships entail experiencing local patterns that connect one to large patterns in the human world. Do we have a mutual stake in each others lives when the other is only on the video programme and we are not in it? When I consider Vella's (1996) approach (to educational programmes), which stresses the importance of closeness and mutual trust between the teacher and the learner, I find it hard to have a stake with a person teaching me through a video programme only. I can only trust that people can operate according to the directive or teaching of the video programme only in a formal, structured classroom situation. Can we sustain human virtue of neighbourliness through 'Electro-Wise' video programmes? I believe that this would be difficult.

In a deep sense, the specific question above and the two theories of the *Gesellschaft* (which produces these programs) and the *Gemeinschaft* (that has to use them) are addressed very well in Vella's (1994), Allen and Martin's (1989), Freire's (1972) and Mezirow's (1990) theories. These writers stress the importance of continuous dialogue in adult education. Jerome Bruner (1996) adds the importance of cultural beliefs in a teaching-learning situations. I think 'Electro-Wise' programmes are not in line with these theories but contain reduced information with little interactivity possibilities.

The issue of the learning theory that could inform 'Electro-Wise' programmes arises. For the purpose of this essay I shall not discuss child learning, but learning theories which relate to adults. The emphasis will be on transformatory theory of adult learning.

Philosophies of learning and instruction used by 'Electro-Wise', using technological tools, seem to be based on constructivist theory of knowledge.

The learners are guided by pictorial presentation of the information assuming that the learners have limited prior learning. Moreover, individual learning styles and preferences are recognised on the video and in booklets. Learners can view, read and listen. For example, there will be a training workshop on the 1st of September 1998 in which, perhaps, videos will be screened in addition to other activities. These different strategies are interpreted as meant to support various ways of learning.

The question that arises is whether the existing 'Electro-Wise' programmes are rooted in emancipatory pedagogy? Are the adult learners encouraged to challenge the programmes in any way?. Emancipatory pedagogies reject the 'banking system' as explained earlier. Paulo Freire (1972) argues that adults need to be emancipated by learning through and being engaged in a continuous dialogue. The dialogue referred to here is given a deeper meaning by Mezirow (1991), explaining the role of the educator in fostering communicative learning. Communicative learning for Mezirow (1990), is necessitated by the need to teach and learn for relevance. This question of teaching for relevance, in the case of 'Electro-Wise' is in terms of skills, knowledge, values and attitudes which the community needs to develop, through negotiation, is an important one. From Mezirow (1990:58)'s perspective the Soweto Community "cannot know their real needs because they cannot know what they would need if they could see things from a more developmentally advanced perspective."

Mezirow (1990:58) also argues that the educator cannot assess the learners' "need" before he or she arrives at the educational venue. I argue for an educational programme which is underpinned by Mezirow's (1990) theory of learning. Mezirow (1990) also emphasises the question of praxis in an educational programme. By praxis, Mezirow suggests that adults in a learning situation should reflect, collaborate, and enter into some kind of discourse. 'Electro-Wise' programmes do not cater for reflection about the past of

the learner. How can learners, in this regard, develop reflective insight into how to utilise electricity effectively to an extent that they effect social change in the process?

For example, once people develop reflective insight on the effective use of electricity, they may not only concern themselves with solutions to the economic problems, but also with the problems of depletion of non-renewable resources like coal. (Eskom uses tons of coal a day to generate electricity). They may begin to pose questions about the use of solar energy on a large scale for example, instead of chemical potential energy in the form of coal.

The question of assessing what the learners gain from the learning programme is addressed by looking at the question of context awareness. Reflectivity and effective participation in discourse and inclusive interpretations, and integrative of experience, should also be included in assessment of learners. This is the advice given by Mezirow (1990). If 'Electro-Wise' teachers were using the assessment method suggested by Mezirow (1990), it might be that this would manifest itself in many ways. For example, people in the Soweto Community, to say the least, would be talking about or showing their concern over the long-term solution brought about by effective use of electricity. This is in essence, emancipatory pedagogy. They may not be changing their practice immediately, but they will begin to think, to reflect and may begin to save electricity.

For the purpose of proper critical analysis of 'Electro-Wise' programmes, I need to keep on drawing from its definition of adult education. The question which I would like to focus on, firstly, is: does 'Electro-Wise' view adult learning sessions as nonformal or formal and as a co-operative venture that is non-authoritarian? Do the learning programmes allow for a connection of new knowledge of electricity use, to existing preconceptions of electricity use?

If 'Electro-Wise' views adult education as essentially nonformal and meant to help people to be critical of how they use electricity, people of Soweto, for instance, would be in a position to take the role of being subjects of what they want to learn, in terms of effective

use of electricity programmes. For a person who is a product of the 'banking system' of education, which is oppressive, to be conscientized within a short space of time and to change his or her culture of learning and teaching, and to change the frame of mind, may be difficult.

Hence Taylor (1993), in writing about Paulo Freire's theory, rightfully says that acculturation is a process that takes time. Acculturation in this essay means helping people through dialogue to critically look at the circumstances surrounding their lives and from that freely voice what their needs are in terms of learning materials. This is not what people used to be encouraged to do by the banking system of education. Mezirow (1990), would advise, in the case of 'Electro-Wise' programmes, that people in the community be encouraged, through their programmes, to enter as much as they can in the critical dialogue through critical reflection and rational discourse. 'Electro-Wise' can only make room for this type of learning if the workshops elicit it. The booklets do not and perhaps cannot.

The question which arises at this point is, how the programmes could be planned to teach people in such a way that they all co-operate in critical dialogue during learning process. To answer this question I argue by referring to the theories of learning as expounded by Piaget and Vygotsky, through Brown, Metz, and Campione (1996). These theorists postulate that learners construct knowledge by actively participating in the learning process. What Piaget stresses is the importance of the existing knowledge on the part of the learner. In Piaget's notion of learning, how can one view 'Electro-Wise' text as meant to help train people to use electricity effectively if the trainers had no idea of what learners' prior knowledge was. As a consequence 'Electro-Wise' has said nothing about the pre-knowledge test of the people they have trained so far.

The objectives which Eskom sets out to achieve through 'Electro-Wise' programmes are low-level objectives (in Bloom's (in Bieler and Snowman (1993:280)) notion of objectives). Such objectives mainly aim at teaching people terminology of specific facts and specific ways and means of dealing with specifics. For example, 'Electro-Wise'

teaches people how to save electricity by following certain defined methods like insulating the geyser.

'Electro-Wise' also teaches people the method of avoiding overloading plugs (see Addendum 4) and other safety measures. If they remember how long the above measures are used in electricity usage, it fits a low level of Bloom's taxonomy of objectives. The question of comprehension, which is higher in the hierarchy of Bloom's learning objectives, is undermined by current 'Electro-Wise' programmes.

How can learners be critical of what they learn if they are not stimulated by some activity to do so? How can they comprehend the information at a higher level, if they learn facts without critical analysis thereof?

To try to answer the last question, I shall turn to Vygotsky's theory of learning. For Vygotsky, as explained in Brown et al (1996), learning occurs when the teachers stimulate students to explore the zone of proximal development or the possibility to learn in an area with the help of peers or teachers. The application of this theory in Bloom's taxonomy of objectives is evident in the higher order objectives.

Higher order objectives are comprehension, application, analysis, syntheses and evaluation of knowledge. (Bielher and Snowman (1993:280-281)). In this higher order objectives people in the community would actively co-operate in using electricity effectively. For example, if a person applies what she has learned, she applies it in the community.

The question of how the affective domain is involved during the teaching learning situation remains. For Bielher and Snowman (1993:281) this is a difficult domain that stresses values, by saying that "affective domain stresses out-of-school values if not more in school values". In the case of adult learners, how can teachers involve their affective domain? For example, how can 'Electro-Wise' trainers influence people in the

community to change their values and attitudes and make adjustments towards the effective use of electricity?

This section concludes by stressing that I attempted to argue that for a community driven project to be viable, the participants need to be involved in the design and development of the curriculum. The argument emphasizes the need to involve the people from the community, who are to be trained, at all stages of the community project development. The section has also argued for proper consideration of well established theories of learning when a learning programme is developed.

The section started by arguing for treating adult learners as adults. It went on to emphasise the importance of healthy relationships between the teacher and learner in a teaching-learning situation. It also stressed that the relationship, trust and freedom of expression should be developed and assessed at all levels of development of the project.

It has also been argued that the community chosen should be identified by some symbols and boundaries (Cohen 1985) such as belonging to the same school, or church or any other organisation or share common interests.

The strategy used for teaching the members of the community in question has also been argued. It has been stressed that the strategy argued for is the one that is negotiated and agreed upon by all the parties concerned. The approach to how the teaching strategy is negotiated is captured in Vella's (1994) text, suggesting that the following be done:

Be as prepared as possible

Do not assume the solution

Don't just assume your audience will simply understand what you are going to say

Design your programme in such a way that it appeals to people in the community.

The people in the community should also contribute to the design of the programme and participate in the process of presenting it.

Summary

Section Two has made a critical analysis of Eskom's 'Electro-Wise' programmes from the point of view of community education. In doing this I applied the transformatory theory of adult learning propounded by Mezirow (1990). In addition to Mezirow's theory I used Vella's (1994) theory to look at how Eskom approaches people in the community with the aim of teaching them to use electricity in a cost-effective manner. The teaching of adults referred to in this study takes place in a nonformal setting. Therefore, I think the argument presented in this section may indicate the need for Eskom's 'Electro-Wise' to adhere to the ideals of nonformal education. These ideals are as propounded by Streibel (1998), among other writers.

The community programmes should be community driven. In other words, they should be planned in close collaboration with the community members they are meant to serve. They should have elements of nonformal education.

This means that the programmes designed by 'Electro-Wise' trainers have to be based on ethics of caring for the defined community. Furthermore, the programmes which do not foster critical dialogue among the parties concerned, are not sustainable. Again the best way for 'Electro-Wise' to establish the orientation of trainees/learners about the effective use of electricity is to help them form their own "ecological identity", Streibel (1998:37), which is grounded in where they stay and in what they do.

The phenomenon of effective use of electricity has made me think of the manner in which I use electricity, and how this may affect people in my community now and in the far distant future.

Conclusion

In this section I have attempted to argue for a view of adult education programme which is community-based. This happens within a framework of dialogue and respect. Such a framework suggests a continuous dialogue between the teacher and the learner, in such a way that the learners take full ownership of the learning programme and do not feel it has been imposed on them.



SECTION THREE

3.1 The design of the field inquiry

This section attempts to address the questions about the 'how and what of the inquiry'. The approach to the study consists of two component issues as described by Patton (1987). These two issues are what Patton calls conceptual issues and technical issues. For the purpose of this study, conceptual issues are those which address the question of how or on what basis I consider the chosen research instruments would help me address the phenomena and components of social reality. The technical issues address questions of data collection and analysis. For example, questions such as: What will be the method of inquiry? What will the sampling strategy be? The contextual nature of the inquiry requires that the social reality be observed in its context, making use of suitable methods (Patton 1987:45).

The research design is therefore largely qualitative. Qualitative research for the purpose of this inquiry is defined by Mason, (1997:4) Qualitative research is:

grounded in a philosophical position which is broadly 'interpretative' in the sense that it is concerned with how the social world is interpreted, understood, experienced or produced.

based on methods of data generation which are flexible and sensitive to social context, in which data are produced.

based on methods of analysis and explanation building which involve understandings of complexity, detail and context.

In this inquiry qualitative research is seen as suitable because in addressing the question of how people can be educated to use electricity effectively, educational programmes need to be designed. The suitable programmes should be informed by the findings obtained through data generation. The strength of qualitative research in this sense lies in the fact that I will concern myself with the process of seeing how programmes are used and what the adult learners think and feel. Although the questionnaires are basically a

quantitative technique I will use interviews along with questionnaires and observation. Mason (1997:45) argues that “neither quantitative nor qualitative methodologies are the unifying bodies of philosophy, method, and techniques which they are seen to be .”

This statement suggests that it is better to integrate two techniques rather than using one only. In this study, I used the interviews and questionnaires in order to get the understanding of how electricity should be used, their interpretation of information which relates to electricity usage and their ideas about how people should be educated to use electricity effectively.

3.2 Selection of Participants

The data sources were six families in the area called ‘Beverly Hills’ in Orlando West, Soweto. The data sources were selected according to the guidelines given by Mason (1997:83-105). According to Mason, the selection of data sources should be done on the basis of the research questions. In response to my research questions I took the families in the area mentioned above as available or appropriate data sources. The reason why I did so is that there are a few things which are unique in these families. The unique features are that they all occupy an area in which, before the Soweto riots, people were denied an opportunity to build houses. After the riots, sites were open at ‘Beverly Hills’.

People who were interested to build houses on these sites applied for bonds and built houses whose average sizes are between eight and nine rooms. All the homes belonging to the participants have garages and backrooms. Seeing that the homes of the participants started to be occupied between 1978 to 1983, all the houses share the same mini electricity substation. This substation is connected to the meters of these houses, including mine.

Due to the excitement of having new neighbours all the owners of the newly built houses welcomed one another by organising social gatherings. It was during these social gatherings that people talked about common interests. Among interests discussed during

conversations, was electricity supply in the area and the problem these people experienced with their electricity bills. Despite the fact that it was discussed quite often, the problem with electricity consumption went on in this area. Some people reported to the local council of the time that there was an electricity overload problem. Although the local council attended to the problem of electricity overload in the area, the problem of high electricity bills, which most consumers cannot interpret, continued.

It is in this regard that in my study I chose my data sources from this community. In Cohen's (1985) view this is a community because the families I refer to are families of educated people who are between ages of fifty one and sixty and they are all in permanent jobs. They share socio-economic symbols and boundaries. Besides the relationships the people in my study have, they also have more or less the same number of children who are all more or less the same age.

All the people in the study graduated from high school and the majority of them have University degrees and diplomas. Seeing that all the participants are my neighbours and we understand one another, even if we communicate in vernacular, it was easy for me to secure my appointments with the majority of them. However, I had a serious problem with one of the participants who had some time constraints. All the interviewees were interviewed at home at the times suggested by them. The participants are not many. They are only five. One of them is a male who holds a B.Sc. degree and who has some background of Science and Technology. Presently he is working for IBM (International Business Machines). He works with computers. One of the participants who is an insurance broker, does not know even the basics of the application of electricity knowledge. For example, she confessed that she does not even attempt to wire a plug.

3.3 Research Methods

I chose to use interviews, survey questionnaires and observation as methods that would potentially help me address the problems of people's views relating to the effective use of electricity. I also prepared an interview guide because it provided space for covering as

much as possible and doing it in a reliable way. All the interviewees were asked the same questions.

Patton (1987:111) writes, "An interview guide is prepared to ensure that essentially the same information is obtained from a number of people by covering the same material." This is exactly what I did in an attempt to keep the interaction between the interviewees and myself focused. The question, which may arise at this stage, is how well the interview guide helped me to generate data from people's experiences, interpretations, thoughts and ideas within a short space of two hours. Although the answer may lie in how well I made it a point that interviews are systematic and comprehensive, the use of additional methods might help.

These additional methods are a survey questionnaire and observation. The term observation here is not used in the social anthropological sense described by Mason (1997:60-61). It is used in the sense that unconscious observation is inevitable. To answer the question of how reliable my observation of the type of lamps people in my study keep, the answer is that those lamps have been there and have been conspicuous, for over ten years. The question is, is a person who keeps multiple lights for over ten years not free to change his mind or interest to other types? Furthermore, as I observed the lights I had a survey questionnaire to check which heavy electrical gadgets each family uses and how often. The use of the questionnaire was meant to increase the validity on how electricity is handled in each case (Jick: 1979). I visited each family and made general observation notes.

Mason (1996) reminds us that qualitative research is an ethical practice. This statement is in agreement with Booth *et al* (1997) when they give an example of one of the ethical considerations in research by saying that people's time should not be used aimlessly. What these writers mean is that questions for the interviews should be prepared well in advance. For Patton (1996), for as long as the interviewer knows what he wants, he can ask the right question. In an attempt to stick to the above guidelines I also used a questionnaire in order to save time because the participants in my study are busy people

(Jacquer 1982). I think it is also ethical to consider the entry point for research. For example, before the interview started I introduced my research to the interviewees. I told them the focus of what I intended exploring. At the end of the research I promised the participants that the findings would be disclosed to them.

3.4 Data Collection Procedure

During the interview sessions an audio recorder (dictaphone) was used to tape record the participants. According to Mason (1997) the use of a tape recorder should not disrupt or inhibit the social process. The dictaphone was always kept inside my pocket during the interview. Notes were also taken judiciously during the interview. I spent minimum time noting down information. I tried to maintain neutrality as explained by Mason (1997), when I communicated with the participants.

From time to time I asked the participants to look at the information in the booklets which are designed by Eskom's 'ElectroWise' team. The booklets are accompanied by Eskom's newsletter. From the newsletter I asked the participants to just look at what Eskom says concerning 'Electro-Wise'. I did this in order to control the interview. I also used 'Electro-Wise' booklets to try to get the interviewees to focus on the use of electricity. I think, as the interviewees and I referred to the information in Eskom booklets, a great deal of time was saved.

At the end of each interview session I asked each participant if he or she could spare five minutes of his/her time to fill in the questionnaire.

3.5 Data Processing and Analysis

The qualitative analysis procedure I chose for the study is what Miles and Huberman (1994) describe as partly interpretative and partly social anthropological. The approach to data analysis for this study is that whatever participants say is the interpretation of their experiences, interpretation of ideas, norms and beliefs about the effective use of

electricity. This information is organised into coded patterns and category units as described by (Patton 1987:150).

The advice given by Patton (1987), namely that overlapping data collection with data analysis is inevitable, was observed. For Patton (1987:144) this “overlapping of data collection and analysis improves both the quality of data collected and the quality of the analysis so long as the evaluator (researcher) is careful not to allow initial interpretation to bias additional data collection”. In order to avoid bias, data from each participant were analyzed immediately after data were generated. This is in agreement with what Miles and Huberman (1994) advise. Although Miles and Huberman say that ongoing analysis permits interim reports in policy studies and evaluation, it may help reduce volumes of data which may accumulate unanalysed during field work.

After each interview I transcribed the information from the tape recorder . According to Miles and Huberman (1994:55) only "what matters more" should be transcribed for coding purposes. In order to check what matters more I took Mason's (1997) route of considering the information which relates to my research questions as data or evidence of my study.

I also kept the chronological context in tact. According to Mason (1997) it is necessary to decide how I would like to ‘read’ my data - literally, interpretively or reflectively. Even if data were ‘read’ literally, this reading of data was actually one way of sorting. Therefore, it is only data, which matter most, which I read literally and interpretively. I therefore assigned codes to the information, which related to research questions.

For example the information which related to handling of electricity and the bills/accounts, ideas, norms and beliefs of the participants on the effective use of science and technological equipment was important. I assigned codes to this information according to the sequence suggested by Miles and Huberman (1994:9) Strauss and Corbin (1990:65) call this first step 'conceptualisation of data.'

Data below is organised into concepts

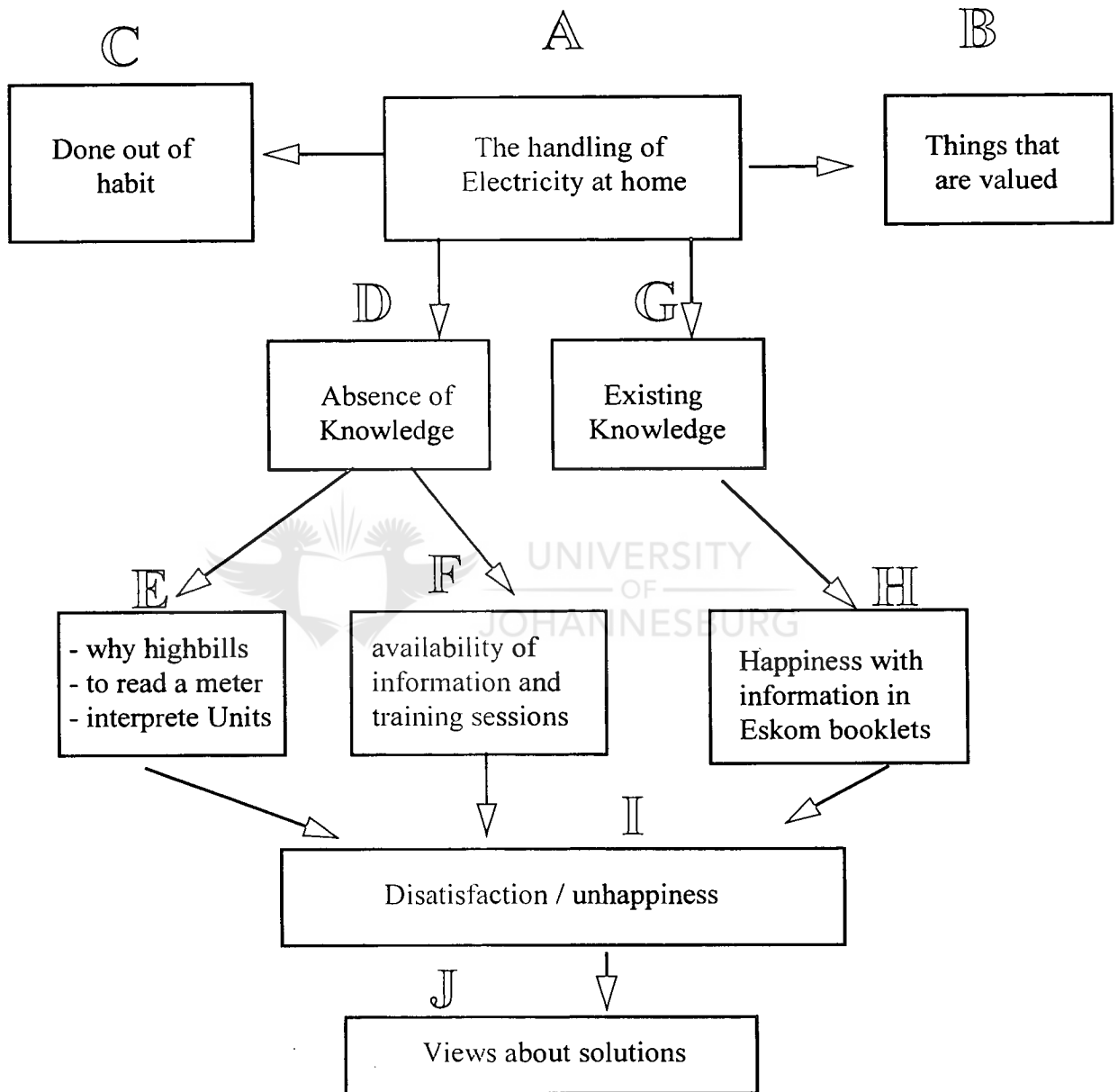


Figure 3.1 Data Organisation

Table 3.1 shows how the patterns of the information obtained from interviews were tabulated according to the summary given in the previous flow chart. This results from open coding.

Table 3.1, Concepts in the 'open-coding' process.

CONCEPTS	COMMENTS / INTERPRETATION
1=B&C * CO.S * V.P	These concepts are meant for what participants do out of habit. What people value becomes habitual and they find it difficult to change.
2=D - E * D W M R * L B K * L K N/U/W	Participants who lack knowledge about meter readings for example units and watts. They are also dissatisfied with how these meter readings are handled by Eskom.
3=H * S E A * A N P	Participants know and are fully aware that they need to save electricity because it is costly. Hence all participants are willing to pay for the electricity they consume.
4=F * A O L P	Participants do not know that learning booklets are available at Eskom offices. All the participants have never been involved / or invited to training sessions or workshops.
5=I * R U E L	Participants recognise the ease with which information in booklets can be read
6=G-J * D E T S * L O C/N F C * N F E * L O V * V A T/T	Participants are dissatisfied with the way 'Eletro-Wise' does training and workshops, as they have never been invited to these workshops and training sessions. They are also dissatisfied with the way meters are been read and inconsistency of the amount they are told they owe to Eskom. Hence they express their views on how Eskom should strategize the process of reaching them and their community. The participants emphasize the importance of the question of trust and good relationships between themselves and Eskom. They also emphasize the importance of communication between them and Eskom about matters relating to electricity use. Participants gave their views on how communication by means of programmes written in booklets can be facilitated. They also are worried about the kind of experience and training the meters readers have. Participants voiced out that Eskom should assess what meter readers do on regular basis. Mutual assistance and understanding, participants viewed as important in understanding how electricity should be handled.

(See glossary for table 3.1 on the next page)

GLOSSARY FOR TABLE 3.1

1. D.E.T/LS = Disatisfaction with Electro-Wise's Teaching and learning strategy
2. R.U.E.L = Recognition of Electro-Wise useful information in (Booklets)
3. D.C.H = Difficulty in changing habits
4. L.K.M/U/W = Lack of knowledge about meter reading, or unit or watts
5. L.O.C. = Lack of communication
6. A.N.P. = Acceptance of the need to pay (for electricity)
7. C.S. = Culture of silence
8. V.P. = Valued practices
9. T.F.E. = Teach / Train for Empowerment
10. S.E.A. = Save electricity awareness
11. D.W.M.R. = Disatisfaction with meter reading
12. N.F.C. = Need for communication
13. L.O.T.R. = Lack of Trust and relationships
14. L.O.V. = Lack of visibility of meter readers
15. V.A.T./T. = View about teaching and training
16. L.B.K. = Lack of basic knowledge (of electricity) for example wiring a plug
17. A.L.P. = Learning programmes

The following expositions explain the content of Table 3.1 and the "raw" data it summarises

- A = Central question/Basic question/ the first question of the interview guide (see adendum 1)
- C = "I just buy the types of bulbs I am used to buying".
"It is not easy to change people's habits".
"My family and I just mix globes. We never check what difference each globe makes".
"I have a tendency of not reading instruction on the gadgets containers".
- D-E = "I can not explain why the bill/account keeps escalating. Whether it is summer or winter the account keeps on rocketing.
"I do not know what difference it makes if I makes use 100W lamp as compared to a 60W one".
"I do not know what 'Watts' mean".
- H = "I make it a point that I plug one item at a time for example a kettle only and not a kettle and a refrigerator. I only boil the amount of water I need at that time".
"I switch the radio off when no one is listening to it".
- F = The booklets from Eskom are readable especially because they have illustrations".
The programmes are simple enough for all people".
- G = "I have neither seen Eskom Newsletter nor seen several of these booklets. I ave seen only one Eskom Customer Service package (booklet). Eskom should do demonstration in clinics, schools and at street committee level. The reason clinics are appropriate for demonstration is that there are programmes already running there, for example Aids Awareness Programmes. If there is a variety of programmes which run at the same places that will holistical".
"Lack of knowledge about Units, for example, necessitates out regular discussion with Eskom. Maybe a week's discussion on Wednesday afternoon".
Training is vital because it can help people who use the card system as well".
From what I see, I would suggest that Eskom puts adverts on big boards along the main routes or freeways".

“Direct interaction with the learner is important. For example dangers inherent in using bathroom heaters and electric blankets are not emphasized when sales of these commodities are made”.

“If for example the compact fluorescent light is demonstrated at Pick'n' Pay”.

After the broad concepts were identified I started with open coding of each section. This is a process of breaking down, examining, comparing, conceptualizing and categorizing data. In some cases I did open coding and axial coding. Axial coding means putting together of the same data based on the context and intervening condition as described by Strauss and Corbin (1990)

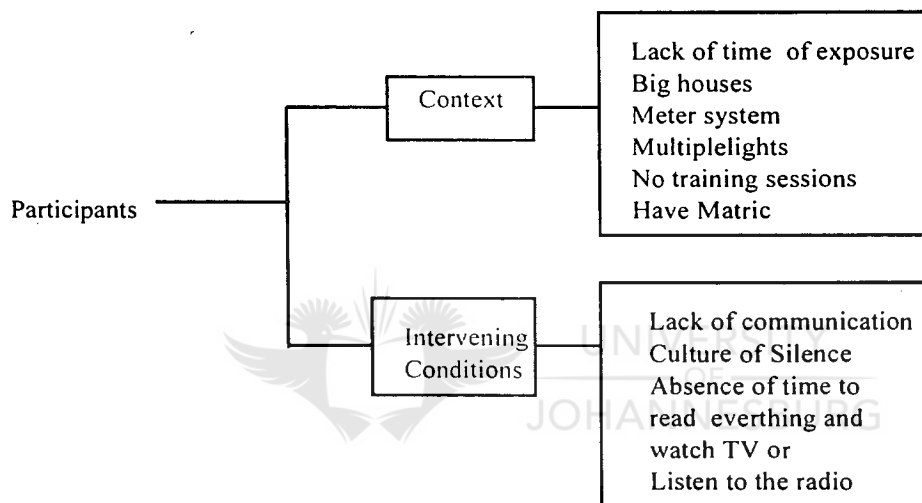


Figure 3.2 An extension of data from figure 3.1

The participants were interviewed in English and the Eskom booklets were written in English. As a result all the information from them is in English. There were a lot of similar experiences that people have had, which relate to the interface between them and Eskom with respect to matter which relate to the effective use of electricity as tables show.

Intervening conditions in the participants lives which contribute to the problems of ineffective use of electricity are displayed in Table 3.1 and 3.2

Table 3.2. Summary of responses about knowledge

Participats	Understanding illustration in booklets	Know how to save	Seen or read booklets	Invited for training / workshop	Know- how to read meter	Can interpret Unit to kW
1	+	+	±	-	-	-
2	+	+	-	-	-	-
3	+	+	-	-	-	-
4	+	+	-	-	-	-
5	±	+	-	-	-	-

+ = Yes
the book or = No

± = *seen but not read
 understand a bit*

Table 3.3. The effect of lack of knowledge.

Action	Ann	Fanie	Lucy	Mimmy	Agnes
Action	Complained Many times				
Response from Eskom	Negative somebody sent No explanation	-	-	-	Meter adjusted (low consumption)

All the participants were unhappy with the way Eskom organises what they claim is the way of helping people use electricity effectively. These people have views about the solution to these problems. The views are tabulated below in Table 3.4. All participants' views stress that people need to be educated in one way or another. They all particularly stress that they need to be educated in order to be able to make their own records of meter readings. Failing which, the views are tabulated below. The table also indicates the participants' views about the time for education sessions, publicity and for television programmes or radio (702).

The next table displays:

- (a) the response of choice between meter systems or card
- (b) the views about time for training session, radio or television programmes.

Table 3.4 Data about meters and training

Participants	Time for Public training	Radio	TV Programmes	(systems) Card/ Meter
Lucy	Wednesday Afternoon			
Ann	Sunday after Church or directly after paying			
Mimmy	-	702 at 10h00	At 19h30	Not sure
Fanie		Sunday after Church or directly after paying		
Agnes				Meter

The respondents who opted for the card systems/ and those who said they do so in view of their individual experience.

All the respondents were willing to co-operate. They even said that they would like to work in partnership with Eskom.

I identified the following categories of meaning from the data thus far.

Category: Lack knowledge

Properties: high bills, read meters, interpret units into watts and vice versa, training session programmes available.

Category: Valued things

Properties: Multiple beautiful lamps kept.

House kept warm, always have warm water, people work in partnership and have direct interaction, trust and transparency to one another.

Category: Knowledge

Properties: Save electricity, some gadgets consume a lot, can easily understand information given to them in English.

Communicate well in English.

Some safety measures not all presented in booklets.

Table 3.5 below represents the type of electricity gadgets the participants have and how many times a week these are used. In order to see how much each of the gadgets below consume per month the numbers in the table are percentages.

Table 3.5. Frequency of use of electricity gadgets

Participants	A W M	G	FP	T	M O	VC	I	FH	PH	L	SO	S	F
In Possession of	AL L	AL L	AL L	A L L	4	AL L	AL L	3	4	AL L	AL L	AL L	AL L
Number of times the gadgets used	3= 20 1-- 0	AL L =1 00	1= 20	2 = 3 0	1=1 00 3=2 0	1= 60 2= 40 1< 20	AL L =100	1= 100 2=20	3= 100 1<20	AL L =10 0	AL L =10 0	AL L =10 0	AL L =10 0

All the participants have no insulated hot water pipes and geysers. Only one of them uses a pressure cooker instead of ordinary pots. They all use AMC cookware. The number of times the gadgets are used per week is presented in percentages for example 1 = once a week = 20%, 2 = twice a week = 40%, 5 = everyday = 100%

Abbreviations of the electric gadgets in the Table 3.5 above are:

1. A.W.B. = Automatic Washing Machine
2. G = Geyser
3. F.P = Frying Pan
4. T = Toaster
5. M.O. = Microwave Oven
6. V.C. = Vacuum cleaner
7. I = Electronic Iron
8. F.H. = Fan heater
9. P.H = Panel heater
10. L = Lights (Multiple Lights)
11. S.O. = 2 - 4 plate stove alone and oven together
12. S = 4 plate stove alone
13. F = Fridge plus freeze



Final Categories of data are clustered into themes as shown in table 3.6 below.

Table 3.6. The final themes of this inquiry

THEME	INTERVIEW	OBSERVATION/ QUESTIONNAIRE
Valued Practices	The participants said: "We can not restrict our use of electricity because the home can not be home anymore. We have two geysers they consume a lot I cannot sacrifice a warm bath. I can not let my visitors not use a warm bath". "Eskom compact fluorescent light is ugly". "I can only use the compact fluorescent in the kitchen".	Q: Geysers are never switched off and they are not insulated Obs : I saw lights with multiple globes

THEME	INTERVIEW
Lack of knowledge (about certain things and the way Eskom does about this problem)	Participants comments: - Four of the participants in my study said, each "I do not know why my electricity bills are escalating" The all said (each): "I have never seen Eskom's 'Electro-Wise' booklets. I am not involved / have never been invited to attend 'Electro-Wise' Eskom training sessions. I have never been invited to attend" One of the participants said, "I do not know what Watts/ Units mean". Another participants said, "I do not trust Eskom people". Three participants said (each), "I do not trust Eskom people (referring to meter readrs) in particular. Eskom people are not visible".
Participants have a certain amount of knowledge on how electricity should be handled	One participant said, "I plug one item at a time". All the participants said (one/two), "I/We do not overuse electricity. I/We do not use electricity most of the time". All of them said, "The booklets have good information. The booklets are readable". One of them said, "I pay electricity in advance in order to avoid high bills". Four of the participants said (each), "I think a lot of people would like to have these booklets".

<p>Participants have their own views about the problem (of not using electricity effectively) and the solution thereof</p>	<p>One participant said, “We are not conversant with use of meter reading”. Direct interaction with the learner is important.</p> <p>Another participants said, “There should be some partnership between us and Eskom. Eskom people should be patient”.</p> <p>Two of the participants said, “Technology changes all the time so people need to be trained continuously on new Technology”.</p> <p>All of them said, “Demonstration of the Eskom fluorescent light should be made at the Pick n’ pay Entrance”.</p> <p>Four of the participants said, “People in the community should be empowered to read their own meters”.</p> <p>Five of the participants suggested, “Training sessions should be held in churches, meetings, public halls, on Wednesday afternoon”.</p> <p>One of the participants said, “For people who are not working, training session should be done during the day at clinics”.</p> <p>One of the participants says, “Eskom should assess what meter readers do”.</p>
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The main themes in the data above.

The respondents find it difficult to control the use of electricity in big houses especially in winter. This is basically because they are in a habit of keeping the houses warm. The respondents *value* a warm home. For them *home* is a home if it is warm.

Interpretation of bills (Accounts)

The respondents are unable to make a full and satisfactory interpretation of their electricity accounts. They all suggest they need to be properly educated about the meter reading so that they can be able to draw up their own electricity accounts. This will, furthermore, empower them in making use of gadgets, which keeps electricity costs down. The participants also emphasized that once a small group is well educated on meter reading, they can easily educate others in informal settings, for example meetings, churches, and so forth.

The participant emphasizes that Eskom also assumes that educated people in the community have pre-knowledge of watts and units, which are referred to in their electricity accounts. The electricity accounts are not interpreted satisfactorily because they are mainly estimations of what people really use.

Negotiations with Eskom

All the respondents have tried to negotiate with Eskom on the question of their high accounts. Most of them have negotiated with Eskom employees at paypoints and also with meter readers. The cashiers at paypoints and meter readers alike did not treat the respondents with respect. The respondents associate the meter readers and Eskom cashiers' bad attitude towards customers with improper training on how to treat customers.

The bad attitudes of Eskom cashiers and meter readers towards the customers is also associated with understaffing and inadequate training of the Eskom cashiers and meter readers. For example, the meter readers cannot detect faults with meters. The meter readers and cashiers are not adequately empowered in the way that they can inform the community on how to take readings on their meters. They probably need help from responsible community members.

Values

From my observation and interviews it became clear that people value comfort and beauty in their homes. For example, most of the respondents are prepared to pay for their comfort. They are also prepared to pay for warming water in big geysers.

In addition, warmth is also enhanced by beautiful lamp fittings, which take multiple bulbs. Due to the fact that fluorescent light is unattractive, it may be used in the kitchen only. If it is used in the dining room or lounge, for example, it should be covered by means of a fancy lampshade.

SUMMARY

In this section I made an effort to avoid biases assumptions and patterns of rigid thinking about the data that were collected. Strauss and Corbin (1991) emphasize the importance of keeping distance between personal feelings about an inquiry and the actual data generated. Although I am aware of the fact that I have not acquired enough skills in this regard, I tried to design and execute the inquiry, keeping in mind that at no stage should my personal experience and assumptions influence the generation of data and analysis thereof.

For Strauss and Corbin (1991) the assumptions and her patterns of thinking of the researcher can prevent her from seeing what is significant in the data. It is this advice which I kept in mind even when I analyzed data. As I was analyzing data, I kept on reminding myself of the theoretical framework, which in turn was enhanced by my reference to the research questions.

SECTION FOUR

4.1 Discussion of findings

The emphasis in this section is on the information/responses of the participants. The participants are a community because they have certain things that they share. For example, when one family has a dinner party, it is customary to the neighbours to give a hand without being asked. This kind of action symbolises the relationship, which these neighbours have.

In the regard of neighbourliness, my neighbours and I visit one another as we please and do so quite often. Hence, I have been in a position to see the type of lights, among other electrical gadgets, they have and those they have been buying over the period of ten years. During our stay of over ten years as neighbours, we have shared talks about problems we have with our electricity bills. We have never shared talks about the ways in which Eskom (as a producer of electricity) has tried to help solve this problem.

As an educator I have explored this problem from an educational point of view. I have done this by conducting interviews and also asked the participants to respond to a questionnaire in a systematic inquiry. I also observed their use of electricity informally.

The findings indicate that the participants in my study lack knowledge on how the meter (which measures electricity consumption) is read and how the units are interpreted. I think this situation is worse with people who have grown up in a culture of silence. Such people live in fear of questioning anything. Even if they are aware that something wrong is done to them, they don't question it. There are some participants in my study who specifically said they never question what Eskom does regarding meter readings.

Some participants claim that they don't know the meaning of words such as watts and units. The very same persons have never been invited to Eskom's 'Electro-Wise' training sessions. In addition, most people who are in the sample in my study have neither seen

nor heard about 'Electro-Wise' booklets or 'Electro-Wise' programmes from television and the radio.

This lack of knowledge links with what participants expressed in their views. All the participants expressed the need for education. The question of direct interaction between the learner and the trainers or teachers was emphasized in different ways. For example, most participants suggested that Eskom trainers should demonstrate physically what they teach people in the community.

Some participants have expressed lack of trust and visibility of Eskom members. This information links with their views of wanting to see training sessions done in visible, public places like churches, clinics, public halls. on the short days like Wednesday or on Sundays after the service.

All the participants in my study recognise that they need to learn, on a continuous basis, about the effective use of electricity, because technology keeps changing. They also express a dire need to work with Eskom people at different levels to solve this problem.

They would also like to see the Eskom managers assessing what the meter readers do. Assessment of work done, for the participants, is vital because it bridges the gap between the parties concerned. The participants would also like Eskom to empower them by teaching and assessing their progress. Teaching, referred to here, should focus on how to read the meter correctly and use the electricity gadgets in the manner that saves electricity.

The participants are aware that they need to save electricity. However, there are things that they value so much, that they are prepared to sacrifice for them. The findings on this link with their views that they need to work in partnership with Eskom. For example, if there were partnerships, and working relationships between Eskom and the community, probably the design of the shape of the compact fluorescent light(which Eskom has

designed in such a way that it consumes less electricity than the usual globe) would have suited the taste of the community.

The participants also assume that maybe Eskom is short of manpower. They express the idea that if that is the case, there will always be lack of communication between them and Eskom. The interpretation of the cause of lack in communication links with the view that if Eskom educates people in the community, they will be empowered to use their electricity so effectively that there will be no need for Eskom to employ a lot of people who attend to complains. They stress that the only employees Eskom would need are those who would audit, maybe once in many months, the records which the individual households make per month on electricity consumption. The two parties then work out together how much the house owner has to pay. In this way there will be no reason for house owners or Eskom to complain.

There may be a lot of tentative answers to the problem of how the question of how to teach people to use electricity effectively may be addressed. Such answers may be brought about by continuing research. In this inquiry I tried to explore how people taught to use electricity in a cost-effective manner. I argue that the existing Eskom 'Electro-Wise' programmes are not properly designed to teach people to use electricity effectively. I do this by arguing the findings in the context of community education. In my argument I start by looking at the teaching strategy. I then go on to the question of learning.

4.2 Recommendations

I think a viable programme which is meant to teach people something, takes into account a suitable strategy to teach that particular group of people, say adults, for example. I think a suitable strategy is one which implements the ideas of the authors as will be referred to in this section of the essay. The basis of the teaching strategy suitable to teach the adults in the study is emancipatory pedagogy. In a deeper sense the emancipatory pedagogy (as Paulo Freire 1972 puts it) is transformatory. In adult learning, transformatory theory is the norm.

Transformatory theory of adult learning is described by Mezirow(1990:61) as involving “an analysis of the psycho-cultural process of making meanings and how they are transformed through reflection, rational discourse and emancipatory action”. The question is, if Eskom’s ‘Electro-Wise’ programmes are not organised to facilitate the process of making meaning of what adults need to learn, then they will not be effective.

The findings don’t reveal people’s reflection on what Eskom claims to be teaching people. What is even worse is that amongst the participants in my study, there are participants who live in a culture of silence. These people do not question anything, whether good or bad. If Eskom can encourage critical reflection on what is taught, as explained by Mezirow (1990), critical reflection might help not only to break the culture of silence but also to help people deal with the circumstances from which invisibility and untrustworthiness of the meters readers originate. Furthermore, critical reflection as described by Mezirow (1990:46) is, “reassessment of assumption we have taken-for-granted, which prop up in the manner in which we think”. For example, the findings in the study show that Eskom’s ‘Electro-Wise’ seems to assume that people in the community understand the meaning of watts and units. They also assume or take for granted that people in the community would buy the lamp of any shape, no matter how unattractive, as long as it consumes less electricity. I think if Eskom’s ‘Electro-Wise’ trainers would use critical reflection as strategy to help adults learn, they would assess the taken-for-granted assumptions like the one above.

To use Mezirow’s language, ‘Electro-Wise, programmes are aimed at instrumental learning, not communicative learning. Mezirow’s explanation of communicative learning gives me the idea that an educational programme which is meant for adult learners, should be communicative in nature. Mezirow describes instrumental learning as learning which pertains to controlling or manipulating people (learners). ‘Electro-Wise’, programmes are prescriptive in the sense that only the trainer designs them. They can be regarded as designed for the above type of learning.

The trainers base the design on their own hypothesis. For example, the 'Electro-Wise' hypothesis seems to be, if the "Guide on safe and sensible use of electricity in and around the home" (Addendum 4) is fully and colourfully illustrated, it will help people learn and change. The question is, how can such programmes be revolutionary, if they, in Freire's notion of revolutionary programmes, are not a product and a process of dialogue where people in Soweto would have assumed the role of subject?

Indeed, the illustrations, colourful as they appear in booklets mentioned above, attracted the attention of the participants in my study, but there was no dialogue about how they can be used. Judging by the attention the booklets received, one cannot say that people are suddenly transformed by just looking at colourful illustrations.

The question I considered, in the following paragraph, is how people learn if learning has to bring transformation in their lives?

Eskom's 'Electro-Wise', in its effort to teach people in the community, has organised booklets and training sessions. This is an indication that Eskom is aware that people lack knowledge about the effective use of electricity. The findings in my study show that participants would like to have the booklets and learn something from them. All the participants found it easy to read most of the information in the booklets, especially the tables. They still indicate that they need to learn how to put the information in these booklets into practice so that it can change their lives in some way.

The question is how the information in booklets can be learned meaningfully if it is not designed to take cognisance of the theories of learning as transformation. Furthermore, Eskom should take people who belong to a particular area, group them and give them tasks as groups. Collaborative learning would be the norm for such groups. Again, 'Electro-Wise' then takes advantage of the symbolic nature of communities and teaches people who belong to the same area separately. Such people can easily learn through socialisation, if they are a community in Cohen's (1985) sense. I think participants' views emphasise the possibility of learning effectively in social setting.

Despite the fact that Eskom says people from the community are invited to attend training sessions, the findings in my study show that not even a single participant has been invited. One may assume that the participants in my study have their turn coming. The question is, when? Furthermore, the lack of communication links up with the notion of the culture of silence. Mezirow (1990:55) rightfully says, "Participants may be silenced by the belief that discourse cannot make a difference in resolving a problem". I think some participants in my study don't question their escalating electricity bills because they think it cannot make any difference. It is worse if they don't even see the meter readers. If, for example, Eskom's 'Electro-Wise' planners can adopt the advice that Mezirow gives, they should keep in mind the value of the transformation theory. They should also encourage dialogue at all levels. The programme should be the product of the dialogue which for Mezirow (1990:55) "proceeds in a critically self-reflective manner that aims towards more sensitive, respectful, non-dominating and non-distorting communication".

Programmes of this nature should have an input from both Eskom's 'Electro-Wise' team and the people in the community. From non-distorting communication with the community, Eskom should be able to derive ideas which can enable the 'Electro-Wise' team to draw up programmes that are suitable for different groups (depending on the groups' educational background). I say this because it emerged in my study (as one of the findings) that people may fail to project themselves if they find themselves in a group with big gaps in educational backgrounds. Furthermore, once human activity doesn't contribute to learning, the social interaction, in Vygotsky's (1978) in formulation of learning potential, obscures the zone of proximal development.

I also consider the question of self-assessment and peer assessment in a learning situation as valuable. This was also confirmed by the findings in my study. Therefore, Eskom should incorporate both self and peer assessment in its programmes. There is hardly a single sentence in the 'Electro-Wise' programme, which is meant to assess what learners, would have learned at the end of the programme. I argue for effective learning programmes. Such programmes should have room for assessment, which includes the

criteria as described by Mezirow. The criteria for assessment of learning gains in this sense:

would include context awareness, reflectivity and more effective participation in discourse and interpretations which are more inclusive, differentiating, permeable and integrative of experience Mezirow (1990:59).

These experiences and interpretations are important because they are examples of ontological perspectives of which social reality is made up. The ontological perspective of which social reality is made up of bring about the importance of the definition of community in an educational context.

The question of how Eskom regards people's membership of a community suggests the following tentative answer.

Eskom needs to recognise the characteristics of the community (as described by Cohen 1985) they would like to serve. This suggests that Eskom takes into consideration the community in terms of peoples behaviour. The findings in my study show that all the participants are in full time jobs. They are, therefore, not at home during the day. If Eskom's 'Electro-Wise' programmes are on television or radio during the day, then participants in my study miss such programmes.

Cohen (1985:19) further describes the community, as symbolic and as having boundaries. In the case of my study, the findings point out that the language and educational backgrounds as well as even the kind of lamps the people have are symbolic. As Cohen puts it, "symbols of community are mental constructs, they provide people with means to make meaning."

This description is in agreement with Vygotskian view of learning. Vygotsky's theory stresses that people construct knowledge through socialisation. In socialisation people use symbols which mark a particular community or culture. This description of the

community, gives an alternative answer to the question of how the views of the community as described above, may help Eskom's 'Electro-Wise' to target a certain group of people at a particular time.

Presently Eskom trainers train people indiscriminately. The findings indicate that if people are bundled indiscriminately for training, there are those who would fail to engage with the process and also to voice their opinions freely. Cohen (1985:19) adds that the symbol of the community "provides them with the means to express the particular meanings which the community has for them". The findings show that all the participants would like to keep their homes attractive and 'warm'. Warmth in this sense means literal warmth from heaters, and figuratively warmth in treating visitors cordially, and by keeping warm water from the geysers and decorate houses with attractive lamps.

All the participants'(in my study) geysers are not insulated and the owners realise that they consume a lot of electricity. The question is how can people who are aware that much as they would like to keep their homes 'warm' and at the same time save electricity, fail to co-operate in endeavours to save electricity? The tentative answer to the question of how Eskom can take advantage of the symbols, which make a community, lies in how much Eskom takes advantage of the symbolic nature of the community. The people in this community clearly would not like to be educated randomly and indiscriminately.

By so saying I mean the 'Electro-Wise' team should be quite conversant with the meaning of Community Education. I think it is imperative for all people who claim to be community educators to define the community they intend educating and to employ the accepted learning theories they use in educating that community. This means that adult education specialists should assist in writing the materials and designing the curriculum for the workshops.

Eskom and Soweto residents need to establish a relationship which will enable them to co-operate in matters which relate the effective use of electricity. This can be done if

Eskom's 'Electro-Wise' team takes the trouble of following Vella's (1990) steps (principles) when they embark on educational programmes. (These principles are: safety, action and reflection 'sound relationship, sequence and reinforcement, learners as subject of their own learning, learning with ideas, feelings and action) If they consult critical adult educators they will be able to understand this issue of transformation. Vella's theory stresses that the needs of the community should be defined and assessed by them in collaboration with the teacher in the atmosphere of trust and caring. Vella also stresses that the learners be involved in the design of a learning strategy.

The Soweto residents would express their sincere concerns about the lack of relationship, and visibility of meter readers. People should make it a point that it becomes clear to Eskom what they would help with and how, when and at what time they can be available for training. People need to suggest to Eskom how they would like the booklets to be distributed. People who have the time can suggest to Eskom how they can help to train other people in their areas. For example, street training needs a lot of manpower and dedication. Booklets at paypoints do not equal education and development, but only provide information.

The people of Soweto should also suggest the time that will be suitable for the Eskom personnel to come and discuss with them the strategies for assessing what has to be done. The conception of a training programme has to be mutual. The sample I have investigated should come together and define their needs in as far as effective utilisation of electricity is concerned.

They should also be in a position to listen to problems Eskom encounters in trying to help people learn how to use electricity effectively. This will help the participants to make sure their views are not overambitious. They should show sympathy and show willingness to trust and improve the element of trust on the part of Eskom's employers and personnel alike.

They should come up with innovative ways of assessing the needs people have concerning the effective use of electricity. People I have investigated will go all out to encourage continuous dialogue with Eskom at appropriate levels and also encourage mutual trust and caring. I allude to the fact if Eskom's 'Electro-Wise' should meet Soweto residents, especially the educated community and share with them ideas and views on how educating people in Soweto to use electricity effectively should be done, they would achieve a higher success rate. This session should be the way Vella (1994) advises in terms of how Eskom should approach Soweto residents. The steps which Vella suggests should be followed to the minute by Eskom's 'Electro-Wise' trainers.

Therefore, Eskom's policy of community education in terms of the effective use of electricity should be the policy of the people. The policy should be as suggested by Allen and Martin (1985). Allen and Martin stress that the policy, which works, is the people's policy. People's policy is negotiated with the people on the ground. Once the policy is accepted, the learning programme may follow. When it comes to learning, research needs to be done on how effective learning programmes are drawn.

4.3 Conclusion



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The argument presented here seems to point out that in terms of Community Education there can be no suitable programmes to help educate people in Soweto to use electricity effectively, if principles like those propounded by Vella (1994) are not included in the planning. It therefore suggests that Community Education programmes should be driven by the communities themselves. However, this is unrealistic because not all members of the community know what they need in terms of education.

The question then becomes how best can the community be educated on how to use electricity effectively. The answer was alluded to earlier: The steps towards teaching and learning as well as the policy making which directly affects this should be negotiated. The community and Eskom need to establish some mutual relationship, trust and some sense of responsibility towards the welfare of each other before they engage in the

process of teaching and learning. Even uneducated members of the community will require this “prior and concurrent relationship if everyone has to make meaning of one’s experience through equal opportunity to participate democratically” in dialogue Mezirow, (1990:61).

This means that the programmes in community education specifically to educate people how to use electricity effectively have to be based on an ethic of caring for one another. To rephrase Vella’s (1994) words: caring for people you deal with takes precedence over the amount of knowledge you have of the issue. Mutual caring of the parties involved establishes rapport (bond) between them.

Again, the best way to help people in the community understand or be oriented towards saving electricity is to expose them to the natural resources (for example. coal) which supply their own area. In this way, I think the exposure and knowledge about non-renewable resources will become the foundations for suitable programmes to educate people to use electricity in a cost effective manner.

The question on how to design suitable programmes to educate people to use electricity effectively and tentative answers to that are my way of continuing inquiry. I will conclude by saying that the inquiry regarding the suitable programmes referred to above, need to be based on Vella’s (1994) principles described in the recommendations.

4.4 Summary

In this final part of *Section Four* I conclude this study by attempting to consolidate what the inquiry comprises. The discussion of findings in the previous section shows that the participants in my study are concerned with the lack of partnership between what Eskom’s trainers do and themselves. In their views it is this lack of partnership, which precipitates the problems which they encounter which the use of Electricity.

I began this essay by saying that its purpose is to investigate a selected sample at Orlando West in the effective use of electricity. I am aware that Eskom through 'Electro-Wise' programmes, is attempting to address the problem of effective electricity usage. My focus was therefore on the investigation of how the selected sample handles electricity and what skills they have acquired from 'Electro-Wise' programmes, if they had been involved in them.

I tried to show that the investigation mentioned above, if done in the context of community education, might be interesting, challenging and that it is very important. I think the most interesting and challenging part of the investigation is the attempt to argue for a grounded theory on which community projects, of which 'Electro-Wise' is one, should be based. This theory would direct and inform, for example, Eskom's programme designers on how to design a programme for adult learners.

I selected the theories of Vella (1994), Paulo Freire (1972), and Mezirow (1991) to form the basis of the argument for a programme of adults which is informed by adults themselves. All these theories postulate the importance of critical dialogue and reflective procedures in drawing programmes for adults. I think the arguments (or debates) in this regard continue to be topical as well as long running in response to the demands of critical dialogue among trainers and trainees, in which life long learning and transformation are embedded. It is in this regard that the above theories I regard as making a valuable contribution to the design of adult, nonformal learning.

In order to substantiate the argument of the importance of the theory directed approach I did a field inquiry. I started by choosing the design of the field inquiry. Then I selected the participants and chose the instruments for generating data, which had to do with the effective use electricity, for the inquiry. I did this according to the guidelines given by Mason (1997), Booth *et al* (1997), Patton (1987) and Le-Compte and Goetz (1993). In addition I used Le-Compte and Goetz's (1982) guidelines for generation and analysis of data. I think it was useful to take guidelines which insists on the importance of more than one instrument to generate data, because in analysis thereof the instruments can be

triangulated (Denzin 1978) in Todd (1979). For Todd, triangulation increases the validity of the study.

For the purpose of validity in my study, I felt it was unsatisfactory to use one method and do away with triangulation of more than one method. The reason for opting for more than one method was that I did my study under terrible pressure and also within short space of time.

The data, which I generated, using more than one instrument, were processed, using open and axial coding as suggested by Strauss and Corbin (1991). The information which emerged from data processing and analysis informed the recommendations which I made.

The recommendations suggest further research on how 'Electro-Wise' programmes should be designed. It seems to me that the same recommendation should be adapted for the design of many of the adult teaching programmes, on condition that the designer defines the community as symbolic and having boundaries (Cohen 1985) or takes into cognizance the criteria for construction of a community (Sergiovanni: 1994).



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ADDENDUM 1

Guided interview questions

1. (a) How do you handle your electricity at home. Ideas and beliefs on how to handle electricity effectively?
(b) Does the method you use to control careless use of electricity helps you to get the bill you anticipate? Judgement made.
2. (a) What matters have you negotiated with Eskoms in terms of electricity usage?
(b) What do you think is important to negotiate with Eskom in terms of effective use of electricity?
(c) Tell me more about the kind of training you suggest Eskom should use.
3. How so you control electricity consumption in your house?
4. What are your comments about the card system
5. Scan through the 'Electro Wise' (programmes) booklets and comment about them.
6. Have you ever seen any of the booklets or been invited to Electro Wise Training session?
7. Have you ever seen or read any of the booklets or Eskom news letters?
8. How should Eskom run programmes which are available? say what you think Eskom should do?
9. Continuee making comments as you go through the booklets one by one.
10. In your opinion, can consumers be helped realise that there is a fluorescent light which saves electricity

ADDENDUM 2

QUESTIONNAIRE

1
Make a cross through the gadgets you have in your house. Also indicate how often the gadget is used by making a cross in the appropriate space on this sheet. Match the numbers with usage

e.g.

Automatic washing
Machine

Per week

1= once

2= twice

3= three times

4= more than three times

5= everyday

1. Automatic washing
Machine

1 ~~2~~ 3 4 5

2. Geyser

1 2 3 4 5

3. Frying pan

1 ~~2~~ 3 4 5

4. Toaster

1 ~~2~~ 3 4 5

5. Microwave oven

1 2 3 4 5

6. Vacuum cleaner

1 2 3 4 5

7. Iron (600 - 200)

1 2 3 4 5

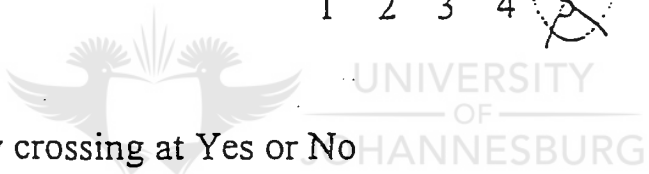
8. Fan heater

1 ~~2~~ 3 4 5

9. Panel heater

1 2 3 4 5

10. Freezer 1 2 3 4
11. Panel heater 1 2 3 4 5
12. Light 1 2 3 4
13. 2 - 4 plates and oven together 1 2 3 5
14. Stove 1 2 3 4
15. Fridge 1 2 3 4



Answer by crossing at Yes or No

- (a) Are your hot water pipes insulated? YES/ NO
- (b) Is your geyser insulated? YES/ NO
- (c) Do you know the maximum temperature of your geyser thermostat?
YES/ NO
- (d) Is there enough space around your refrigerator to allow free circulation?
YES/ NO
- (e) Do you use an energy saving switch in your refrigerator? YES/ NO
- (f) Do you use the pressure cooker quite often instead of ordinary pots
YES/ NO

ADDENDUM 3

INTERVIEW 4

Mimmy has been one of my neighbours for more than 10 years. Mimmy Ramafoko was interviewed in her house on Sunday 13/09/98 afternoon for about 2 hours. Ms Ramafoko works for Old Mutual as an insurance broker. So she doesn't stay at home most of the time during the days of the week. She doesn't drink nor smoke. She stays in a six-roomed house with a garage detached/separated form the house.

The interview was tape recorded using dictaphone. The types of lights used were observed. At the end of the interview the survey questionnaire was filled by the interviewee. Ms Ramafoko is not at home most of the time of weekdays.

in each case + care

How do you handle electricity in this house?

A.H.P.
"I don't know, the highest amount I have ever paid is R300.00. My bills are controlled by the fact that I pay in advance. I know that my bills are mainly estimations, which are unfair. I try to keep them low by paying whether I receive the statement or not. I often listen to 702 adverts starting at 7h30. I get tips."

What would you suggest should be done in order for you to feel that what you pay is fair?

T.F.E.
L.K.U.
"I would like to be educated to read my won meter. In doing so I can be able to estimate how much I use every month. (For now I don't check any units.)"

How should people like yourself be educated about matters which relate to how they need to use electricity?

L.T.C.
"I know it is difficult to teach adults. (People can be educated in meetings.)"

What is your comment on the use of the card system?

"The card system is problematic. (People at Protea Glen use it and they complain a lot.)"

Scan through ElectroWise booklets (Living with electricity) and make your comment about it.

L.O.C.
R.U.E.L.
L.B.K.
"The booklet has good programmes but I have never seen one. If I knew there were such programmes, I would have asked for one. Other people would also ask for such programmes. For example I didn't know that when pouring water into a steam iron I have to unplug it. Even changing the bulb I didn't know that I need to switch the main switch off. I don't know how to wire a plug. I'm so scared of electricity. I don't even want to try."

What is your comment about ElectroWise booklet called "Focus in electricity in and around the house?"

LU EL "Focus on electricity in and around the house is a good booklet. It has a wonderful chart. It is very educative. The only problem is that one doesn't know where to find such programmes."

Eskom has introduced a Compact Fluorescent Lamp which is available at Pick 'n Pay Stores. Have you ever heard about it as compared to ordinary bulbs?

"No. In fact, I never check bulbs and compare them. I just buy."

Read and look at the picture and make your comments about it.

EA MY SE "I would like to try it. I'll go to Pick 'n Pay and buy this fluorescent light."

In your opinion, how can Eskom facilitate or speed up the process of helping people get to know the value of using the fluorescent light instead of ordinary globes.

MFC "Eskom should advertise on T.V, radios and also demonstrate this light at Pick 'n Pay entrances so that people can actually see the difference between this light and other bulbs. Eskom should also use Sowetan and other media to advertise the fluorescent bulb."

How do you save on your electricity generally?

SEA "I don't use the panel heater unless I have visitors. I know that the geyser uses a lot of electricity, but I can't sacrifice a warm bath. I can't also let my visitors not use a warm bath."

V. P.