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The impact on current and former learners of an ABET programme run at Duvha Power Station

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A research report submitted to the school of Education, Faculty of Humanities, University of the Witwatersrand in part fulfillment of requirements for the degree of Master of Education.

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Abstract

This study evaluated the impact on learners of Adult Basic Education and Training (ABET) programmes at Duvha Power Station. The methods of collecting data comprised face-to-face interviews, on-site participant observation, classroom observation and document analysis. The underlying assumption was that ABET programmes did not have a positive impact on either the company and individual candidates, and that they were only provided to comply with the legislation and not to develop and empower people. What emerged from findings was that ABET programmes had a major impact on the company and on the individual candidates, in their homes and communities. The findings, however, also revealed weaknesses and challenges in ABET level 1 that need to be addressed i.e ABET level 1 respondents showed no further interest in participating in the programme citing advanced age, learning being for youth, difficult sums etc, as some of the reasons.

Key words: Adult Basic Education, Literacy, Workplace training, Development, Democracy, Empowerment, Lifelong learning, South Africa

Declaration

I declare that this report is my own unaided work, it is submitted for the degree of Master of Education at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

…….
M.P.Shelile

…… day of……2005

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Chapter 1: Introduction

Research context

Eskom is a parastatal company, that generates and distributes electricity to all parts of South Africa and neighbouring states. Electricity is generated by fossil, nuclear and hydropower stations that are scattered all over the country. These power stations are called business units. Each business unit consists of a number of departments and disciplines which ensure efficient and constant electricity generation and supply to customers.

Duvha Power Station is situated just outside Witbank in Mpumalamga Province. It is one of the biggest fossil fired power stations in the world. Most of the employees on the shop floor are illiterate or semi-literate. They were recruited from all parts of rural South Africa to do manual work such as cleaning, digging and sweeping. They rely on their physical strength for their employment, and most live in nearby hostels in order to be close to their workplace. The majority, if not all, have been working for Eskom for many years. Most spent little or no time at school in youth due to Apartheid's education system.

Apartheid's Bantu Education

Bantu Education in the Apartheid era caused untold damage to the country as a whole.

> Bantu education produced stereotyped, uncreative, inefficient, and dependent learners. This system denied many people access to opportunities to gain the information, skills and experience necessary to develop themselves and make the country's economy grow.
>
> (Learn and Teach,1991:11)

> The Apartheid education system fragmented education and training into different ethnic and racial sub-systems with unequal allocation of resources. This resulted in poor quality education in black schools, and condemnation of millions of adults to illiteracy, effectively limiting the intellectual and cultural development of South Africa.
>
> (Government Gazette,1995:Vol.375)

According to Orkin (1998), the 1996 census found that there were nearly 4.1 million adults aged 20 and over (19% of all adults) with no formal schooling. There were over 8,5 million adults aged 15 or older (32% of such adults) who had less than seven years of schooling. Christian National Education and Bantu Education did not promote the idea that people should think analytically, or be critical and creative. In this system, learners were not encouraged to come up with new ideas or to control their situations and lives. Many people were left out of mainstream education and many more dropped out.

> In situations where people did attend school, the system of syllabi, examinations, authoritarian methods of teaching, rote learning and overcrowding in the schools meant that the learning was neither stimulating nor encouraging. Corporal punishment was common. Children were ridiculed, insulted and abused at will by their teachers. As a result, apart from those who had not been to school at all, most people were forced to leave school after four years with limited ability to read and write in their own language.
>
> (Mckay,1992:5)

Bantu Education tried to control what people learnt by deciding what to include in syllabi, and more importantly, what to leave out. The underlying ideology, organisation and financing of the system did not, in any way, encourage the development of critical, logical thinking and problem solving skills. Most participants in this research are products of Apartheid's Bantu Education system.

Adult Basic Education and Training (ABET) has been defined as “the general conceptual foundation towards life-long learning and development, comprising of knowledge, skills and attitudes required for social, economic and political participation and transformation applicable to a range of contexts" (Department of Education, 1997:12).The term 'Adult Basic Education and Training' or ABET " subsumes both literacy and post literacy as it seeks to connect literacy with basic (general) adult education on the one

hand and with training for income generation on the other hand"(1997:7).

ABET Provision at Duvha Power Station

Candidates attend ABET classes full time on site. There are four ABET levels and learners must obtain accreditation for one level before moving to the next. Through the recognition of prior learning, learners are assessed for placement in the appropriate ABET level. Competency levels and standards are set by the Independent Examination Board (IEB). Classes start from “Mother tongue” (pre-ABET) to ABET level 4, and each class runs for three months on a full-time basis with six hours of contact daily.

Mother Tongue is designed for people who never went to school. It consists of writing and reading in Zulu or Sotho. ABET level 1 and 2 concentrate on basic literacy and numeracy moving from Mother Tongue to English. ABET levels 1 and 2 also include the development of generic core competencies through literacy and numeracy, providing a foundation for lifelong learning. The standard set for ABET level 2 is equivalent to five years of formal schooling or grade 5 (formally standard 3). ABET level 3 is equivalent to seven years of formal schooling or grade 7 (formally std 5). ABET level 4 is equivalent to ten years formal

schooling (formally std 7).

On completion of each ABET level, certificates are awarded to successful candidates. Candidates can either be recalled to their respective workstations, continue with the next ABET level or repeat the same level. Upon completion of either ABET level 3 or 4, Recognition of Prior Learning (RPL) is effected to assess the level of knowledge and skills accumulated formally and non-formally through the years on the plant. That is then matched against the appropriate ABET level for purposes of competency declaration. Instead of doing ABET level 5, candidates are sent to a technical college to complete Pre-N1 courses e.g. maths, science, power station theory or drawing and power station electricity in order to prepare them for relevant technical qualifications.

While employees attend at ABET classes, their responsibilities at work are covered by other workers on overtime pay. About 300 employees have gone through ABET programmes between 1995 and 2003 and only ten employees dropped out of them.

Statement of the problem

Duvha Power Station started to provide ABET programmes on

site eight years ago. Candidates leave their work environment to attend classes. The programmes are provided by an external supplier (Mogolo Academy). The company has spent over seven million rand on this effort since its inception. There has never been a study to assess or evaluate the impact of ABET programmes on the company or on individual candidates' social and economic lives. No evaluation has indicated whether ABET programmes meet their intended objectives, whether they justify the time and money spent by the company and whether programmes succeed in developing and empowering employees.

The research aims

The aim of this study was to evaluate the impact of ABET programmes at Duvha Power Station (i.e. in the work place, and in the extended arenas of individuals' homes and communities).

The focus of this study was on employees who attended these programmes between 1995 and 2003. Participant's views and feelings about attending ABET programmes were an important element and a pivot around which this study revolved. This involved:

1. Assessing the candidates' performance at the workplace after going through ABET programmes and

investigating the possible practical application of knowledge acquired from ABET programmes to the work environment i.e :

- Written English by examining plant reports (state of plant reports, occurrence reports and plant deviation notifications).
- Verbal communication in English between the supervisor and former ABET learners through direct observation (verbal/telephonic reports, verbal work instructions to subordinates).
- Numeracy by looking at log books or deviation sheets (addition and subtraction to determine pump running hours, water usage, ash and dust disposed).
- Completion of leave forms by looking at files (leave forms for employees).
- Reading and understanding of pay slips(earnings, deductions, benefits, hours worked/not worked and over-time).
- Holding of work team sessions (work plans, work allocation, monitoring, feed back and recording).

- Investigating promotion opportunities after ABET programmes.

Motivation for the research

My philosophy and ethical beliefs are modelled on the progressive school.

> Progressive literacy organizations believe that literacy is more than reading and writing. Literacy means developing critical thinking, and deepening the understanding of how society works, and participating actively in social change. This kind of literacy approach could be a powerful tool for developing a participatory democracy in South Africa.
>
> (Learn and Teach, 1990:25)

In this model, development is through practical problem solving and experience. Learning is built on people's experience and needs. Meaning is created through concrete facts and inter-relationships.

My philosophy is also influenced by my upbringing as an African growing up in a country where *Ubuntu* was threaded into our way of life. I understand *Ubuntu* as a cultural act of transformation and growth, which is inculcated in the individual and the community through the spirit of brotherhood, in which people offer each other their thoughts, words and deeds. I view it as an effort effected towards the formation of the new man and the new woman; brotherhood inspired by goals of community service rather

than by individual gain. It is motivated by values and attitudes such as sacrifice, humility, love, discipline, co-operation, creativity, hard work, and a critical consciousness. Ubuntu is about human value and social justice.

My philosophy has some degree of radicalism.

> ...every human being, no matter how 'ignorant' or submerged in the 'culture of silence' he may be, is capable of looking critically at his world in a dialogical encounter with others. Provided with the proper tools for such encounter, he can gradually perceive his personal and social reality as well as the contradictions in it, become conscious of his own perception of that reality, and deal critically with it.
>
> (Freire,1972:12)

More than forty percent of the South African population is functionally illiterate. The majority of citizens are steeped in poverty and ignorance, and there are limited resources for literacy/ABET efforts. A large percentage of the population is unemployed. Diseases such HIV/AIDS and death due to criminal violence are rampant. People must be encouraged to think and act responsibly with awareness of their actions on others, and also get involved in community projects to learn, teach others and to survive.

Formal, informal or non-formal literacy awakens and conscientises people. People are resources themselves, and

they should not wait for the government to come up with solutions to their problems. "A peasant can facilitate this process for his neighbour more effectively than a teacher brought in from outside. Men educate each other through the mediation of the world"(Freire,1972:13). In situations like the South African one, radical literacy efforts could create a solid foundation for progressive further education, and attitudes of dependency and entitlement could become ones of the past.

Assumptions

As an Education Training and Development (ETD) practitioner in a workplace training environment, my informal assessment of the Duvha literacy initiative was that the impact of ABET programmes on both the plant and the lives of the participating workers was not great, as anticipated by stakeholders (i.e. management and trade unions). My assessment was based on plant performance reports that suggested incompetence or lack of necessary skills as the root cause of auxiliary plant associated problems e.g. load losses due to maloperation of plant auxiliaries, operational errors due to lack of proper communication, slow response to warning alarms, lack of problem solving skills, lack of writing and reading skills etc.

My assessment was also based on informal discussions with trade union leadership on career progression and workers developmental issues on the labor front. Trade union leadership saw ineffective ABET programmes on site as one of the main reasons for the slow career progression and workers development in general e.g. some learners come back from ABET programmes and perform the same tasks as before they participated in these programmes etc. The discussions and plant performance reports formed the basis for my assumption that ABET programmes at Duvha Power Station fall short of satisfying the seven critical cross-field education and training outcomes set out in national education policy. The critical outcomes are as follows:

1. Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made.

2. Work effectively with others as members of a team, group, organisation, and /or community.

3. Organise and manage oneself and one's activities responsibly and effectively.

4. Collect, analyse, organise and critically evaluate information.

5. Communicate effectively using visual, mathematical and /or language skills in the modes of oral and /or written presentation.

6. Use science and technology effectively and critically showing responsibility towards the environment and health of others.

7. Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

(Department of Education, 1997)

The importance of this research

This study is very important in that it gives an indication as to whether ABET programmes at Duvha Power Station are meeting their intended objectives. As the first documented, formal evaluation with regard to ABET provision, this study could be used for reference purposes in this field in the future. The findings could be used for organisational development purposes to monitor ABET's effectiveness and human resources possibilities on the shop floor. The outcome of this study should spark debate and dialogue among stakeholders e.g. trade unions, management, ABET providers and participants.

Chapter Two: Literature Review

South Africa is committed to developing the social and economic capacities of all citizens in order to become actively involved in the development of the country. "The primary focus of Adult Education and Training (ABET) is to introduce a culture of learning and provide the foundation for acquiring the knowledge and skills required for social and economic development, justice and equality"(Department of Education, 1997:7). A large percentage of the population is illiterate or semi-literate. Without literacy, or some form of basic knowledge and skills, it will not be possible to prepare people for the great challenges that national reconstruction demands.

In this chapter, I intend to show, and argue for, ABET as a transformational tool and a catalyst towards development and empowerment in communities and work places. I have drawn in views, observations and arguments from theorists such as Bowman, Freire, Jarvis, Bhola, Sanctis, Hall, Scultz,Mchlup, Castleton, Fingerlind, Dinison, Becker, White,Timori, Westrand and Durkheim. The following themes will be reviewed in the related literature:

- ABET's transformative power

- ABET and lifelong learning
- ABET and the workplace
- ABETs’ links with development and democracy
- ABET and empowerment
- ABET and poverty eradication
- Literacy in other developing countries
- Literacy in West Africa and Uganda

At the top of the present government’s agenda is redress of past injustices and ensuring opportunities for all members of society to develop academically and in terms of skills. Global pressures are mounting and South Africa needs to attain a competitive edge in a world that has now opened its doors to us. South Africa will have to ensure that its workforce is flexible and that skills mastered are market related. The complexity of work in a power station necessitates workers to have full understanding of technology and the tools it offers.

Apartheid education system

The Apartheid system used both education and training to either exclude or systematically undermine the advancement of a large proportion of South African society. The present government sees Adult Basic Education and Training (ABET)

as "an essential component of reconstruction, development and transformation of South African society" (Final ABET draft, 1997:7). The Bill of Rights in the Constitution of South Africa (1996) enshrines the right of all citizens to basic education, including adult basic education. The White Paper on Education (1995:23) clarifies that "the right to basic education applies to all persons, that is to all children, youth and adults".

National Qualification Framework (NQF)

The South African Qualification Authority (SAQA) was established to oversee the evolutionary and participatory development of the ETD. Providers seek recognition for their programmes in terms of defined unit standards to enable learners to earn credits that culminate in a national qualification. A unit standard is a registered statement of desired training outcomes and their associated assessment criteria together. It is the smallest part of a national qualification for which a person can be awarded a certificate. The level assigned to a unit standard or a qualification will be based on the complexity of learning. NQF has eight levels. Levels one to eight are open ended, and this means that learners can enter level one at any point in time and can exit level

eight at any point in time. This framework makes it possible for one to progress horizontally or vertically on the NQF. Learners can progress upwards in the same field i.e. acquiring a unit standard or a qualification on NQF level two, then level three, and then level four in the Education Training and Development field. Alternatively, they can progress sideways in different learning field i.e. acquiring a unit standard or a qualification on NQF level two of the ETD field and then on NQF level three of the management field.

In terms of this framework, ABET levels are recognized and credits are given in terms of national core standards at various levels within a unified system of qualifications (Phillips, 1997:16). Qualifications are comprised of a combination of fundamental, core and elective unit standards. Fundamental unit standards form the grounding or basis needed to undertake the education, training or further learning. Core unit standards refer to compulsory learning require in situations contextually relevant to the particular qualification, and elective unit standards are a selection of additional credits from which a choice may be made to ensure that the purpose of the qualification is achieved.

The combination of these unit standards in a qualification ensures the vision that a qualification should contribute towards full development of the learner and to the social and economic development of the nation at large. It should thus not only prepares a learner for a particular job, but also facilitates entry to opportunities for lifelong learning.

The advantages of this is that people, by and large, enjoy the social recognition of certification and feel a sense of achievement when they move up the ladder. This also improves chances of promotion and opens up opportunities in their working lives. This framework, links literacy with practical ways of improving people's lives. The functional approach teaches people about issues which directly relate to their own living and working conditions. Literacy work feeds into the economic and developmental policy of the country. It is important to remember that the skills of reading and writing are not of much use if they are taught in a vacuum. My views and those of my colleagues involved in the ETD practice in the workplace, especially at Duvha, is that literacy must be integrated with vocational training or productive, self-reliance work projects.

ABET's transformatory power

ABET for youth and adults is a pre-requisite for a truly democratic society because it prepares people for full and active social participation.

> In a democratic society, people need access to information on which to base their choices, and the confidence to participate in decision making structures. This point to a close relationship between democracy and literacy: it is not easy to truly democratize society if large sections of the population are illiterate.
>
> (COSATU Education Conference, 1989)

I see ABET as a transformative effort that could result in widespread growth by awakening individuals to take action, responsibility and control over their lives, moving from resignation, ignorance and subservience to active involvement in productive social and economic activities. Literate people are better equipped to claim and defend their rights, to insist upon accountable government and participate in democracy. In this sense, ABET is not just a fundamental human right, but an enabling right which unlocks a wider set of civil, political and economic rights.

Bowman, et al (1973) argue that there are ways to improve the economic productivity of society without literacy. They give an example of the agricultural sector where input can be increased through basic innovations and technology like

fertilizers and irrigation. I would like to argue that Bowman et al's position increases the outcome of the effort at hand, but it does not develop the people involved. For people to know how to use new technology, they will need some form of literacy e.g. reading operation manuals and understanding or knowing how to mix new fertilizer by reading the instructions supplied on the product. Otherwise, without the farmer present, there will not be work; there will not be production. That is not development, nor is it empowerment.

I believe that in any educational programme, it is important to have clear objectives in mind and to work towards them consciously. Functional literacy for tobacco farmers aims to raise their productivity while at the same time teaching them to read. Health education for slum-dwellers in Lagos, Hillbrow, Abidjan or Marabastad aims to improve personal well-being and cleanliness of the environment. These examples also carry a further lesson. An effective educational programme must be directed towards a specific learner or group of learners with the clear objective of addressing their needs.

ABET and lifelong learning

ABET is supposed to lay a foundation for lifelong learning.

One of the main principles of lifelong learning is the forging of links between learning and work, so that the place of work becomes a place of learning. The key notion in lifelong learning is that all individuals ought to have organised and systematic opportunities for instruction, study and learning at any time throughout their lives. This is true whether learners goals are to remedy earlier educational defects, to acquire new skills, to upgrade themselves vocationally, to increase their understanding of the world in which they live or to develop their own personalities. In this framework, ABET is basically seen as serving to facilitate personal development throughout life, in the broadest sense of the term 'development'.

> An increasing need is seen for innovative knowledge, in which present knowledge will serve as the basis for the continuous process of further learning and re-learning. Human learning is a lifelong process. One which has acquired greater significance as the speed of change in society has increased so that its members are almost compelled to keep learning in order to remain members.
>
> (Jarvis,2002:35)

Lifelong education rests on the belief that learning occurs throughout life, albeit in different ways and through differing processes. Cropley (1970) argues that within any given person, ideas, feelings, attitudes, values, motives and self-image become stable as the person develops. Each

individual's behaviour becomes relatively consistent.

> Learning is something that takes place all the time, all activities involve learning, it is not limited to an official setting in a classroom. We change throughout our lives, and as children, adults are constantly learning.
>
> (Jarvis, 2002;34)

I agree with Jarvis that learning should be about knowledge acquisition, change, progress and prosperity. I also believe that learning should take place all the time through life experiences and not be limited by time or place.

ABET and the workplace

The workplace is enormously significant as a site of learning, both for accessing formal learning opportunities and for many informal learning opportunities which result from the nature of work and social interaction within work groups. Adult Basic Education and Training (ABET) at work could be a catalyst towards acquiring the knowledge and skills required for personal, social and economic development.

> Literacy and the political economy of a society are in a dialectical relationship, each affected by and affecting the other. ....Literacy work is never too early since it is "potential added" to individual new literates, to their families and to their communities.
>
> (Bhola et al, 1991 :19)

Kirby (1997)observes that employees habitually produce knowledge during their daily work. They produce solutions to solve their work related problems and they improve their skills. They try out new modes of production and at the same time better their situations.

> Just as working is a part of education, so learning must become an integral part of working and people must learn as and where they work. It is therefore essential that workplaces become places of education as well as of work. If we are to make real progress in adult education it is essential that we should stop trying to divide up life into sections: one for education and another, longer one, for work with occasional time off for 'courses'. In a society dedicated to change, we must accept that education and work are both part of living and we should continue with both until we die.
>
> (Nyerere,1990:21)

ABET is no different from other developmental programmes for workers. It needs constant monitoring and adjusting in order to suit economic, societal and individual interests and contexts. I hold that a trained workforce could contribute towards better quality products as well as deliver higher productivity rates. It could lead to economic growth that, if equally distributed would enhance economic development.

ABET at work is a form of investment in human capital. "Learners are empowered through the acquisition of skills as well as knowledge. Skills are for life, knowledge

is relative and changes" (USWE,1986:42).

ABET, development and democracy

Development processes contain many complexities and the reason for this is that development is not about addressing individuals' needs, but is about developing human beings as a whole and transforming their total life, freeing them from poverty and oppression. According to Swanepoel et al (1996) development influences the context in which it is taking place, but it is also influenced by the context in which it is taking place.

According to May (1998) our understanding of development has changed over the years, and so have the indicators to measure development. Measures such as the minimum per capita calorie intake, the literacy rate, the fertility and mortality rate, and life expectancy remain important, however the Human Development Index (HDI) has been compiled by the United Nations Development Programme (UNDP) to try to measure development in a more integrated and holistic way. The HDI comprises three factors: life expectancy, educational attainment including literacy and standard of living. The UNDP gives a country a mark on a scale between zero and one. The closer to one, the higher the development of that country, and the closer to zero, the lower the

level. Countries with an HDI below 0,5 are considered to have a low level of human development, while those with HDI above 0,8 have a high level of human development. South Africa ranks number eighty six (86) in the world with a Human Development Index (HDI) OF O,677. This compares South Africa with countries like Botswana, China and Paraguay.

These statistics suggest that South Africa needs to intensify its development efforts, and it is for this reason that I stress the importance of ABET in laying a solid foundation for real development initiatives. Development should not be seen simply as higher income and economic growth; it is also about social development, cultural development, political development and organisational development. ABET therefore needs to encompass all situations by being integrated and holistic in trying to address all needs in a balanced and sustainable approach.

Development should lie at the heart of all programmes of adult education. At the centre of this view, should also lie the concept of adulthood which stresses not only the development of the full potential of individuals, but also the person’s ever increasing autonomy.

ABET could be a key component in the development of individuals, communities and nations. ABET could also conscientise people and build their political, social and cultural awareness. According to Freire (1972) conscientisation is brought about by education, and training that encourages people to apply their own knowledge to the context they find themselves in, and be reflective about what is happening around them.

Sanctis and Hall (1985) argue that good educational programmes can never be instrumental in bringing about social change. They argue that the relationship of adult education to struggle, to social change, to the improvement of distribution of wealth and resources amongst all classes is one of integral support....not instrumentality.

> A political view of adult education would not allow for a conclusion that adult education, or in fact any education alone, is an instrumental factor in changing society.
>
> (Sanctis,1985:113)

I argue that ABET as the basis for development and lifelong learning, plays a pivotal role in further learning of individuals. This is because in its advanced levels (e.g. ABET 4) it links specific skills development training within various disciplines. For example, on completion of

ABET level 4 i.e. maths, science, technology and communication, learners can proceed to Pre-N1 and then to N1,N2,N3 etc.

Throughout these programmes, the learner's success depends on his/her foundational knowledge. Learners cannot complete ABET level 4 maths without ABET level 3 maths mastery, and cannot enter N1 maths without pre-N1 mastery. In this way, ABET becomes not only an integral part of social change, but an instrumental component also.

ABET and empowerment

> ...Every human being, no matter how ignorant or submerged in the culture of silence he may be, is capable of looking critically at his world in a dialogical encounter with others. Provided with the proper tools for such an encounter, he can gradually perceive his personal and social reality as well as the contradictions in it, become conscious of his own perception of that reality, and deal critically with it.
>
> (Freire,1972:12)

Schultz (1961), Mchlup (1970) and Freire (1972) oppose the notion that education is *sine qua non* to a better life, empowerment, enlightenment and socio economic freedom. They argue that it is not necessarily true that education always results in better lives for individuals and communities, due to the fact that it could be education for consumption which does not effect socio economic mobility in the

community or effect change for the better. It could be education for the sake of education that does not address socio-economic issues at the ground level.

Freire (1972) argues that literacy or any educational effort can never be neutral. It can either be an effort to liberate people or to domesticate them; it can either lead people to accept their world as it is, or to change that world.

Schultz (1961) argues that although it is obvious that people acquire useful skills and knowledge through workplace programmes, it is not obvious that those skills and knowledge are a form of capital. He argues that the skills acquired cannot be justified as a product of deliberate investment without translating production activities into economic capital.

Mchlup (1970) puts forward the view that meaningful participation in the labour force and gainful employment may be negatively associated with educational attainment. He sees this being the case in economies which do not provide job opportunities desired by people who have become too educated to work as common labourers.

I would like to argue that in South Africa, the Apartheid

education system provided unskilled labourers, economically and socially immobile citizens and at the same time, justified unequal power relationships. It deliberately encouraged passivity and subservience. To reverse that situation, education and training, knowledge and skills acquisition need to be focused upon intensively. Strategic and systematic planning of training interventions will pay dividends in terms of productivity. These are deliberate investments in human capital.

Overwhelming consensus from Castleton (2002), Schultz (1997), Jarvis (2002) and Fingerlind (1983) indicates the importance of workplace education and training in creating a skilled and viable workforce. These theorists contend that recently there has been a remarkable convergence by both human capitalists and modernisation theorists that a more educated population is more productive and exhibits the attitudes and behaviour required for a sustainable modern industrialised economy.

Human capital theorists Schultz (1961), Denison (1962) and Becker (1964) argue that formal education is highly instrumental and necessary to improve the production capacity of a population. They too argue that an educated population is a productive population. ABET could be the

first step towards this in South Africa.

ABET and poverty eradication

According to the Reconstruction and Development Plan(ANC,1994:12) “ attacking poverty and deprivation must be the first priority of the democratic South African government”. I agree with Wilson et al’s notion,(1989) that a person is poor when she/he is dependent on other people to help her/him to survive, but I would add that poverty in the local context is mainly about hunger, unemployment, lack of access to clean water, sanitation, health care and schools, exploitation, isolation and vulnerability. It is about experiencing disadvantages and struggling to survive. ABET could play a crucial role in providing basic tools to help people to assist themselves. ABET efforts must not aim to bring relief to people in the poverty trap, but to free them so that they can gradually improve their situation themselves, as self-reliant individuals.

According to White (1990) there is a link between the quality of life of a person and his/her level of education. The lower the level of education, the higher the risk for such a person to experience material and emotional disadvantage. Lack of education tends to perpetuate the cycle of poverty.

Because educated people have access to information and the development of knowledge and skills, they tend to have more power, enabling them to be involved in decision making within the household, the community and the workplace.

Of great importance as far as ABET is concerned are questions of improved quality of life, greater self-esteem and self-fulfillment, and liberation from ignorance, poverty and exploitation.

Literacy initiatives in other developing countries

"South Africa is not the only country to be confronted with a broad range of educational needs. All over the world, newly liberated countries have had to respond to the problems that stemmed from the elitist, colonial education which they inherited" (Lind et al,1990:30). In Nicaragua, in 1979, after the dictatorship was overthrown in a revolution, illiteracy eradication became the number one priority in reconstructing the country. Apart from the highly privileged elite, the people of Nicaragua were steeped in extreme poverty and ignorance. At the time of liberation , Nicaragua had one of the highest illiteracy rates in the world. Two weeks after the overthrow of the government, the national literacy campaign involving half a million adults began. It lasted for five years. At the end

of this period, Nicaragua astonished the world by reducing the illiteracy rate which, at the same time, resulted in the visible improvement of the lives of the people. Nicaragua was awarded two UNESCO prizes in 1980 in recognition of what it had achieved with its literacy campaign.

> Literacy is fundamental to achieving progress and it is essential to the building of a democratic society where people can participate consciously and critically in national decision making. You learn to read and write so you can identify the reality in which you live, so that you can become a protagonist of history rather than a spectator.
> (Learn and Teach,1991:60)

In 1974, Mozambique was freed from its colonial government and immediately embarked on a literacy campaign. Only one in ten people could read and write. By 1980, four in every ten Mozambicans could read and write, and people began to exhibit increasing independence. Unfortunately, Mozambique was plunged into a fierce civil war and many of the gains were reversed.

One can see from Nicaragua, Mozambique, Cuba and Vietnam that literacy campaigns, allied to practical goals, mobilised their people. Literacy efforts or ABET in the South African context, could facilitate a climate of popular, positive transformation. ABET could provide a unifying creative focus for people who may be divided along

race, class and cultural lines. ABET could open communication channels, facilitate cultural understanding, and bring people together. It could also facilitate joint economic activities between rural and urban areas.

The West African experience

Up to this point in this literature review, ABET's successes and its possible positive effects have been discussed. There are, however, countries where literacy programmes have not met their intended objectives or have failed altogether. The West African case illustrates this.

At the UNESCO Conference on Planning and Organization of Literacy and Adult Education Programmes in Africa, in Abidjan, in March 1964, reports on literacy efforts in West Africa were analysed. It was generally agreed that the 'drop-out' of students from literacy classes was due to, among other things, unsuitable teaching materials and inefficient teachers rather than a lack of motivation amongst adults. The other problem, as observed by Timori (1979), was that literacy education in West Africa was Eurocentrically oriented. Adult education in West Africa, in the 1940s, principally served as a cultural vehicle. Illiterate people attended literacy classes to gain reading and writing skills to enable them to share

in the new, European culture. Those already literate groomed themselves to become 'cultivated gentlemen'. The 1950s, however, added political and nationalistic objectives to the purely cultural aim.

Through the print media, West African nationalists sought to educate their followers about the struggle for national self-government. They advocated a sort of mass, political education rather than a formal or systematised adult education process. A few classes in literacy were conducted but the impact was slight and negligible. It became difficult to sustain the same philosophy, direction and momentum of literacy provision in the region. Economic and functional education hardly existed. With the attainment of independence by different West African nations there appeared to be a lull in the drive for adult education.

In countries like Nigeria, adult education approaches returned to literacy of the liberal and cultural type. In all, adult education as a functional instrument for socio-economic development or for the survival of the nation was difficult to realise.

The Ugandan experience

In Uganda, at the same time as in West Africa, a literacy

effort was started. A total of 1.181 adults pursued literacy courses in 129 centres. Eventually the 129 centres dropped to 80, primarily because of a decline in the number of volunteer teachers. At the end of the proramme, 806 people took literacy tests and of this number, 542 passed. UNESCO attributed some failures of literacy efforts and slow development in parts of Africa to traditional beliefs and cultural practices. People were prone to defend static conditions and old fashioned values, for example, the belief that women did not need to be educated as their duty was to bear children and look after household chores, and men as heads of families were unlike boys who attended classes.

In the late 1990s, however, partly as a result of participation in international conferences on adult education, and partly as a result of the growing awareness of the inadequacies of the formal education system for meeting the needs of nations, various West African governments began to pay new attention to adult education. Amilcar Cobra, then newly elected president of Gunea-Bissau clearly recognized adult basic education as a tool for national development and as an instrument of national survival.

> If we may characterize the present position of adult education in West Africa, it would be correct to say that we have just reached the dawn of awareness - an awakening consciousness of the importance of adult education but without as yet the full national commitment to its prosecution.
> (Timori,1979:128)

Timori (1979) and Westrand (1965) observe the following as obstacles towards smooth, effective and sustainable adult education provision and development in West Africa and other parts of Africa: lack of a basic philosophy; lack of resources; lack of whole-hearted commitment on the part of rulers and leaders; unstable environments i.e civil wars and military coups; culture, traditions, beliefs and customs that undermined/disrupted literacy efforts e.g. that women/girls need not attend school because their role was to bear children, plough fields and to do all household chores; lack of clarity in the thinking of adult educators about their work; occasional lack of imagination about content; and administrative difficulties caused by the looseness of adult education organizations; lack of direction, depth, breath and length in literacy issues; and lack of learner centered programmes.

Durkheim (1977) observes that changes in society always precede changes in the educational system. He emphasises that educational transformations are always the result and

the symptom of social transformation. I concur with the above observation, but I also believe that as much as changes in society precede changes in the educational system, an educational system should prepare people to question, challenge and change the society's mindset.

Literacy, as described above, failed in its function as a basic and centrifugal force towards development and national reconstruction in West Africa and some parts of North Africa. Governments, curriculum developers, educators, planners, philosophers, and communities, however, did not take the initiatives seriously enough or regard them as potent tools that could be used to propel the thinking of people forward thus changing their behaviour and aligning them with accepted trends economically, politically, commercially and morally. In part, failure was due to the implementers’ lack of planning, assessment, monitoring and maintenance. Literacy, in itself, cannot be blamed. Critical literacy could have been useful in providing be national architects with the knowledge and skills to enable the attainment of abilities, capabilities and knowledge to deal with particular failures before they limited the success of ventures.

The power to vote for the party of one's choice without

fear at elections and to say 'yes' or 'no' on issues that affect one's life is the most spectacular power of the people, but that power is worthless if people lack the ability to critically reflect and use their influence in matters that affect them. Literacy is a path to democracy and it allows the public to stand up and take part in decision-making. In attempting to reconstruct and build a nation towards a future where there will be limited segregation, exploitation, and inequality of race and gender, ABET is a powerful vehicle of desired change. ABET is a weapon, and South Africa needs to use it.

All the themes discussed above argue for ABET as a *sine qua non* for development especially in contexts like ours in South Africa where millions are illiterate and semi-literate, and need to be brought into the economic mainstream in order to increase individual, regional and national productive capacity. Views, opinions, suggestions, contentions and arguments expressed in this review of literature point in one direction, that ABET could be a tool towards social and economic development. The themes discussed above strongly suggest that the effects of literacy on individuals, communities and nations could play an important part in encouraging participatory citizenship

and vibrant interaction.

The next chapter will give a detailed account on what kind of research this was, the data collection and the sampling methods used. Sources of information, strengths and limitations of this research are also described.

Chapter Three: Research Design

This research was an evaluative case study. The researcher assessed the impact of ABET programmes on the learners and the company and made judgments based on information gathered.

> Case studies are the best reporting form of evaluations and are best because they provide thick descriptions, they are grounded, holistic, life-like and they simplify data to be considered by the reader. They illuminate meaning and can communicate tacit knowledge.
>
> (Carr,1983:35)

This study was conducted in order to improve practice in the workplace. Evaluative research, according to Dane (1990) "is conducted in order to effect changes in the way things are done". I see evaluative research as a form of study that could be used to improve workplace initiatives and assess the impact of these on situations outside of the work environment. "Evaluation can assist projects by continually assessing past, present and future goals … follow-up is an integral rather than supplementary part of an evaluation"(Ramasia et al,1995:12). Evaluative research can be conducted at any phase of the programme and according to Dane, it involves "judging the means by which a programme is operating" (1990:309). I see an evaluation as an investment in

progress.

Data collection methods

The researcher used triangulation of methods to collect data. Cohen et al (1980) define triangulation as "the use of two or more methods of data collection in the study of some aspects of human behaviour". The advantage of this method was that evidence or data was collected from different angles and that eliminated the bias that could have resulted had a single method been used. For the purpose of this research triangulation consisted of comparison of the following data collection methods:

- Face-to-face interviews.
- Observation both participant observation (on plant) and non-participant, classroom observation.
- Analysis of plant reports, and work team session minutes.

Face-to-face interviews

Part of the data was collected in face-to-face interviews using an interview guide with standard questions. Interviews were conducted in Zulu in order to accommodate participants who could not speak or understand English and responses were recorded in English. The line of questioning facilitated healthy interaction between the researcher and

research subjects, and made transition from opening questions to core questions smooth (see appendix 1). Interviews, as a data collection method, were suitable for this research because of the participants' level of education. It would have been difficult for ABET level 1 and 2 respondents to answer written questions on their own had they been asked to do so. The face-to-face interview method was appropriate for this purpose because the researcher was able to follow-up on unclear responses and could probe for further information during the interview sessions when the need arose. According to Mwiria et al (1995) "interviews add an inner perspective to outward behaviours, and are a source of meaning and elaboration".

Interviews were conducted at the candidates' workstations during working days. The advantages of this data collection method, as compared to other methods, was that the interaction between the interviewer and the interviewee resulted, in most cases, in a conducive atmosphere for openness and frankness, and thereby resulted in quality information being gathered.

Standard questionnaires, appropriateness and sensitivity. The researcher interviewed thirty (30), current and former ABET learners. Five plant supervisors were also

interviewed. (Reasons for this sampling size and selection criteria will be discussed on page 44).The interview schedule or guide attempted to be sensitive, suitable and appropriate instruments to gather necessary information for this research. Fox (1969) defines sensitivity of an instrument as "the ability to make necessary discrimination required for the research problem". The appropriateness of the data collection instrument, according to Fox (1969) "is the extent to which the respondent group can meet the demand imposed by the instrument".

Text analysis

Another data collection method used was the analysis of daily plant reports and records. Analysis was a systematic process that aimed to make sense of the data collected. It included arranging, sorting and interpreting data so that appropriate conclusions could be drawn. Dane (1990) observes that data analysis is only a tool we use to make sense of the data collected in a research project: it is a consideration of a balancing act. He further observes that proper data analysis involves more than contributing to knowledge; it also involves treating other researchers ethically.

Participant observation (on plant)

The third method of triangulation was participant observation. This data collection method was carried out after face-to-face interviews. This data collection method was used as a way of validating and expanding on themes which arose from interviews. The observation period was one month on plant(April 2003). The researcher worked with research participants daily in order to observe real-life situations and social interactions within the participants' natural environment. This data collection method enabled the researcher to collect current and relevant data as issues arose and encounters occurred. The researcher was immersed in workers' daily experiences without disturbing the pattern of daily activities. This enabled the researcher to obtain in-depth data and to record participants' actual behaviour.

Classroom Observation.

ABET Classrooms were also observed while learning was taking place. The classroom observation took twelve working days (05.05.2003 to 20.05.2003)i.e. three days in each classroom from ABET level 1 to ABET level 4. The researcher wanted to observe the teaching/facilitation principles and practices used to impart knowledge and skills in these ABET

programmes. This provided first hand information rather than relying solely on what the research subjects said. The classroom observation enabled the researcher to attribute successes and some failures of these ABET programmes to the teaching and learning methodologies applied in the classroom settings.

Sampling method

Purposive sampling was the most suitable method because the researcher selected research participants from across all the ABET levels (i.e. ABET level 1 to 4). Fraenkel et al (1990) observes that the purposive sampling method is different from convenience sampling in that researchers do not simply study whoever is available, but use their judgement to select participants. The total population of ABET learners available to the researcher was 300. Most of the participants were shift workers and the selection of learners and their interview schedules were designed to be on day shift cycle because interviews were conducted during the day. The researcher decided on ten percent (10%) of three hundred (300) population which was thirty (30) as an ideal number to give a true reflection of the situation. The researcher selected willing and available respondents. Age and length of service were not used for selecting

participants (see participants’ profiles on page 48—50).

Sources of information

The sources of information for the purpose of this study were:

Former ABET candidates (30)

Former ABET candidates from all four levels were interviewed face-to-face in a formal setting. The interviews were scheduled on site during working hours to avoid costs and make participants feel comfortable. An interview guide consisting of ten questions each was used for each research participant(see Appendix 1).

Former ABET candidates supervisors (5)

Supervisors participated in face-to-face interviews in a formal setting. Interviews were scheduled on site during working hours. An interview guide consisting of ten questions was used for each supervisor (see Appendix 2).

Job descriptions (former ABET candidates)

Former ABET candidates' job descriptions were also examined to establish the relevance of the assigned tasks undertaken in the ABET programme to the job description. That helped to examine the expected/desired performance of an individual and the actual performance.

Performance ratings (30 former ABET candidates)

Performance ratings over a one year period gave an indication as to the performance of individuals. These are employee assessment forms completed by supervisors and workers annually. They were used to assess performance of workers against defined outputs or set of agreed upon targets. Ratings were given i.e. “E” for exceeding targets; “M” for meeting targets and “N” for not meeting targets or poor performance. These documents are kept by supervisors and copies by individual employees. The researcher got permission from respondents to use them for the purpose of this study.

Logbooks/Plant reports covering a (3 Month) period

Logbooks, work team session minutes (3 Month) and safety minutes were also analysed. Logbooks/Plant reports were used to record all activities on plant in sequence as they happened e.g. pump “B” stopped at 10H00 due to high bearing vibration. Pump “B” was started manually at 10H30 etc (see Appendix 5). Work team session minutes were record of meetings held every morning before work commenced within sections. Tasks to be performed and work related/safety concerns were recorded by supervisors and safety minutes were records of what transpired in safety meetings within

the sections. The above mentioned documents were very important and useful in establishing the impact of ABET at work e.g the researcher compared participants' abilities (both written and spoken) before and after ABET attendance. These documents were filed and kept by plant operators. They were readily available on request.

Scope of this research

This study focused only on the following aspects of literacy efforts on the plant and the classroom: Former and current ABET candidates, plant reports/plant related texts, their supervisors, leave forms, pay slips, work team sessions/safety meetings, performance ratings, adult learning principles and teaching/facilitating practices.

Limitation of this research

The questionnaires were drawn up in English and during translation of the questionnaires to Zulu, Tswana or Swazi languages, the essence of the questions/responses might have been lost or translation might have resulted in misconstrued meanings. Though respondents knew the researcher, some were cautious and uneasy to participate due to a culture of mistrust between workers and management. This could have had negative impact on

openness and truthfulness in that respondents feared reprisal for speaking out. Two meetings were held between the researcher and participants where participants were reassured about the confidentiality of their responses.

Strength of this research

The research subjects knew the researcher well and, overall, this minimised tension or fear during interview sessions. The interviews were conducted on site, in the research subjects' environment. This helped to minimise anxiety. The research subjects were involved in the scheduling of interviews. Participants participated in the planning stages of the interviewing process by giving input in the selection and preparation of venue, suitable times for different shifts and the order of interviews considering work to be done at that time. Workers also participated in the piloting stages of the interviews. They knew the reason for the interviews, and what was going to happen to the findings of the study.

In the next chapter, the results from all sources of information will be consolidated, analyzed and discussed, but before that, I would like to present the profiles of participants’ who were research subjects during face-to-face interviews.

Profiles of learners

T.L. is 51 years old. He is from a small village called Batleng in West Province. He is a Motswana. He has been working as a plant cleaner for this company for 22 years. He has no formal school qualification. He strongly believes that ABET is for young people who still have years ahead of them. He is currently doing ABET level 1.

D.D. is 50 years old. He is from Umtata. He is Xhosa. He completed ABET 4 last year. He is waiting his turn to do preparation for N1 course. He has been working for this company for the past 24 years.

J.H. is 48 years old. He is Zulu (Umzulu). He is from Mahlabathini in Kwa-Zulu Natal. He has been working for this company for the past 19 years. He completed ABET 4 two years back and is waiting his turn to attend preparation to N1 course.

Z.M. is 49 years old. He is from Pongola village in Mpumalanga. He is Zulu (Umzulu). He completed ABET 4 last year and is currently busy with plant related courses. He intends to continue with further studies in future.

R.S. is 49 years old. He is Shangaan from Malelane in Mpumalanga. He has been working for this company for the past 20 years. He completed ABET 3 last year and is currently engaged in ABET 4.

S.S. is 47 years old. He is Zulu (Umzulu) from Msinga, Kwa-Zulu Natal. He has been working for this company for the past 20 years. He completed ABET 2 and currently engaged ABET 4.

N.J. is 46 years old. He is from Thohoyandou in Limpopo Province. He has been working for this company for the past 20 years. He completed ABET 3 and currently engaged in plant related courses.

S.M. is 47 years old. He is Mopedi(Northern Sotho). He is from Kwa-Guqa township in Mpumalanga. He completed ABET level 3 and is currently engaged in plant related course. He intends to attend ABET 4 in future.
S.S. is 49 years old. He is Zulu (Umzulu). He is from Kwa-Guqa township in Mpumalanga province. He completed ABET 3 and is currently engaged in plant related course. He has been working for this company for the past 19 years. He intends completing ABET 4 in future.

K.D. is 54 years old. He is Motswana. He completed ABET 3 last year and intends to complete ABET 4 in future. He has been working for this company for the past 20 years. He is from Lehurutshe township in the North West Province.

K.H. is 54 years old. He is from Matatiele in the Free State. He completed ABET 3 and he intends completing ABET 4 in future. He has been working for this company for the past 15 years.

O.M. is 57 years old. He is from Mapulaneng village in Mpumalanga. He is Mopedi (Northern Sotho). He has been working for This company for 24 years. He has no formal school qualifications. He also sees no need for people his age to attend ABET classes. He is looking forward to his retirement day. He attended ABET 1 class last year and was unsuccessful in the examinations.

S.H. is 49 years old. He is from Mbuzini village just on the Mozambican boarder of Mpumalanga. He is a Swazi (Mswati). He has been working for this company for 15 years. He has no formal school qualifications but he attended school until SUB “B” (an equivalent of two years of schooling). He sees the need for people to attend ABET classes. He is currently engaged in ABET 2. He intends to continue to attend ABET classes.

M.N. is 48 years old. He is from Carolina in Mpumalanga. He is Ndebele and has been working for this company for the past 21 years. He sees the benefits of attending ABET classes and he intends to continue attending if given the opportunity. He is currently doing ABET 2

J.M. is 55 years old. He is from a small village called Centani in the Eastern Cape. He has been working for this company for 25 years. He passed ABET 1 last year and is currently doing ABET 2. He sees the benefits of attending ABET.

X.O. is 49 years old. He is from a village called Mqanduli in the Northern Cape. He is a Xhosa He has been working for this company for the past 23 years. He has no formal school qualifications. He sees the benefits of attending ABET classes. He is currently doing ABET 2 he intends to continue attending ABET classes.

T.F. is 47 years old. He is a Xhosa from Port Saint Johns (Sojonisi) in the Northern Cape. He has been working for this company for the past 20 years. He completed ABET 2 last year and he intends to continue attending if given an opportunity because he sees the benefits of attending ABET classes.

G.S. is 40 years old. He is from Empangeni village in Kwa-Zulu Natal. He is Zulu (Umzulu).He has been working for this company for the past 16 years. He completed ABET 2 last year and he is waiting to be sent for ABET 2. He sees the benefits of attending ABET classes and he intends to continue attending in future.

P.Z. is 50 year old. He is from New Castle in Kwa-Zulu Natal. He is Zulu (Umzulu). He has been working for this company for the past 25 years. He completed ABET 2 last year and he intends to continue attending ABET classes if given an opportunity.

J.N. is 48 years old. He is a Shangaan. He is from Tzaneen in the Northern Province. He has been working for this company for the past 21 years. He completed ABET 2 last year. He will attend ABET classes if given a chance.

K.H. is 42 years old. He is Southern Sotho (Mosotho). He has been working for this company for the past 20 years. He is from Senegal (Matwabeng) in the Free State. He is currently busy with Preparation for the N1 course in power generation. He completed ABET 4 last year and he is looking forward to studying further in future.

L.K. is 49 years old. He is from Naledi Township in Gauteng Province. He is Motswana and he has been working for this company for the past 23 years. He completed ABET 4 last year and he intends continuing with studies in the future.

M.M. is 48 years old. He is from a village called Vlaklaagte in Mpumalanga. He is Ndebele. He has been working for this company for the last 17 years. He completed ABET 4 two years back and he is currently engaged in an ash plant operators course.

D.D is 50 years old. He is from Umtata. Hw is xhosa. He completed ABET 4 and he is waiting for his turn to do preparation for N1 in technical subjects. He has been working for this company for the past 24 years.

J.H. is 48 years old. He is Zulu (uMzulu) from Mahlabathini in Kwa-Zulu Natal. He has been working for this company for the past 19 years. He completed ABET two years back and is waiting his turn to attend preparation to N1 course.

Z.M. is 49 years old. He is from Pongola village in Mpumalanga. He is Zulu (uMzulu). He completed ABET 4 and is currently engaged with plant related courses. He intends to continue with further studies in future.

R.S. is 49 years old. He is Shangaan (uMtsonga) from Malelane in Mpumalanga province. He has been working for this company for the past 20 years. He is currently engaged in ABET 4.

S.S. is 47 years old. He is Zulu from Msinga, Kwa-Zulu Natal. He has been working for this company for the past 20 years. He completed ABET 3 is currently engaged in ABET 4.

J.N. is 46 years old. He is from Thohoyandou in limpopo Province. He has been working for this company for the past 20 years. He completed ABET 3 and currently engaged with plant related courses.

Profiles of Supervisors

C.F. is 50 years old. He is an Afrikaans speaking from Freyheid in Kwa-Zulu Natal. He has been working for this company for the past 25 years. He completed N4 in technical subjects and intends continuing with his studies in future. He is a supervisor on auxiliaries (ashplant). He wants to use development opportunities for himself and the workers he supervises.

S.M. is 45 years old. He is from a small town called Hendrina in Mpumalanga. He completed N6 in technical subjects and intend to study further to complete a degree in management sciences. He is Mswati (Swazi). He has been working for this company for the past 10 years. He want to see people he supervises developing and occupying better positions in future.

F.F. is 28 years old. He is English speaking from Durban in Kwa-Zulu Natal. He completed N4 with technical subjects and intends furthering his studies in future. He has been working for this company for the past 6 years and wants to give people opportunities to develop themselves so that they could improve their standard of living.

C.X. is 34 years old. He is from Gugulethu township in Western Cape Province. He is xhosa. He completed N6 technical subjects and intends to complete a degree in Mechanical engineering in future. He wants develop his staff so they could contend with challenges due to global competition.

F.C. is 36 years old. He is from Heidelberg in Gauteng province. He is Afrikaans speaking and has completed N5 with technical subjects. He has been working for this company for the past 10 years. He wants his people to equip themselves with necessary qualifications for promotion purposes because they have experience.

The results from all sources of information and data collection methods used for the purpose of this study will be presented in the next chapter. Motives for each interview question and participants' responses will be discussed in detail.

Views, opinions, arguments, and explanations will be sourced from researchers, and educationists for the purpose of discussing the results in the final chapter of this report.

Chapter four: Research Results

The first question was designed to establish each respondent's ABET level/qualification. The results were as follows:

* ABET 1: Seven (7) respondents.
* ABET 2: Nine (9) respondents.
* ABET 3: Seven (7) respondents.
* ABET 4: Seven (7) respondents.

Question 2 was intended to establish what motivated respondents to attend ABET programmes. Were individuals forced or persuaded, or did they volunteer to enrol in ABET programmes. It was found that eighteen (18) of the respondents volunteered to attend, which suggested that they felt the need to acquire some form of knowledge from the programmes.

This study established that respondents' needs and expectations varied with regard to motivation and expectations of the ABET programme. Some learners wanted to improve their reading and writing skills in order to contend with daily challenges, others wanted to improve their qualifications for promotion purposes.

There were also those who saw ABET as an opportunity to begin where they left off at school. They wanted to revive

their educational dreams which were destroyed by Bantu Education system. Some were sent to the programme by their supervisors in order to improve their qualifications in preparation for further development. When asked why they sent or gave workers time to attend ABET classes, CF, a supervisor, answered:

“I knew that most of them had the potential to grow and develop. They have experience but what lacked were academic qualifications in order to fulfill company requirements for promotion”.

FF, a senior supervisor responded:

“I wanted to give them an opportunity to develop themselves so they could improve their standard of living. The new company directive requires that people be trained and be developed’.

The researcher wanted to establish what the respondents’ daily activities were before they attended ABET programmes in order to compare activities before and after participating in the ABET programme. This would give the researcher an indication as to the worth and value of ABET in addressing needs from the company perspective, and the efficacy of these programmes in developing workers.

Most of the respondents were general workers. They were engaged in cleaning and other activities as such as digging trenches, cutting grass, felling trees and also performing tasks as instructed by their supervisors.

On completion of ABET programmes, some candidates returned to perform the same tasks they had performed before attending ABET but those engaged in more advanced levels were often given new tasks/responsibilities such as starting and stopping of pumps, completion of logsheets, chairing of safety meetings and allocation of tasks were often given after completion of ABET levels 3 or 4. Of the thirty (30) interviewees, sixteen (16) respondents were between ABET levels 1 and 2, and they returned to their previous tasks/responsibilities on completion of their programmes i.e. sweeping floors with brooms, using shovels etc.

Talking to them regarding their activities during my observation period, PZ (ABET level 2) explained:

“ A person is formally assigned new responsibilities on completion of ABET level 3, but you have to be tested practically first to see if you know and understand the tasks you will be performing”.

MN (ABET level 2) commented:

“ I am not yet ready for tasks involving reading and writing. I need to attend ABET level 3 first and then I will be ready to even communicate in English’.

The above responses gave an indication that workers knew the process and the procedure for promotion, and it seemed as if they accepted colleagues being assigned new tasks or being promoted on completion of ABET level 3. When asked

about his expectations of the performance on plant of candidates at ABET levels 1 and 2 the supervisor, FC explained:

“During ABET levels 1 and 2, there hasn’t really been a visible change in terms of productivity that could be attributed to ABET Programmes, but there are positive signs like in some cases the ABET level 2 candidates started filling their leave forms for themselves and corrected overtime hours booked incorrectly”.

The other fourteen (14) respondents were between ABET levels 3 and 4. They were assigned new responsibilities (i.e. learner plant operators, reject men who cleaned coal from reject boxes and utility men whose responsibilities include removing coal dust and ash from hoppers). Unlike the other group (ABET 1 and 2), they often applied what they had learned to their situations, and were highly motivated.

“I use the knowledge in calculating pumps running hours, plant auxiliaries temperature points and filling of leave forms”(SS, ABET level 3).

“ I am more confident and motivated in all aspects of my life and I see life in a positive way. I see opportunities now”(KD, level ABET 3).

The usefulness of knowledge acquired from ABET programmes at work was probed through the fifth question.

The study found that respondents between ABET levels 3 and 4 felt that acquired knowledge was useful and could be applied to reading and writing in work related functions.

When asked how useful the knowledge acquired from ABET was

when transferred to work situations, NS (ABET level 3)

responded:

“ I use the knowledge to calculate pumps running hours, plant auxiliaries temperature points and when I fill in leave forms for myself and my colleagues”.

RS (ABET level 3) answered:

“ very useful in my work situations in that I can now write plant performance report, take down plant readings and also do plant related activities alone. I can also understand items on my pay slip”.

LK (ABET level 4) commented:

“ It enabled me to progress with ease within plant related programmes and has also increased my productivity and confidence”.

ZM (ABET level 4) answered:

“ It helps me to analyse and find faults, to read and write reports etc”.
Supporting what the workers said, FF, the supervisor

commented:

“ Yes, they write reports, safety minutes, calculate pump running hours. That need some academic qualifications or knowledge acquired from school hence they cope well”.

During my plant observations in 2003, I noticed learner

plant operators and plant operators working out

calculations to determine plant running hours, analyzing

and interpreting information, writing reports, filling in

leave forms, chairing safety meetings and writing minutes.

Other respondents felt that the knowledge acquired was

useful in enabling them to complete logbooks, communicate in English with supervisors, colleagues, and maintenance personnel, and when taking both internal and external telephone calls. They could also conduct basic faultfinding on the plants, record deviations on faulty plant, interpret temperatures on plant items, calculate pump running hours, fill in necessary forms such as leave forms, calculate overtime worked, interpret information for staff members during meetings, read and understand pays slips and explain items on the pay slip to staff members.

No ABET level 1 respondents felt that the knowledge acquired from ABET programmes was useful or relevant to work. The ABET level 2 respondents felt that, though there was no change in what they did prior to attending ABET programmes, the knowledge they acquired from ABET programmes was useful in that it enabled them to write and speak a bit of English, communicate telephonically, fill in leave forms, read names on internal mail envelopes, read pay slips and calculate overtime worked. Transfer of knowledge acquired from ABET programmes to situations in participants' homes and communities varied.

Answering this question, ZM (ABET level 4) said:

“ It helps to improve my small business operation and expand my client base. I can now do my own accounts and buy

new stock comfortably. My community save money by buying goods locally instead of traveling to town to buy from big retailers”.

NM (ABET level 4) responded:

“ I do my own bank transactions and runs my coal business very well and profitable. I am now a community leader and I participate in community projects”.

JH (ABET level 4) answered:
“I feel like a complete person now. I take informed decisions and offer advice to others if requested on a range of issues”.

SM (ABET level 4) responded:

“ I see the knowledge for many critical things like reading my children doctor prescriptions, budgeting, reading newspapers and help my wife with her homework as she is also attending ABET classes”.

RS (ABET level 3) commented:

“ I read newspapers and understand what is happening around us e.g. HIV/AIDS and other epidemics in the world”.

Some of ABET level 2 candidates felt that although their

designations and responsibilities remained the same at

work, the knowledge acquired from programmes was very

useful in their homes and communities. JM, a level 2

candidate explains:

“ I can now read the bible on my own and help my wife with the household budget”.

MN, one of the ABET level 2 candidates from a rural area answered:

“ I can now count my cows and goats”.

Another respondent, XO, who has a similar profile said”…I can now write letters to my wife and children at home”.

During my observation of safety meetings on plant, agenda items included awareness of Malaria, Sugar Diabetes, Tuberculoses and Cholera. People who listened attentively and asked questions were in most instances from rural areas. At times, they requested safety posters to take home if they were no longer needed. Upon asking them the reason for taking the safety posters home, they explained that they felt the need to pass the information they learned from the safety meetings on to their communities, and posters would help a great deal. This supports the notion that ABET could be a tool towards empowering people to help themselves.

ABET also enabled other respondents to, amongst other things, read newspapers to gain current information, participate in community projects, offer leadership skills to others at work and in their communities, and offer guidance and advise to relatives, friends, and community members.

Respondents at ABET level 2, 3 and 4 believed that attending ABET programmes changed their lives in many ways.

" I do my own things now, ABET gave me the basis for further development and I see life differently now (e.g being an independent businessman and buying stock comfortably). I am more confident and realise the dangers of ignorance".

(ZM, ABET level 4).

"I am motivated and more confident to face life(e.g read and write, and offer advises to others in range of issues). I feel independent and free and see many options in life".

(JH, ABET level 4)

"I am an active citizen who takes informed decisions. I give my children good advice to be good citizens'.

(NM ABET level 4).

"I am becoming a complete person in that I am less and less dependent on other people for my survival. I have achieved something (e.g. ABET level 3 certificate and promotion at work) and I am living a more hopeful life since I started ABET classes".

(RS ABET level 3).

"Yes, life is different from what it used to be. I am independent (e.g. I do not need anybody to help me with my private matters like reading my confidential letters or documents) and more responsible than before. I can now read newspapers, speak and understand functional English (i.e. no need for interpreter anymore)".

(SM ABET level 3)

In terms of changes in behaviour, I observed that both plant operators and learner plant operators bought newspapers every morning and read them throughout the day. They also wore clean personal protective clothing, and ensured that their offices were clean. Some brought their ABET books to work to study when whenever time allowed.

Responding to the question of change in candidates'

attitudes/approaches to life, supervisors indicated that workers were more responsible and showed leadership roles e.g. allocation of tasks to others, offering advice to colleagues, chairing of safety and work team sessions. They were more confident and took initiative in ensuring that the plant and personnel were working efficiently e.g. fault finding before equipment was damaged, solving problems amongst colleagues before they become conflicts, and helping colleagues to understand work processes and company specific procedures.

I used tea breaks for informal discussions about issues around ABET and development during my observation period, and some of the benefits of ABET mentioned by candidates were that they enjoyed more privacy as they no longer needed other people to assist them in private matters such as leave applications, reading pay slips, writing and reading letters to and from girlfriends or relatives. Some participants bought themselves cellular phones to be in contact with their families and they could operate them thanks to ABET programmes.

Most participants could sign their names instead of using thumb prints, and this increased their self-esteem and pride. Some saw ABET as a basis for further development and

an opportunity to progress to other levels. Some workers gained further knowledge in basic maths, science and communication skills and were motivated to work diligently in all aspects of their lives.

Some saw opportunities in life opening up such as promotion, transfer to other departments and entrepreneurial enterprises like opening small business. They saw opportunities and options in life through their improved qualifications.

SM (ABET level 1) responded to the issue of changes at work that might lead to higher productivity.

“We need to be fairly compensated for what we do. We could be treated with respect and dignity from the bosses’.

MO(ABET level 1) answered:
“The bosses must equip us with new equipment and discard the old ineffective tools we are using at present.

BS ABET level 1 responded:
“I think I need to attend ABET further and also do plant related courses”.

SH (ABET level 2) answered:
“ I would like to see us at ground level having a voice as to how work should be done”.

PZ (ABET level 2) answered:
“I want to see my colleagues also attending ABET in order for us to share the same understanding regarding work approaches”.

At ABET levels 3 and 4, candidates wanted to a see a

variety of changes. KH ABET Level 3 responded:

“ My colleagues need to go through ABET and complete plant related courses in order for them to be trained and become competent as well”. The team would be more cohesive and all

would pull in one direction.

SS (ABET level 3) answered:
“ I think as a person in charge of the shop floor, I need more authority in order to deal with situations as they arise, rather than to wait for a supervisor”.

The ABET level 4 candidates in general wanted to see

their colleagues also attend ABET programmes or further

their studies, to be trained properly to do their current

jobs and to be given more responsibilities so that they

could grow and develop. Through colleagues attending ABET

and other plant related programmes all employees could

understand the set company targets and deadlines, and make

a positive contribution towards the plant production

process and work as a whole.

ABET levels 1 and 2 candidates wanted to see technical

schools, churches, houses and shopping complexes being

built, especially in rural areas. Roads and clinics should

also be constructed and clean water and electricity

supplied to their communities in order to make

their lives better. Small farmers should be assisted by the

government, shebeens and taverns properly regulated or

closed down, and parks and playgrounds created. Community projects (e.g. poverty relief, HIV/AIDS, TB, malaria, cholera, child rearing awareness etc) should be started and life skill interventions presented. Vegetable gardening should also be encouraged.

ABET level 3 and 4 respondents wanted to see infra-structure developing e.g. roads, clinics, parks schools and halls, ABET centers established in communities where people attended classes and poverty eradication interventions begun. Technical schools should be built in their communities to prepare their children for the world of work.

Most ABET level 2, 3 and 4 candidates felt they would attend future ABET classes in future if given the opportunity.

Most of ABET level 1 candidates responded negatively and felt that they would not attend further progammes:

“No I am too old for that now”.
“No, I am too old for school. The sums are difficult and there is a lot of work”.

“ No, my kids attend school not me. I am too old for that”.

“ No, ABET is for young people”.

Supervisors encouraged their staff to attend ABET classes

because they desired improvement in workers' academic qualifications for promotion and personal growth purposes. They felt that ABET could lead to improvement in workers standard of living and hoped that these efforts would result in more productive and responsible workers who could read and write, fill in leave forms and take minutes during meetings. Leadership abilities could be developed to supervise staff, learn how to operate power plant auxiliaries and assume more responsibility. This would result in a confident and motivated workforce of independent people who could be promoted and earn better salaries.

On the question of whether expectations were met after attending ABET classes, supervisors agreed that ABET levels 3 and 4 met expectations and the other levels showed encouraging signs.

CF explained:
" Those who have completed ABET levels 3 and 4 are really doing very well".

FF answered:
" Yes, to some extent in that most workers have succeeded in ABET programmes and are learner plant operators. After completing ABET 4 they will progress to plant related programmes".

Responsibilities before attending ABET included those of plant cleaners; sweeping floors and washing floors with

hosepipes, digging trenches, moving furniture from one office to the other, and other menial tasks, under instruction by supervisors.

From ABET level 3 upwards, workers can be promoted within a plant operator career path. Their responsibilities include operating plant auxiliaries, taking readings, writing logs, writing reports, basic fault finding, holding work team sessions and safety meetings, solving plant related problems and ensuring the safety of the plant and personnel.

At ABET levels 1 and 2, the supervisors felt that there was no visible change in behavior that could be attributed to ABET attendance. Although some workers were beginning to show some positive signs, promotion would only be effected once learners completed ABET levels 3 and 4.

Knowledge acquired from ABET classes was applied to the work situation. Supervisors reported that participants could calculate pump running hours and temperatures, fill in leave forms, read and write reports and count at a basic level. During my observation period, I asked one of the supervisors whether candidates applied the knowledge they acquired from ABET classes at work situations.

A question on visible changes in the lives of former/current ABET candidates that could be attributed to attendance of ABET classes, elicited different views from supervisors. Supervisors reported that some participants showed discipline, increased responsibility and leadership qualities and a sense of ownership. Some workers were more confident and motivated and took initiative in solving work related and other problems. Some had opened small businesses, and their colleagues admired them and sought guidance and advice from them.

CF responded:
“They are more disciplined and responsible now at work. They are begining to show leadership qualities and there is a sense of ownership that emerges on daily basis”.

The responsibilities of supervisors towards former/current ABET candidates' was to offer them necessary support in new environments.

FF responded:
“ I am their on-job-trainer, their mentor and their supervisor. I appraise their performance, assess and recommend learning interventions”.

Feedback to candidates regarding their work performance was on-going. Formal feedback was given when performance appraisals were reviewed, and verbal and written feedback was continuous.

FC answered:
" I give them daily verbal feedback as we work and written feedback six monthly as their performance appraisals are reviewed".

There were no rewards for completing ABET levels 1 and 2. Rewards and incentives for good performance were promotion on completion of ABET level 3, salary adjustment on completion of ABET level 3, performance bonuses for meeting and exceeding set targets and monthly achiever awards.

Participant Observation (on plant)

I observed research subjects performing their daily tasks at their work stations. The observation period covered one month. This study found that:

- Before normal work was started, a work team session was held attended by all the staff members of that particular work station. The status of the plant and the plant report from the previous shift would be read to staff members. Work instructions would be given to colleagues and the dangers associated with the tasks to be carried out were clearly explained.

- Wearing of appropriate personal protective equipment was always emphasised before any work was

undertaken. Colleagues were given the opportunity to ask questions and raise concerns. The work team sessions were used as information sharing and awareness sessions i.e. bulletins and notices regarding company/work related issues were read out.

- Safety meetings were conducted twice each month and minutes were taken by the safety committee secretary. The plant operator or trainee plant operator chaired the meetings. Unsafe acts and conditions were followed up with the aim of eliminating them.

- Plant reports were written in English and telephonic reports were conducted with supervisors as events unfolded.

- Verbal communication with supervisors in English was effected regularly by plant operators/learner plant operators and other colleagues.
- Staff members helped each other to complete leave forms on a daily basis and in this way they taught each other how to complete the forms independently. They also helped each other to read and understand their pay slips on pay days. Basic mathematics

and computation would be used to calculate overtime worked, deductions etc.

- There were conflicts and problems at times that needed to be solved amongst the staff members and in most cases, these would be solved without inviting the help of the industrial relations department or without going through formal grievance procedures. Problem solving and leadership skills were displayed on a daily basis during the observation period.

- There were daily situations where plant operators or other staff members needed to make critical decisions and take action in order to keep the plant running, and in most cases, these were handled very well. Candidates showed initiative and good planning skills.

Classroom Observation.

My classroom observation focused on four ABET levels i.e. ABET level 1, ABET level 2, ABET level 3 and ABET level 4. I spent three days in each classroom and the study focused on five learning principles i.e. Teamwork, respect for learners, praxis, immediacy, and sequence and

reinforcement.

Adult learning principles

1.Teamwork.

All the classes I observed showed the existence and encouragement of teamwork among learners which is a very important component of a workplace adult learning process. My view is that teamwork is both a principle and a process because it provides adult learning experience, parameters for self discovery, direction and safety for learners who are struggling with complex concepts and skills.

Teams created an atmosphere conducive to healthy debates, self-expression and critical analysis of facts among learners which, at the same time, developed their communication, analytical and problem solving skills.

I noticed learners become creative in solving given problems that built their confidence and self-esteem e.g. the coarse ashhopper doors use high pressure water to open. This water is supplied by two seal water pumps. When the pressure is low, the ashhopper doors cannot be opened. I saw learners isolate the two pumps, connect fire hydrant hosepipes to the inlet of the pumps and supply high pressure water to open the ashhopper doors.

The inter-dependency among team members complimented each other very well. Varied options towards solving problems emerged and as a result, skills were developed and others were perfected.

2.Respect for learners.

I observed adequate respect accorded to learners e.g. learners decided on the class starting time in the mornings, breaks, lunch times and knock off times. I used the word “adequate” deliberately because I believe that respect for learners should not be more than what the situation requires or less than that needed to build sound relationships characterized by mutual respect between the learners and facilitators/teachers. I observed learners being consulted on most issues that affected them directly e.g. learners were actually the ones who decided on starting times, breaks etc, and that resulted in relatively few incidences of late coming in the mornings, and from lunch etc.

The respect cultivated in the ABET classes, resulted in honest and open communication from all sides, effective listening and humility, which created a perfect climate for learning to take place. My view is that respect breeds tolerance and could be a binding force that keeps cohesion

within the team. I noticed respect not only between learners and teachers but also among learners themselves.

3.Praxis.

Facilitators gave learners tasks and enough time to make mistakes, analyse the mistakes, try different options, reflect and return to action until the solution to the problem was found. Participants were allowed to make mistakes and to learn from those mistakes. This permission played an important part in situations where learners needed moments of reflection before they could approach problems from different angles. This was done by individual learners and as a team. This was a good exercise that developed learners' fault finding skill in preparation for plant situations back at their work stations. I noticed learners sit back and think when faced with challenging tasks.

4.Immediacy.

Programmes at ABET levels 1 and 2 laid the foundation for ABET levels 3 and 4, and the knowledge and skills acquired from these classes were not to be used immediately on plant. This could be the reason why some people dropped out of these programmes. They saw no immediate benefits for their participation in ABET programmes.

5.Sequence and reinforcement.

All ABET classes I observed showed that there was a sequence in learning material and regular reinforcement by facilitators. Lessons proceeded from easy to difficult and from simple to complex. Vella (1994) defines sequence as “the programming of knowledge, skill and attitude in an order that goes from simple to complex and from group-supported to solo effort”. Mathematical calculations started with basic formulae and as learners went through more difficult and complex chapters, they always referred back to the basics. To me, this shows that one needs to know and understand the basics before progressing to more difficult and complex situations. To me, sequence is a grounded building of fundamental knowledge and understanding.

Facilitation/teaching practices.

My classroom observation also focused on classroom practices of facilitators and teachers in ABET level 1 to ABET level 4. I use the words teachers and facilitators simultaneously because research subjects were divided on their professional titles. Those who had taught in public schools before felt that they were teachers by profession and preferred to be called teachers. The other half had

taught in industry training and they felt that they were Education Training and Development (ETD) officers by profession. They preferred to be called facilitators of learning.

The results of my observation are as follows:

1. In these ABET classrooms, facilitators/teachers mediated learning in a manner which was sensitive to the diverse needs of learners, they created a climate appropriate and conducive for effective learning to take place. Facilitators/teachers communicated effectively showing recognition for differences of learners and they also demonstrated knowledge of subject matter and appropriate and relevant resources in an industrial context.

2. Facilitators/teachers understood and interpreted learning material for learners, designed challenging task appropriate to the levels, selected and prepared suitable textual resources for learning. They also selected the sequence and paced the learning in a manner sensitive to the needs of learners.

3. They made decisions appropriate to the levels,

and ensured that whatever decisions made were democratic e.g. colleagues and learners were always involved and consulted, debates were encouraged, and views, comments and opinions were invited from learners.

4. Facilitators/teachers demonstrated the ability to develop a supportive and empowering environment for learners and responded to the educational and other needs of learners and fellow educators e.g. when a learner's wife or a child was sick, he would be allowed to go home early, and arrangements would be made for his homework to reach him at home.

5. Facilitators/teachers also developed a supportive relationship with supervisors, managers, trade union, organizational developers and human resources department e.g. stakeholders visited learners on Fridays and these visits were spread throughout the month. Progress reports and attendance registers were sent to the learners immediate supervisor every month.

Text analysis

Logbooks

Logbooks were written in English and sequences of events

were chronologically documented as they occurred. Log books are used to record any occurrence on the critical auxiliary plant that could result in a load loss, power plant trip or emergency plant shutdown. The information in the logbooks covered what happened, on which unit, how critical, action taken, why such action, who took action, plant status, time, date, name of a person completing it, signature, designation, company number, telephone number and comments. My observation was that logbooks were filled in correctly by trainees and plant operators. These skills may be attributed to the ABET programmes run on site.

Work team sessions.

Work team sessions were held every morning before work started. They began with health and safety aspects, environmental issues and the topic of the month (e.g. HIV/AIDS, TB etc). Notices, messages, announcements and letters were distributed at this meeting. Work instructions were given and staff allocations were planned at these meetings. According to the company's operating procedures, work team sessions fulfilled their purpose. Work team sessions were run by former ABET candidates, plant operators or trainee plant operators.

Performance ratings.

Performance ratings were a culmination of yearly contracts drawn up by both the supervisor and employees. They comprised of outputs expected from employees within a year-long period. Performance was reviewed after six months. During assessment, employees' performance was measured against outputs agreed upon by both parties. The outputs were within the scope of workers' job descriptions.

Due to the kind of work employees were doing (e.g. sweeping boiler and turbine floors, cleaning coal reject heaps, cleaning ash spillage from ash hopper floors and cleaning dust spillages from underneath precipitator plants), and their level of education, measurement criteria and outputs were arrived at which were understood by all. Other outputs included amount of sick leave, number of days absent, co-operation with a team and an attitude towards one's work.

Performance ratings over a three years period showed that that in the first year, most ABET candidates met their set targets as contracted by the employer. They were rated "M" which indicated that a person met the set targets. In the following year the texts showed that about half of the candidates improved their performance from that of the

previous year in that they exceeded their targets and they got "E" ratings. Most of those who exceeded targets were former ABET candidates.

The third year appraisals showed even further improvement. Most of those who "Met" or "Exceeded" their targets as per their contracted outputs, had been through ABET programmes at some point in the recent past.

Performance records.

Performance records are on-going performance assessment throughout the year. They are a source of reference during performance rating sessions. They are compiled by workers' immediate supervisors in the section/work station.

The research found that as candidates progressed to higher ABET levels, there was a marked improvement in their work performance. This was more evident in cases where candidates started ABET at level 1 and progressed through to upper levels. On lower levels (i.e. ABET 1&2), most candidates were rated "M" and improvement started to show strongly once they completed ABET level 3. The results of this study will be analysed and discussed at length in the next and final of this report.

Chapter 5: Results analysis and discussions.

Reading, writing and arithmetic are basic fundamental skills that have been denied millions of people in South Africa. Statistics reveal that one in every three adults in South Africa cannot read or write. Illiteracy is both an effect and a cause of poverty. Because people are poor and struggle to survive, they do not have the money or time to afford education and training, and because they do not receive education and training, they often remain poor.

The objective of this study was to evaluate the impact of ABET programmes run at Duvha Power Station, on the company, and individuals, both at work and in the extended settings of their homes and communities. The results of this study revealed that ABET programmes run at Duvha have a positive impact on productive capacity and general personal development. The benefits were found to be far-reaching in that they affected the social, political and economic spheres of Duvha community.

The results of this study suggest that ABET is viewed by current and former learners within Duvha Power Station as a basis and catalyst for social or economic development. This conclusion is derived from the fact that when

responding to the research questions "Why did workers attend ABET classes?" and " Why did supervisors send people to attend ABET programmes?", the intentions of both employees and supervisors respectively was for the development and growth of employees in order to cope with challenges and opportunities that arose due to changes in the workplace.

Houle (1979) draws a general conclusion that participation in any type of educational activity is usually undertaken for a variety motives rather than a single one and that these usually reinforce each other. He formulated an early and useful typology within which to classify these motive : goal-orientated learners, activity-orientated learners and those whose main orientation is learning for its own sake(1961).

Burgess(1974) identified the following basic orientations to adult education which are the desire to gain knowledge; to comply with formal requirements; to reach personal goals and to take part in social activity. The motives or orientations mentioned above seem to be very close, if not identical to the findings of this study in that the needs of those who volunteered to attend ABET programmes were to improve knowledge; improve their qualifications; be able to

read and write and for promotion purposes. The need for those who were sent by their supervisors were to improve their academic qualifications; to adhere to company requirements and once again to qualify for promotion.

There seemed to be congruency of intentions and beliefs between employees and supervisors towards ABET attendance. ABET is largely viewed as a vehicle that empowers workers to achieve intended aspirations or objectives e.g. promotion at work, self development etc. South Africa is part of the global village, and forces of external change have a huge impact on both the individual and the organisation. To survive and prosper, in other words, to function as competent individuals and a competitive organisation, it is important that people are able to work with ever-changing forces and make the most of what these changes have to offer. Employees attended ABET programmes to improve their qualifications and acquire relevant skills and competencies in order to increase their prospect of promotion and better earnings.

The reasons given for participating in the ABET programme support the notion that ABET could be a catalyst for growth and development because it increases individuals' productive capacity, analytical skills and capacity to take

responsibility.

Regarding responsibilities before and after attending ABET progammes, it emerged from the findings that candidates' responsibilities (as set out in their job descriptions) changed and further responsibilities were given to workers on completion of ABET levels 3 and 4. This was determined after a practical assessment was carried out on the plant to ascertain the skills and knowledge that candidates accumulated formally, informally and through work experience over the years on the plant. The skill and knowledge displayed could then be recognised and be combined with ABET qualifications in order for candidates to gain promotion.

As responsibilities increased, candidates were expected to operate at a higher level than before completing the preceding ABET levels. During my observation period, candidates who were assigned new responsibilities carried them out safely and effectively, under supervision initially, but eventually on their own. According to Saint (1974), this kind of support is called scaffolding. The term conveys the image of adjustable and temporary support that can be removed when no longer needed by the learner. It refers to the practice of providing learners with ample

help during the early stages of learning and then diminishing this assistance as trainees become competent to take increased responsibility for task performance. In essence, this is what I view as personal development.

I noted the growth of skills, capacities, self-confidence, creativity, responsibility and innovation coming to the fore, and if that is sustainable, the impact of ABET programmes could be described as positive and phenomenal both for the individual and the company.

Responding to the research question " How useful is the knowledge acquired from ABET to your work situation?" the majority of workers recognised the usefulness of the knowledge acquired on a daily basis as they performed their duties (e.g. being able to communicate in English with their supervisors and colleagues, completing logbooks in written English and being able to calculate pump running hours) as required by their extended scope of work. The twenty three candidates who recognised the usefulness of the knowledge acquired from ABET programmes comprised of respondents from ABET levels 2 to 4, the majority being from ABET levels 3 and 4. Their supervisors confirmed that the knowledge that candidates brought back from ABET programmes was very helpful in that it was basically a pre-

requisite for auxiliary plant operation (i.e. reading, writing, basic mathematical calculations and communication).My view is that skills development is a direct intention of Outcome Based Education and (OBE).

According to Spady (1994), the philosophy of Outcome Based Education emphasises success for all learners and educators. It recognises no limits on who or how many learners are successful, how they can learn and how rapidly they advance. One of OBE's formal purposes is to ensure that all learners are equipped with the knowledge, competence and qualities that they need to be successful after they finish school. OBE aims to develop citizens who are active and creative, inventors of problem-solvers, rather than meek citizens and unthinking followers.

Commenting on any visible change that could be attributed to attendance of ABET classes, CF, the supervisor said:

"The workers are more disciplined and responsible now at work, they show leadership qualities and there is a sense of ownership that emerges on daily basis".

FC. Supervisor:

"They are confident and motivated human beings now. They take initiative in solving problems on the plant and amongst themselves".

The senior supervisor FF. answered:

“I see more responsible people now, with leadership roles. They look more confident and innovative in solving plant related problems. Others look up to them when faced with problems e.g. help them fill in leave forms, explain pay slips. They always try to improve the situation’.

It was interesting to note that, though the majority of ABET level 2 candidates felt that attendance of ABET programmes did not bring any changes to their designations or the scope of their work, they noted that it was useful in enabling them, amongst other tasks, to use telephones and cellular phones to communicate telephonically on site, and to speak and understand a little English.

Respondents from ABET level 1 felt that the acquired knowledge was not useful to their situations (i.e. at home and at work). At first, I could not understand why ABET teachers and learners spend three months on a foundational programme and at the end participants claim not to have learnt anything useful that can be applied to life more broadly.

During my observation period working with workers daily, I realised that there was nothing really that they could bring and apply to the plant situation because ABET lessons for the first three months were in Mother Tongue and dealt with reading and writing words and simple sentences which

could not be used for production purposes on the plant. Workers at level 1 went to ABET classes as plant cleaners and came back to perform the same tasks they performed before attending ABET classes. There was no skill transference from ABET programmes to work situations. After completion of ABET level 1, knowledge of a few English words and basic numeracy was introduced. The reason for responding negatively to the portability of knowledge and skills could be due to the fact that ABET level 1 is concerned with the development of basic core competencies through literacy and numeracy, moving from Mother Tongue to English.

> Learners should first learn to read in their mother tongue. It makes simple common sense that people are more likely to learn quickly and efficiently through their own language, and that the development of their first language provides a sound base for development of their skills in a second or third language.
> (Burroughs, 1995: 271)

The generally negative response from learners in ABET level one as to whether they would attend ABET classes again in future, was explained in several cases by an attitude of learning being an activity associated with youth. TS reasoned that his children attended school, not him, and that he was old to attend classes. PM cited difficult sums and his advanced age as reasons for withdrawal. VN and DK cited old age, and TL reasoned that ABET was for young

people. MO was about to retire from service and saw no reason to attend ABET classes. Their negative experiences during their early years at school and the low level of education achieved also acted as a barrier to these adults when introduced to educational interventions at a later stage.

There is a considerable amount of research regarding barriers to adult learning; reasons why individuals do not participate or succeed in learning activities. One most pertinent aspect, according to Wlodkowski(1994), is the dispositional barrier. Dispositional barriers are those related to attitude and self perceptions of people regarding themselves as learners. The two most commonly found barriers in this area relate to age and educational background (67). In support of the above view Carp et al(1974) asserts " it is not uncommon for older adults to believe they are too old to begin new learning activities. Also, adults with poor educational backgrounds often lack interest in learning or confidence in their ability to learn (310).

> There is evidence that adults of lower socioeconomic status more often hold negative beliefs and perceptions towards education than adults from the middle and upper ranges of socioeconomic status.
>
> Darkenwald et al (1980:314)

My view is that culture and tradition play an important role as barriers alongside the dispositional and situational barriers mentioned above. My experience in African cultures and traditions is that once a male comes back from a circumcision ritual, which is regarded as a passage to manhood, he will no longer take part in activities he performed before the manhood ritual, and schooling would be one of those activities. It is also difficult if a man has children who are at school in that they might be in the same standard as their father who is attending ABET classes. This cause embarrassment to the head of the family.

From the reasons ABET level 1 respondents gave for their withdrawal from attending ABET classes in future, I deduce that they fall within the scope of the above mentioned barriers. ABET level 1 is a foundation phase for lifelong learning hence there was no visible or tangible evidence in terms of skill transference to plant situations that could have improved chances of promotion or the assignment of new responsibilities.

During my observation and text analysis, it became clear that knowledge transfer from one situation to the another was crucial in solving daily problems and motivating

workers to continue participating. On the plant, the ability to solve problems and apply new skills to new situations and specific settings was very important, for example in one of the emergencies, LK was in charge of the plant. The senior management team was present and LK was coordinating tasks with maintenance technicians, operators, ash plant staff and contractors. He had to apply critically cross-field skills like communicating effectively, using technology, thinking critically and creatively, working effectively with others as a team, and evaluating information critically.

In most cases, workers developed knowledge through finding solutions to daily work related problems. Problem solving comprises of higher-order core competencies which require a person to master basic principles and apply these successfully. The challenges of solving varied problems, developed workers' problem solving skills in multiple situations. In turn, this developed capacity for critical thinking. According to Brookfield (1993:1), being a critical thinker is part of what it means to be a developing person, and fostering critical thinking is crucial to creating and maintaining a healthy democracy. Without critical thinking, our personal relationships

become atrophied, our workplaces remain organised as they were twenty years ago, and our political involvement dwindles to a point of total non-participation. Learning is a process of knowledge construction when information is not merely recorded but is processed, interpreted or constructed as knowledge by candidates, especially during fault finding processes.

JN. could help his children with their homework using knowledge acquired from workplace ABET. MM was doing well with his small business. SS could fill in deposit and withdrawal slips on his own after attending ABET programmes. GS could count his cows and goats and RS could read newspapers and community notices, and give advice to people regarding health issues like TB, Malaria, Cancer, HIV/AIDS and other related topics.

The above claims support the notion that ABET reduces feelings of inability and dependency. It could enable understanding, planning and independence. The above also suggests that ABET could be the basis for human capacity development. Human capacity has both personal and social relevance in that capable individuals are able to access and use available opportunities to earn a living, help shape the future of their communities, and secure

conditions necessary for themselves and their families to maximize their potential.

As capacities grow, individuals respond to their environment by creating new participation opportunities, both for themselves and others. In the case at Duvha, as people move through ABET levels and up the progression ladder, they are exposed to new opportunities, and at the same time, they open opportunities for others who follow the same career paths.

The majority of respondents from ABET levels 2 to 4 believed that attendance of ABET programmes had changed their lives in many ways. At work, some were now in charge of workstations and that responsibility boosted their self esteem, motivation and confidence. Unlike before, workers who had participated in ABET were left to carry out tasks independantly. Many now give instructions as to the work to be performed, how it should be performed, why it should be performed and who should perform it. Their responsibilities required analytical skills and decision making abilities in order to avert or solve problems on their own without consulting higher authority.

Conscientisation, (Freire, 1972) refers to training and

education that encourages people to apply their own knowledge to the contexts they find themselves in and be reflective about what is happening around them. In this study there was convincing evidence that ABET made people aware of the extent and nature of their problems, and often provided the skills, abilities and capacities to solve these difficulties.

My view is that adult education can result in a widespread awakening of individuals to take action, and assume responsibility and control over their lives, moving from resignation, ignorance and subservience to active involvement. Within communities, ABET could be seen as the basis for social cohesion and prosperity. In effect, it could be the catalyst for genuine development of social capital. Social capital is often seen as the glue that keeps democracy together, or as Putnam (2000) asserts, it 'makes' democracy work. He defines social capital as “features of social organization, such as trust, forms and networks, that can improve the efficiency of society by facilitating coordinated actions.

I am of the opinion that ABET establishes relationships between departments, sections, communities and individuals. When an ABET candidate is able to communicate effectively,

verbally or nonverbally with other employees inside or outside his/her section, this has a positive impact on the productive capacity for individual, sections and the company.

Conclusion

This study revealed that ABET is more than just literacy training, but a term that includes aspects like communication skills, life skills, technical and practical skills, understanding society and understanding the context in which we live and work. If the community we come from is under-developed and disempowered, feelings of powerlessness, apathy and unproductivity can carry over to our workplaces. Organisations therefore need to empower employees in their respective communities if they want them to be positive contributors in the workplace.

> Employers have a concomitant responsibility for ensuring access to ABET programmes at least for their employees and preferably for the communities from which the employees are drawn.
> (ABET Policy Final Draft,1997)

This study also found that ABET plays an important part in developing and empowering workers in that it met specific outcomes at the workplace. Van Rooyen et al(2002) define specific outcomes as “the ability to use knowledge, skills and values specific to particular learning field or

occupation”. This study revealed that transfer of skills and knowledge from ABET to the workplace does take place and as a result, people are assigned more responsibilities and are also promoted/upgraded to higher positions with better salaries. The results of this study put to rest the assumption that there is no value for money in ABET efforts at Duvha Power Station.

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APPENDICES

APPENDIX 1

ABET CANDIDATES'QUESTIONNAIRE

APPENDIX 2

SUPERVISORS'QUESTIONNAIRE

APPENDIX 3

DEVIATIONS

APPENDIX 4

WORK TEAM SESSIONS

APPENDIX 5

PLANT REPORTS

APPENDIX 6

PERFORMANCE RECORDS