



## THE IMPACT OF NTFONJENI RURAL EDUCATION CENTRE'S ELECTRICAL INSTALLATION PROGRAMME ON PROMOTION OF SELF-RELIANCE AMONG GRADUATES

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### ABSTRACT

This study assessed the impact of Ntfonjeni Rural Education Centre's (REC) electrical installation programme on promotion of self-reliance among out-of-school youth and adults in Eswatini, Hhohho Region. The objectives of the study were to: establish whether the electrical installation programme objectives were met, determine the electrical installation programme activities undertaken by graduates; and determine the engagement with learning by graduates in promoting self-reliance as a result of the electrical installation programme offered at Ntfonjeni REC. This was a small-scale study that used the evaluation research design with qualitative research methods. Data were collected using interviews, observation, and documents. Participants were graduates from the electrical installation programme, electrical installation instructor and community members that were chosen using convenient, purposive, and snowballing sampling techniques, respectively. Seventeen participants were individually interviewed using structured interviews. Data were analyzed qualitatively through thematic analysis. The findings revealed that the goal of the electrical installation programme of promoting self-reliance among its graduates was partially met. The findings indicated that the electrical installation programme improved the livelihood skills of the graduates and changed their behaviour and the community members' mind-set. The graduates showed some features of self-reliance such as becoming financially independent. The study recommended the upgrading of the electrical programme into Grade 1 Grade Testing Level in order to enable its graduates to be employable by big companies and that the Ministry of Education and Training should allocate more funding to enable graduates to start income-generation projects.



**KEYWORDS:** Evaluation, impact, electrical installation programme, rural education centres, self-reliance

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## INTRODUCTION

The importance of education in promoting self-reliance cannot be overemphasized. This is why the African Union in its Agenda 2063 stressed the importance of countries to attend to their people's needs by empowering them with vocational skills and knowledge (Addaney, 2017). Hence a community cannot foster development without a literate population. Liz (2015) stated that literacy is an important aspect in nation development since being functionally literate is fundamental to all forms of both successes in people so as to participate actively and contribute to their personal development. Similarly, a community cannot retain educated people (those with vocational and professional skills) without an attractive economic environment, which is the situation in many countries including Eswatini. While at present there is no single solution to the fight against rural poverty, education and training are critical elements to fight poverty (Ministry of Economic Planning & Development, 2009). The Eswatini government supported adult and lifelong learning in order to enhance rural development by providing training programmes which will help individuals to acquire necessary skills for achieving set educational goals. Furthermore, the Ministry of Economic Planning and Development (2009) stated that education and training is the cornerstone of sustainable economic and social development of any country. The diverse benefits of education have seen many nations scaling up their efforts towards extending educational opportunities to all their people, and Eswatini is no exception.

Since 1968 when the country regained its independence, the country committed itself to extending educational opportunities to all citizens, irrespective of their economic or social classification with a view to increase productivity, foster economic growth and improves the standard of living of the people. According to the Ministry of Education (1999) empowering poor people with relevant and quality education is the most effective avenue to reduce rural poverty. The Ministry of Education further pointed out that it recognizes that with appropriately educated people, the economy will be transformed, national output will be increased and people's incomes raised, their standards of living enhanced, and the improvement of all positive aspects of life for self-reliance, social and economic development and global competitiveness. Therefore this paper reports about the impact of electrical installation programme that is provided at Rural Education Centre (REC) so as to determine if it has promoted self-reliance among its graduates in the Hhohho Region, Eswatini. The Ministry of Education and Training indicated that there should be substantial increase in the number of youth and adults who have relevant skills, including technical and vocational skills for: (i) employment, (ii) decent jobs and (iii) entrepreneurship. Education Sector Policy (EDSEC) supported educational programmes in which RECs were some of those that work to aid rural development by offering comprehensive programme of education to out-of-school youth and adults in the rural community (Ministry of Education & Training, 2018). The Ministry of Education and Training (2018) in its EDSEC Policy 2018 stated that it promotes education for



sustainable development through strengthening the existing education mechanisms that empower individuals effectively. This is ensured by training centers such as Rural Education Centres (REC) that equip Swazi citizens with vocational skills. The policy further stated that the Eswatini government requires that people should learn to become self-reliant by tackling their social and economic challenges so as to live sustainably (Ministry of Education & Training, 2018). The Eswatini government strengthens educational programmes which provide training in practical skills to promote a self-reliant community.

### **Self-reliance**

Acquiring training skills promotes individuals to become self-reliant. Self-reliance, according to Sanga (2016), has to do with building a character needed to live both independently and freely in community for oneself, with others and for others and has to do with doing things for people. The philosophical concept of self-reliance focuses on the power of independence, creativity, originality and belief in the strength and people's resilience. Sanga (2016) mentioned that self-reliance was advocated by Mahatma Gandhi (1859-1948) who defined self-reliance as being independent, the ability to think and act without the help or influence of others as well as the ability to decide what to do. Marinova and Hossain (2006) and Forsberg (2019) pointed out some characteristics of self-reliance which promotes sustainability and alleviate poverty to include; simplicity, responsibility, respect, commitment and creativity. For Forsberg (2019), a self-reliant community takes responsibility for its actions in creating and using goods as much as possible in a self-sufficient manner. Forsberg (2019) further pointed out that there has to be respect that has to do with considering fellow citizens which is a source of enjoyment for the communities. With commitment, it is expected that communities should be working and should not rely on help from outside to guarantee the provision of their needs and economic security. From an economic point of view, the long-term equitable access to resources needs to be guaranteed by the replenishing of any resources used. Therefore new solutions are the key to success for implementing such a change. The concept of self-reliance implies that a community is a constant source of creativity and ideas about how the present can be made better (Forsberg, 2019).

The study focused mainly on economic and social self-reliance and whether education provided at RECs was relevant to the society. This is because educated individuals must serve society, education must be problem-solving and education must be work-oriented (Cassidy, 2013). Cassidy emphasized that after training in their different fields of study learners are expected to have an ability to do practical work towards providing for the needs of the households based on the knowledge and skills acquired. Cassidy further pointed out that education involves participation of individuals voluntarily, contribution to a group of people by supporting certain causes and norms that benefit the collective whole. Self-reliance is broad, therefore, the researcher felt economic self-reliance and social self-reliance were relevant for the study as it investigated how the REC electrical installation programme promoted self-reliance among its graduates.

The RECs form an integral and essential part of the provision of adult education in Eswatini. RECs were established in 1976 as a means of increasing the provision of education in the country, particularly in the rural areas. They were a follow-up to the National Movement (*Imbokodvo* Manifesto), which stated that education is an inalienable right of each Swazi and that each Swazi has a right to receive education to the best of his/her ability. Ginindza (1991) pointed out that RECs were also established as a part of the



recommendations of the Education Commission of 1975. The first seven RECs were funded by the World Bank and they were attached to high schools (Ministry of Education & Training, 2004). The eighth REC was established with funding from UNICEF and was attached to a primary school at Maloyi Central Primary School. The Kellogg Foundation participated in improving the RECs after the World Bank stopped their funding. When the Kellogg Foundation stopped funding the programme in 1993, the expansion of RECs services also stopped. It is in this light that the Department of Adult and Non-formal Education took over to expand the infrastructure and procure equipment for efficient delivery of services (Ginindza, 1991).

The RECs were merged with high schools with the purpose of sharing resources in terms of classrooms, equipment, water, electricity, human resource to mention a few (Ministry of Education & Training, 2004). However, the sharing of resources has been reduced from happening because of the high increase in enrolments of pupils in schools (Ministry of Education & Training, 2014). The increase in the number of pupils led to inadequate classrooms to cater for both formal and non-formal education learners. There were; clashes of operating hours as the formal section used the classes from 8:00 am to 4:00 pm and at times it was not possible for some REC learners to have class during late hours as the clientele had other responsibilities (Ministry of Education & Training, 2015). The classes that RECs were using did not have funding for maintenance as the RECs tuition fee was not enough to cater for all the needs of the centres. The RECs have few learners, limited centres to provide more skills that are needed by the communities (Ministry of Education & Training, 2016). Therefore, the classes and laboratories have mostly been occupied by the pupils throughout the day which has made it difficult for the adults to use those classrooms during the day therefore compromising the delivery of services of training, and community development (Ginindza, 1991) to name but a few.

### **Location of the RECs**

The Rural Education Centres (RECs) operate in rural areas (Swazi Nation Land) under the leadership of chiefs of the Swazi people. The areas where these RECs were located had a lot of homesteads and students who did not qualify to enrol with the universities and colleges available in the country found themselves doing nothing in the communities. The people living in the rural communities where the RECs are located are faced with vulnerability to ill-health, economic deprivation, displacement, disasters, and to powerlessness of not having an influence in key decisions affecting their lives in community development (Ministry of Economic Planning & Development, 2007). The Ministry of Economic Planning and Development (2007) pointed out that most people living in rural areas are faced with poverty as they do not have adequate incomes to buy the minimum amount of food necessary to sustain a normal and active life. A study conducted by the Ministry of Economic Planning and Development which was a Participatory Poverty Assessment (PPA) of 1997 pointed out some poverty factors in most rural areas of Eswatini, including poor conditions of housing and clothing, as well as lack of access to basic education and health. It is also indicated that income and human poverty are related (UNICEF, 2009). The RECs are using the constituency (*tinkhundla*) system to reach out to the people in communities through community development officers and constituency council. The above predicaments have therefore led to the establishment of RECs with the hope to aid rural development through providing training in practical skills which lead to income-generation, self-employment and self-reliance (Dlamini, 2017). It is on the basis of the above-mentioned challenges that the researcher sought to conduct



the study and find out how the REC electrical installation programme was helping the rural people to become self-reliant. RECs offer programmes which are designed to equip out-of-school youth and adults with skills, knowledge and attitudes on how to face and meet expectations of the ever-changing society. The researcher chose evaluating the impact of electrical installation programme because the skills acquired in the programme could assist an individual to carry out basic domestic electrical work, such as the installation and replacement of electrical components, putting in and/ or rerouting cables, lighting, and repairing electrical appliances in order to get money for a living without being employed by a company. However, there is little that is known in terms of the electrical installation graduates having potential to start self-reliant projects, hence the need for the study. Therefore, this study evaluated what the Ntfontjeni REC electrical installation programme did regarding the promotion of self-reliance among graduates in Eswatini Hhohho region. The study looked at outcomes evaluation that assessed the impact of the electrical installation programme on producing change among learners who have graduated from the REC during years 2013, 2016, 2017 & 2018. In 2014 and 2015 the electrical installation programme was not in existence in the centre following that in 2013 the programme was piloted with sponsorship from the Chinese government through the Ministry of Commerce. The REC in 2016 therefore put the programme into existence.

## REVIEW OF RELATED LITERATURE

### Evaluation

Evaluation is an important aspect to be done in all programmes in order to ensure that the programmes are achieving their intended goal. According to Norland (2009), evaluation is the process that critically examines a programme. It involves collecting and analyzing information about programme activities. Boothroyd (2018) pointed out that outcome evaluation is a method of determining how well a programme achieved its objectives by measuring results. To ascertain how well programmes achieved desired objectives, it is first important to have clearly defined objectives. According to Feurstein (2016), the following purposes of evaluation are worth noting: to help the organization assess where it is going and whether it needs to change directions; to make better plans for the future using lessons learned from the findings; to make performance more effective; to collect more information on the programme / project; to see if the activity is costing large amounts but achieving little; to see if all the effort has been effective; to share experience with other organizations running similar activities among others.

Kirkpatrick's (1993) four-level training evaluation model is a model which was used as a theoretical framework. Kirkpatrick (1993) updated the model in 2009. Kirkpatrick (2009) pointed out the Kirkpatrick's four-level training evaluation model is used for analyzing learning effectiveness. Kirkpatrick's model elaborated that any time an individual delivers training to people, they need to know how effective it is by bearing in mind some questions which includes: are the participants putting their learning into practice? Is it positively impacting their role and the wider organization? (p. 1). Kirkpatrick (2009) emphasized that an individual can use the evaluation model to objectively analyze the impact of training, also to work out how well team members learned, and to improve learning in the future. Kirkpatrick model is a known model for analyzing and evaluating the results of training and educational programmes. Kirkpatrick stressed that evaluation model takes into account any method of training, both informal and formal, to determine aptitude



based on four-level criteria. In the study, Kirkpatrick's evaluation model worked as a guide in analyzing the impact of electrical installation programme in promoting self-reliance among the graduates. Kirkpatrick's (2009) four levels are Reaction, Learning, Behaviour and Results. Kirkpatrick's model can be implemented before, during and following training to show the value of training.

Kirkpatrick (2009) pointed out that in reaction the evaluator wants people to feel that training is valuable through measuring how engaged they were, how actively they contributed, and how they reacted to the training helps to understand how well they received it. Kirkpatrick further stated that reaction enables evaluator to make improvements to future programmes, by identifying important topics that might have been missing. Kirkpatrick (1993) pointed out that Level 2 learning focuses on measuring what trainees have and haven't learned. Kirkpatrick (2009) stated that Level 2 also measures what learners think they will be able to do differently as a result, how confident are they that they can do it, and how motivated learners are to make changes. Shek and Chak (2012) emphasized that learning demonstrates how training has developed skills, attitudes and knowledge, as well as confidence and learners commitment. Kirkpatrick added that level two learning measures how much learners have learned, start by identifying what evaluators want to evaluate. Kirkpatrick stated that the training sessions should have specific learning objectives and that becomes the starting point for the evaluator. Kirkpatrick elaborated that level two measures learning in different ways, depending on the objectives. But it's helpful to measure these areas both before and after training.

Kirkpatrick emphasized that before the training begins, test learners to determine their knowledge, skill levels and attitudes. Kirkpatrick added that when the training is finished, test the learners a second time to measure what they have learned, or measure their learning with interviews or verbal assessments. Kirkpatrick emphasized that evaluating at this level is meant to gauge the level learners have develop in expertise, knowledge, or mindset. Kirkpatrick (1993) pointed out that Level 3 behaviour helps individuals to understand how well people apply their training. Kirkpatrick stated that Level 3 can also reveal where people might need help. But behaviour can only change when conditions are favourable. For example, assessing learners after a training session and can see little change, and conclude that they learned nothing, and that the training was ineffective. Kirkpatrick (2009) emphasized that Level 3 behaviour analyses the differences in the participant's behaviour after completing the training programme. Kirkpatrick added that assessing the change makes it possible to figure out if the knowledge, mindset, or skills the programme taught are being used at the workplace. Level 4 is commonly regarded as the primary goal of the programme. It determines the overall success of the training model by measuring factors of the programme. At this level, it analyzes the final results of the training. This includes outcomes that training programmes or organizations have decided are good for business and good for learners, and which demonstrate a good return on investment.

Kirkpatrick (1993) emphasized that Level 4 measures and analyses the impact training has had at the level, and be sure to tie it to the individual or programme. Kirkpatrick added that the results level identify which outcomes, benefits, or final results are most closely linked to the training, and to come up with an effective way to measure these outcomes in the long-term. The theory is relevant to the study helped offers broad information that helps in understanding training evaluation in a systematic way especially in this study that assessed the impact of the training programme in achieving its objectives. The theory helped to make





improvements to future programmes, by a) identifying important topics that might have been missing in the programmes. Additionally the theory b) served as a guide about the kind of questions that were asked in the field while collecting data. The theory c) explained the phenomena in detail and that became clearer to the researcher pertaining to how the evaluation study can be conducted. It made it easy for the researcher d) to interpret the data and describe the behaviours that were portrayed by the participants of the study.

### **Evaluation of the training programmes**

Rossi and Freeman (2015) highlighted that evaluations are conducted for variety of reasons which are; to judge the worth of ongoing programmes, to assess the utility of innovative programmes and initiatives, to increase, the effectiveness of programmes management and administration, and to meet various accountability requirements. Feurstein (2016) agreed with Rossi and Freeman (2015) and added on the purpose of evaluation that focuses on achievement, measuring progress, improving monitoring, identifying strengths and weaknesses, seeing if the effort was effective, cost-benefit analysis and collecting information to plan, manage programmes activities better and sharing experience. Aspinwall (2017) highlighted some similarities and differences between research and evaluation activities which mentioned that they share many characteristics and approaches. Both add to new knowledge, profit from and stimulate the development theory and contribute to a Science of education and perhaps required for its orderly development.

Kalomba (2016) study on vocational training as a factor of addressing employability and promote self-employment in the Malawi revealed that programme outcomes should evaluate effect on skill development, economic outcomes and measurements of well-being which should produce a positive effects to the learners. Vocational Education Training benefits help individuals develop social competencies and improve health-related behaviour. Vocational education training can have a positive impact on a personal motivation, attitude, self-esteem, self-confidence especially among the unemployed as well as creating self-reliance to its learners. Kalomba (2016) concurred with Pihlaja (2014) that vocational benefits on economic status improve quality of life, confidence for brighter future and aim to support others.

### **Self-reliance**

Admad, Krogh and Gjotterud (2014) viewed self-reliance as the social and economic ability of an individual, a household or a community to meet essential needs (including: protection, food, water, shelter, personal safety, health and education) in a sustainable manner and with dignity. Cassidy (2013) viewed self-reliance, as developing and strengthening livelihoods of people issues of concern, and reducing their vulnerability and long-term reliance on humanitarian / external assistance which is one of the mandate of the researcher to determine if the REC electrical installation programme improve the skills of its graduates.

### **Social self-reliance**

Cassidy (2013) defined social self-reliance as a social participation and religiousness lie at the core of the assessment because they are both frequently cited as reasons that self-reliance is impracticable. Gelpi (2015) emphasised that social participation involves an individual's voluntary contribution to a group of people by supporting certain causes and norms that benefit the collective whole. When learners are just informed



by teachers about facts derived from prescribed sources and compelled to accept and memorise the facts in preparation for an examination, the knowledge developed is unlikely to enhance critical thinking. However, when learners get a chance to construct their own knowledge through practical, hands-on experience, as envisaged in social self-reliance thinking, problem-solving skills and critical thinking are more likely to develop. Learners participating in local agricultural activities will learn by participation, by engaging in simpler and gradually more complex tasks. Learning from skilled role models is an important benefit of participating in real-life activities (Bandura, 2006). Admad, Krogh and Gjotterud (2014) emphasised that to facilitate interaction between learners and society the environment is built on the understanding that learning is not solely an individual, abstract undertaking.

### **Economic self-reliance**

Godfrey (2008) viewed economic self-reliance is an individual's ability to garner and hold economic resources in excess of their basic needs. The concept of economic self-reliance recognizes that there are individuals who are unable (due to physical or mental disability) to garner any surplus resources, individuals with surpluses. Cassidy (2013) emphasised the importance of economic self-reliance that it provides a solid platform from which people can develop and reach their full human potential. Once people possess a sustainable surplus, they can turn their attention to the pursuit that psychologist Abraham Maslow termed self-actualization: developing and expressing talents, skills, emotions, and values to the fullest extent (Cassidy, 2013).

### **Education for self-reliance**

Kassam (2010) agreed with Nyerere's definition (1967) that education for self-reliance comprehensively presents the need for a radical definition of organization and content of education in Tanzania. Kassam emphasised that the need arises from diagnosis of the major pitfalls of inherited colonial education. Essentially, colonial education was founded upon the principle of capitalism. As such, colonial education entailed several features. First, it tended to promote a class of elites, thus encouraging inequality and class structure. Second, it divorced its participants from society and discouraged them from unconditional service to the community. Third, it tended to be formal, stressing book learning and dispensing traditional informal knowledge and wisdom. Finally, it tended to be unproductive, discouraging students and pupils from hard work. Post-independent education in Tanzania simply imbibed the colonial aims and curricula, and thus enhanced its subsequent ideals. On the issue of equality the SADC protocol on education and training (2016) stated four key documents on the issue of gender equality and its relationship to development. The SADC protocol emphasised on recognition on the position of women within the society can contribute positively or negatively to the development of the society. SADC protocol showed the presently women constitute the majority of the poor, and in some SADC countries they may be seriously handicapped in terms of education and training, particularly at higher levels.

## **METHODOLOGY**

The interpretive paradigm and evaluation research design was used in the small scale study that was conducted at the Hhohho region. According to Rakotsoane (2019) evaluation research design is the design





used by researcher to systematically and objectively assess a completed project or programme. Showkat (2017) pointed out that evaluation research is used to determine the impact of a social intervention that is action taken within the social context that is designed to produce an intended result. Therefore the study evaluated the impact of electrical installation programme that was offered to learners with the intention of enabling them to become self-reliant.

Qualitative methods were used to uncover the deeper meaning and significance of the human behaviour and experience as well as likely contradictory beliefs, behaviour and values of the graduates about the Ntfontjeni REC's electrical installation programme in promoting self-reliance in Eswatini. Qualitative approach was suitable to use when establishing the impact of the electrical installation programme offered by the Ntfontjeni REC in achieving its goal of promoting self-reliance among its graduates. Through the qualitative methods, graduates from the electrical installation programme could express their views and opinions regarding the programme and show whether they acquired skills that helped them to become self-reliant.

**Target Population**

According to Babbie (2010), a population is that aggregation of elements from which a sample is selected. It is further defined as a group of people from which the researcher wants to draw conclusions. The study targeted graduates from the electrical installation programme which had been running for the past four years 2013, 2016, 2017 & 2018. There were 81 graduates since the programme commenced. The population size also included community members who had been assisted by the graduates and an instructor of the electrical installation programme who facilitated the four groups.

Table 1  
*Enrolments for the electrical programme 2013, 2016, 2017, and 2018*

Year	Enrolments
2013	17
2016	23
2017	22
2018	19

Source MoET 2014, 2017, 2018 & 2019

**Data collection procedures**

A letter granting permission to collect data from REC electrical installation programme was sought from the University of Eswatini and written by the supervisor for the researcher to take to the participants. The researcher met the head teacher and the teacher leader of Ntfontjen REC for familiarisation and assistance with data whom they introduced her to the electrical installation instructor.

Data were collected using interviews, observation and documents. The population was eighty-one graduates since 2013, 2016, 2017 & 2018 and twelve were conveniently sampled for the study. The only electrical installation instructor was purposively chosen to participate in the study and snowball sampling was used for four (4) community members. All the participants were individually interviewed using semi-structured



interview guide with different sets of questions for different participants. Data were analyzed qualitatively through thematic analysis. Thematic analysis is a search for themes that emerge as being important to the description of the phenomenon (Best & Kahn, 2012). The process involves the identification of themes through careful reading and re-reading of the data (Ngozwana, 2018). Themes and sub-themes emerged during data collection and the objectives of the study guided the analysis. Ethics such as maintaining confidentiality, informed consent, anonymity and free withdrawal from the study were discussed with the participants before they were interviewed (Cohen, Manion & Morrison, 2011).

### **Limitations of the study**

The study did not cover all aspects of evaluation or even all programmes especially since the REC has several programmes. Therefore owing to scarcity of resources and limited time, not all programmes were included but only the electrical installation programme. Also even with the electrical installation programme, the focus was on outcomes evaluation, which looked at the changes or effects the programme has had on graduates about their self-reliance as opposed to looking at all aspects of evaluation to this programme (process / implementation, input etc.). The study results cannot be generalised to all RECs instead the study reported about the results pertaining to one programme at Ntfontjeni REC. Finances and time were limited for the researcher to cover other regions and other organizations that offer education and training programmes for youth and adults.

Furthermore, the researcher encountered challenges as some of the graduates were not having contact details and their relatives' numbers did not exist on the network. Some graduates had changed their numbers, therefore the researcher found strangers who did not know anything about the graduates. That prolonged the time for starting data collection. While another limitation encountered was the COVID-19 lockdown as the study was conducted at a time when the country was on partial lockdown. Therefore, the researcher experienced difficulties when collecting data owing to the partial lockdown, social distancing and restricted movements. The researcher had difficulties accessing selected participants who were nearby, to be interviewed as some were in fear while others were not available for the study owing to COVID-19. There were strict controls in the place where they were residing; outsiders were not allowed to enter at their gate. The researcher had to replace them with other participants who were living far and this increased costs to the researcher.

### **FINDINGS AND DISCUSSION**

The findings are presented according to the responses coming from participants, graduates being the main focus. Then supporting responses from the instructor, community members, observation by the researcher and aspects from the perused documents are presented to corroborate accounts from the graduates.

#### **Level of goal-achievement by the Ntfontjeni REC's electrical installation programme**

This study had its first objective as establishing the level to which the electrical installation programme had achieved its goal of promoting self-reliance among its graduates. From the participants' perspective the electrical installation programme had achieved its goal of promoting self-reliance among graduates. This was reflected by the electrical installation programme's objective that was partially met, the activities that



were conducted showed engagement of learners. The graduates indicated that teaching was easy to understand. The responses showed that their expectations were met, thus they were satisfied with the training programme.

### ***Objectives of the electrical installation programme***

To ensure that the electrical installation programme objectives were addressed, responses were obtained from the graduates and the instructor. Several themes were identified, some of which were inclined to be content areas. The responses revealed that the content areas were: house wiring, safety precautions, repairs of electrical appliances and costing and pricing / calculations of materials. In terms of house wiring the participants indicated that house wiring was one of the objectives of the electrical installation programme that was met. As graduates responded:

*In the electrical installation programme learning is all about house wiring as we were doing Grade 3. What we were supposed to cover was the house wiring, safety precautions, electrical appliances repairs and dealing with electrical faults and these were all addressed (G 8, 2017).*

*House wiring, safety precaution, repairs of electrical appliances and costing were the topics we covered in the programme (G 1, 2016).*

The other aspects of the electrical installation programme were safety precaution and some participants indicated that the safety precautions were also an objective for the electrical installation programme. A graduate noted:

*The objectives of the electrical installation programme were to wire house, trouble shooting, safety precautions, bell wiring, appliances repairs and calculations, costing and pricing. Then emphasized more on safety in everything pertaining electricity as electricity is dangerous. We learnt all (G 3, 2013).*

The electrical instructor confirmed that the objectives were met as stated by the graduates and agreed that the goal of the programme is to cover all the sections in order to create a self-reliant learner. In his words:

*The objectives of the electrical installation programme is to be able to wire a house and maintain in, install and repair appliances, general knowledge of electricity, and safety precautions and all the objectives were met as we learnt all. This is seen by the number of learners who make use of the skill out in their communities. They do call me and consult whenever they come across a problem and also inform me of their progress in life (I).*

The instructor indicated that the learners after covering the lessons become self-independent and were able to work on their own to make a living. This implies that a training programme with goals and objectives enhances learning to be more directive and focused. The activities done allowed both the instructor and learners to follow their learning step-by-step.



### **Activities done**

For the activities that were done in the REC electrical installation programme, the following content areas emerged from the participants responses: individual work, group work and field work / community practice and are presented below. On individual work the responses on individual work stated as follows:

*Activities were done very well. We did a lot of practice in a group and individually and they promised us at the beginning of the training. I was really pleased (G 9, 2018).*

*Working alone had helped me gain confidence as I was able to see how well I was able to acquire the skills. We also did group works and community practical's which were also helping. (G 2, 2017)*

Findings from the graduates indicated that the individual activities were done to ensure whether the individual learner had acquired the knowledge and skill effectively. Exposing individuals to perform activities could be one of the content areas in the electrical installation programme. In training programmes the reaction of an individual learner is important to measure whether the learner had acquired the necessary knowledge and skills. This reveals that the REC was concerned with the individual learner's change of behaviour to portray some self-reliant qualities to show the effectiveness of the training. Graduates indicated that they performed group work.

On group activities graduates' responses on group work activities and their responses are presented below:

*Most of the activities we did in class were done individually in groups and even going to the field for community practice. The instructor was always supporting, guiding and assisting us when experiencing some difficulties (G 11, 2018).*

One graduate revealed that the group activities had helped him a lot as sometime he was afraid to ask some questions where he did not understand, then when they were doing the work in groups he felt free to ask from the colleagues. Findings revealed that the content area of group activities was done which helped the individual learners to share their experiences towards the learnt topic. Participants responses on field work / community practice stated as indicated:

*Content was covered all the activities were done. We even went to the community to do the practice of wiring houses and fixing electrical fault for the people in the communities. This developed our confidence to do the work even at home alone (G 7, 2016).*

Graduates revealed that they even had field practical to enhance the learners to have an experience on the out of classroom content. This implies that the graduates gain the real context exposure that develop confidence among them to do the work without doubt enhance achieving the goal of promoting self-reliance among them.



### **Engagement of learners**

The responses emerged the theme engagement of graduates into learning in the electrical installation programme and several sub-themes emerged from the theme which is presented below as individual engagement, group practical and confidence building. On the aspect of individual engagement in the electrical installation programme graduates responded as follows:

*Every learner was engaged in learning. Electrical installation programme is more of a practical programme, so every learner was given the opportunity to do some practice as part of the training. The learners were supposed to do some individual test project (G 6, 2013).*

All graduates revealed that they were engaged in some learning whereby they were supposed to do some individual task up to the end without any help to ensure that the learning was effective. This reveals that it is an individual responsibility to acquire some knowledge and skill to develop the inner self for the change of behaviour. The findings revealed that the graduates were empowered with electrical installation skills and had done practice based on the topics the graduates had to cover. It revealed the learner involvement through the process of learning. The graduates indicated that the instructor was able to impart knowledge to the learners and allow learners to practice what he demonstrated and in that way learning becomes interesting. The instructor revealed that the training was useful to the learners; learners were engaged in individual activities to see whether each individual learner had acquired the necessary electrical installation skills.

*We were engaged in the programme as we had plenty of individual and group projects which enhances us to understand more and gave us more confidence to outside classroom projects. The instructor even acquired for us some three 2 bedroom houses for community people which we wired as a practical project outside class. This builds more confidence with us as learners and understood more. This was learning in the community in the real context (G 9, 2018).*

The graduate indicated that the engagements in the learning enhanced the graduates to gain confidence and be able to work for people in their communities. The community members revealed that the learners were engaged in some learning in some communities by doing some work for community people at a lower fee. The community member indicated that it helped both the community people and the learners as they were able to gain more confidence toward the work with their instructor's supervision.

### **DISCUSSION OF FINDINGS**

The findings revealed that the twelve graduates who were studied were men. As noted earlier the graduates were the focus of the study. This showed that there was still gender imbalance among some educational programmes. The electrical installation programme is an area in the natural Sciences. Women are not adequately represented in Science programmes. There is a history of poor participation of women in the Sciences. That is why the world is encouraging women to participate in Science programmes. For instance, if there is a position to apply for in the Sciences, women are specifically encouraged to apply for the position. Therefore these findings confirmed what some studies had revealed about the participation of women in



Science programmes (SADC, 2016). There may be factors that influence the gender imbalance among the programme, some of which may be caused by the people who are recruiting and marketing the programme that they are not doing enough in their recruitment exercise (Ministry of Education & Training, 2013).

The findings revealed that the level to which the electrical installation programme achieves its goal of promoting self-reliance among its graduates had been partially met. The findings indicated that the objective of the electrical installation programme were wiring houses, learn about safety precautions, repairing of electrical appliances and costing and pricing of electrical projects and were partially met. The findings were in agreement with Feurstein (2016), Rossi and Freeman (2015) who pointed out that the purpose of evaluation is to focus on achievement, measuring progress, improving monitoring, identifying strengths and weaknesses, seeing if the effort was effective, cost-benefit analysis and collecting information to plan, manage programme activities, and sharing experience.

The findings revealed that in achieving the objectives of promoting self-reliance graduates were involved by performing activities which were done individually, in groups and through field work to ensure that the individual learner had acquired the knowledge and skill. The findings confirmed what Kirkpatrick (1993) in his evaluation model first level reaction as it took into consideration that evaluation training programmes should enable the evaluator to make further suggestions for improvement to the programme designers in future programmes. The finding also concurred with Kalomba (2016) and Pihlaja (2014) who pointed out that vocational training programmes benefit individual's economic status, improve quality of life, confidence and aim to support other community development initiatives.

The findings revealed that graduates were engaged individually and in groups in order to build their confidence. The findings showed that learners' engagement built confidence which encouraged them to work for people in the communities. The findings were in agreement with Bandura (2006) who pointed out that learners participating in local activities learn by participating, by engaging in simpler and gradually more complex tasks. Bandura pointed out that learning from skilled role models is an important benefit of participating in real-life activities. Kassam (2010) also pointed out that learning takes place through participation in practical working in communities.

## **CONCLUSION**

The findings outlined that the electrical installation programme had partially achieved its goal of promoting self-reliance among the graduates. The findings revealed that the electrical installation programme training objectives were partially met such as wiring houses, repairing electrical appliances and learning about costing and pricing as graduates were engaged individually, in groups and during field projects. Engagement in learning was able to build graduates' confidence as they did practical work. The findings indicated that the electrical installation programme activities were done individually, in groups and through field practice while graduates were training, which enabled them to put theory into practice.





It can be concluded that the impact of the Ntfontjeni REC's electrical installation programme on helping out-of-school youth and adults in achieving its goal of promoting self-reliance was partially achieved as graduates became self-reliant as they were able to meet the electrical installation programme objectives which were: house wiring and maintenance, safety precautions, repairs of electrical appliances and costing and pricing items in their electrical projects. The graduates were able to do some electrical activities individually, in groups and some field work to boost their confidence and become satisfied with the whole electrical installation programme.

Goal-achievement of self-reliance – The study revealed that the electrical installation programme offered by Ntfontjeni REC partially fulfilled its objective of making graduates self-reliant. Challenges of graduates failing to utilize the electrical skill owing to lack of electrical tools for establishing themselves were noted. Therefore this study recommends that the MoET in conjunction with the Ministry of Sports and Youth affairs should allocate funding to enable the graduates start income-generation projects. Moreover, challenges of sharing of the venue which disturb learning were observed; therefore this study recommends that the MoET should build more classrooms for both RECs and the pupils so that sharing can be avoided for learning to happen effectively.

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