Perceived impact of training in Ghana implemented by Akuapem community development programme (ACDEP) on community management of rural water and sanitation facilities.

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Abstract
Provision and management of water and sanitation facilities is a major challenge in developing countries and governments in these countries are unable to deliver, manage and maintain basic infrastructure for their growing populations. This study explored participants' perceived impact of water and sanitation committee training implemented by Akuapem Community Development Programme (ACDEP) on community management of rural water and sanitation facilities. The study aimed at assessing participants' satisfaction with respect to the general organization of the training, what has been learnt, how the knowledge gained is being applied, and evidence in the community that the WATSAN committee members are performing their roles. Eighty respondents selected from twenty (20) communities were interviewed for the study. The data is presented in simple statistical charts including pie chart and bar graphs generated from the Statistical Package for Social Scientists (SPSS), computer software used for data analysis. The results indicated that the training was very useful and relevant in managing the WATSAN facilities provided in the communities and participants are satisfied with the way ACDEP organised the training. The committee members were also observed to experience some challenges in performing their roles and responsibilities. Based on the results, it is recommended that ACDEP organise a retraining programme and ensure occasional monitoring visits to the old communities. ACDEP should also put in place systems that will ensure that every training programme is evaluated using scientific methods and well documented for future use.

Key Words: Water and Sanitation Committee, Community Management of Rural Water and Sanitation, Sustainability of Rural Water and Sanitation Facilities, Akuapem Community Development Programme and Community Water and Sanitation Agency.

1. Introduction

Provision and management of water and sanitation facilities is a major challenge in developing countries. Governments in these countries are unable to deliver, manage and maintain basic infrastructure for their growing populations. Assessment of the global water and sanitation situation in the 1990s revealed that most developing countries were still performing below expectation. More than one billion people were found to be without proper water supplies and almost three billion defecated in the open or in unhygienic facilities (WHO/UNICEF, 2000). Based on these results, the international community began to put in more efforts as a means of improving the water and sanitation situation in the world. One of the key areas emphasized at the time was building national and local capacities to develop policy reform and institutional change towards community-based approaches to the provision and management of water and sanitation facilities (Black, 1998). This led to a growing trend in many developing countries including sub-Saharan Africa to encourage rural small town and peri-urban communities to manage their own water and sanitation facilities (Wegelin-Shuringa, 1998).

In line with this trend, and as part of the government's efforts to increase access to safe water, sanitation and promote health, Ghana introduced a new National Community Water and Sanitation Programme (NCWSP) in 1994. According to Ministry of Works and Housing (2005), the ultimate goal of the reform is to ensure sustainable delivery of potable water and sanitation services to beneficiary communities. The new reform was also aimed at supporting rural communities and small towns to form gender-balanced voluntary groups including one or two

village-based caretakers. These committees will receive special training aimed at building their capacity to enable them independently operate and maintain the water and sanitation facilities provided in the communities.

Akuapem Community Development Programme (ACDEP) is one of the organizations that have been active in implementing rural water and sanitation facilities in the country. The main activities of ACDEP are water provision, sanitation improvement, hygiene promotion, capacity building and agro-forestry.

The WATSAN committee training programme is one of the interventions that ACDEP has designed to address the issue of community management of water and sanitation facilities. This training is part of the national integrated water and sanitation programme. The training aims at supporting the WATSAN committees to acquire leadership and management skills so that they can become effective community leaders in maintaining and managing the facilities provided.

Training evaluation is one method used to assess the impact of a training programme. According to McNamara (2008), such evaluations seek to find out what the learner feels about the training, what facts and knowledge among others did the learner gain, what skills did the learner develop, that is, what new information is the learner using on the job, what results occurred, that is, did the learner apply the new skills to the necessary tasks in the organisation and if so, what results were achieved. Unfortunately there has not been any such study in ACDEP. The implication of the absence of such a study is that the organisation will have a challenge in justifying to their donors the resources required to conduct an effective training or share the impact of their training based on scientific evidence with stakeholders. ACDEP is also not able to tell whether WATSAN committee members have developed new skills and abilities as a result of the training to perform their duties.

This paper therefore seeks to assess the perceived impact of the WATSAN committee training implemented by ACDEP in their beneficiary communities. The study will assess the beneficiary's perception of ACDEP's training programme in terms of the training objectives, content, teaching methods, resource person's competencies, the training environment and logistics, the learning that has occurred due to the training program and whether the committee members are applying the knowledge gained in their communities after the training.

2. Literature Review

Community management has become a leading concept for implementing water and sanitation supply systems in rural areas in developing countries. The purpose of community management is to give control of decisions and resources to community groups to manage and develop facilities that benefit them (Dongeir, Domelen & Ostronm, 2003) In a WHO (1996) document, it was noted that community management ensures greater sustainability of projects , improve community identification with the system leading to greater willingness to pay for it, accepting changes in practices and making further improvements more likely to results in the programme suitability. It also increases potentials for achievement when external and local resources are pooled out.

A number of studies have been conducted to prove that there is a positive relationship between community management and project sustainability. For example, Sara and Katz (1997) conducted a study on water supply study of 1,875 households in rural communities in six countries (Benin, Bolivia, Honduras, Indonesia, Pakistan and Uganda) concluded that water systems sustainability is significantly higher when communities manage, control key investment decisions and pay part of the investment costs).

Effective community management of projects requires the community members to have the capacity and the willingness to take up the responsibility of managing and maintaining the facilities. These capacities among others will include institutional, financial and human resource. Deepa (1993) enumerated some of these capacities as ability of the community to link with agencies that provide the facilities, have autonomy, have good leadership skills and have managerial and administrative skills, have technical knowledge, have confidence and assertiveness, have good systems and procedures for generation and management of revenue and provision of affordable services. Deepa (1993) concluded that human capacity development is central to the achievement of community management.

Effective trainings do not just occur; they are planned and require skills to organise. Many training experts today adopt the Instructional System Design (ISD) also known as the systematic approach in organising training. According to Clark (1995), the systematic approach to training is a planned creation of a learning programme. It is a development programme that uses a step-by-step process to solve problems. Some of the benefits of the system approach according to Clark are that the model is a management tool that makes the training model more efficient. The ISD process includes conducting of training needs assessment, designing the training, developing the training, implementing training and evaluating training.

The training needs assessment or analysis is a training process that involves all those activities and skills necessary to identifying and analysing training needs accurately (Peterson 1998). It helps in identifying gaps and

considers if training can solve the problem in an organisation. The primary purpose of training needs assessment is to ensure that there is a need for the training and to identify the nature of the content of the training program. According to Clark (1995) the needs assessment serves as the building block of a training programme. He explains that the basis for who must be trained, what must be trained, when training will occur, and where the training will take place is determined after the needs assessment. The product of training needs assessment therefore is the foundation for all subsequent training development activities.

According to Alonso, Lopez, Manrique and Vines, (2005) the training design defines the how of the training and specifies the learner's learning process, defines the learning approach, the structure and granularity of the information to be delivered (facts, concepts processes, procedure and principles), standards to be used, execution criteria and achievements expected of the learner. The US Department National Institute of Corrections Academy division document, designing learner –centered training 1992, specified that a training design should indicate the target audience for the training (who will be invited, required or allowed to attend the training), the outcome or the goal of the training, that is, what will happen as a result of the target group successfully completing the training, a task that has to be performed in order to accomplish the outcome of goal and what knowledge and skills the trainees would need to perform after each task. The design should also indicate measurable performance objectives, instructional strategies that will engage participants actively and help them reach or accomplish the desired performance objectives and training aids that clarify learning points and assist participants in remembering information presented in the training.

Training development translates design decisions into training materials. It consists of developing course material for the trainer including handouts, workbooks, visual aids, demonstration props and course material for the trainee including summary handouts. According to Clark (1995), the training development phase of the ISD approach specifies the selection of the learning activities that will best assist in the learning process, choosing of the delivery system for the training, reviewing of existing material, developing instruction, synthesizing training material and media into an integrated programme and validating instruction. The final product in the development of training is the training manual or book that will assist the training audience in their learning

Training implementation of the ISD approach is the phase in which the knowledge is being transferred to the learner. It is the process by which the learners are taken through some activities based on what has been designed and developed to enable them gain the knowledge, skills and abilities that need to be acquired. Clark (1995) outlines three factors that ensure successful learning. These are the trainers' knowledge of the subject matter, the training environment and involvement skills.

Training evaluation is used to determine whether the purpose of the training is accomplished or not. It is an important element in the training process that helps to measure the impact of any training program. It assesses the total value of a training system, training course or programme in social as well as financial terms and it attempts to measure the overall cost-benefit of the course or programme and not just the achievement of its laid down objectives (Manpower Services Commission, 1981). Training evaluation is used to collect evidence that the training programme and learning opportunities developed in a workplace has an impact in the organization (Ribeiro, 2006).

Training evaluations may be conducted for a number of reasons. Easterby-Smith (1994) indicates that training evaluation could be for formative or summative purposes. Formative evaluation is a method of judging the worth of a programme while the programme activities are in progress (Clark, 1995)**.** This part of the evaluation focuses on the process and has been termed process evaluation (Sefried, 1998). Results of formative evaluations are often used to improve programme implementation by providing a feedback which can be used to modify future implementations (Fiore & Rose, 1999). Summative evaluation, on the other hand, is taken to assess the worth of a training programme at the end of the activities and focuses on the outcome **(**Clark, 1995). Summative evaluation assesses the extent to which the intervention achieved the outcomes described by its goals.

The most commonly used and known training evaluation model that has stood the test of time is the one proposed by Kirkpatrick (1994). He outlined four levels or steps of evaluation namely: reaction, learning, behaviour and results. He explained that at level one, information on the reactions of the participants at the end of a training programme is gathered. Here, participants assess the learning activity and give their satisfaction with it. This level measures the learners' perception or reaction of the whole training programme.

Level two assesses the amount of learning that has occurred due to a training programme. At this level, participants demonstrate what knowledge or skills they acquired through performance of exercises related to the learning activity. The intention at level three is to assess whether job performance changes as a result of training. It assesses the transfer of knowledge and skills to the participants' behaviour in the workplace.

Assessing behaviour, which is the third level of evaluation according to Kirkpatrick (1994), is aimed at determining the learner's skill to apply what has been learnt in the classroom. This evaluation involves testing the learners' capabilities to perform learned skills while on the job, rather than in the classroom.

Level four, according to Kirkpatrick (1994) assesses the impact of the overall training. This level measures the success of the training in terms of the costs and benefits of training programmes, i.e. organizational impact in terms of reduced costs, improved quality of work and increased quantity of work among others. It measures the overall impact that the training had on the organization.

Kirkpatrick's evaluation model though has received much criticism, is widely known and used.

The study adopted a training evaluation model proposed by Kirkpatrick to assess the WATSAN training implemented by ACDEP.

5. Methodology

The population for the study was all the members of the water and sanitation committee formed and trained by ACDEP in forty communities from the Akuapem North District. These were communities that had benefited from ACDEP's interventions from the late 1990s when the implementation of the new reform began in Ghana. Each committee comprised nine (9) members; the total population for this study was therefore three hundred and sixty (360) respondents.

The sample for the study comprises 80 (eighty) respondents selected randomly from twenty (20) WATSAN committees that received the training from ACDEP and consisted of men and women on the committee. Four members were selected from each community.

The researchers selected the twenty communities randomly from the sample frame of forty communities provided by ACDEP. Some of these communities had two or more committees, depending on the size of the communities and the number of facilities provided. With regards to specific respondents interviewed, four persons on the committee were interviewed and used in data analysis, namely the chairman, the secretary and two other persons of each committee. The chairman and secretary were selected purposely because they served as signatories to the WATSAN bank account, they prepared and kept WATSAN committee records and planned fund-raising activities among others. They are therefore very key respondents in assessing the training impact. Random sampling methodology was used to select the other members for responses from the list of other committee members provided by ACDEP in each community.

A structured interview was used as the means of data collection in this study. A structured interview is one in which the respondents of a research are asked the same questions in a precise manner and offering each respondent the same set of possible responses (GAO, 1991). This instrument is used when the researcher aims at collecting uniform data that can be compared, summed or subjected to other statistical analysis. It also allows use of probes, controls biases of the collector, allows oral and visual enquiry and reduces problems of illiterate respondents among others. The data collection process also used a face-to-face interview due to the low level of education of the respondents and also to enable the researcher observe as well as listen to the respondents during data collection.

The questions for the study were divided into four sections A-D (see appendix A). Section 'A' solicited information regarding the background of the respondents. This included information about their sex, age, role of the committee member, year in which they were trained, name of their community among others. Section 'B' solicited information on the reaction of participants to the training; the aim of this is to obtain participants satisfaction to the training with respect to logistics, training methods and facilitation. The researcher used the likert scale format to solicit responses under this section.

Section 'C' also solicited responses that examined the learning that occurred after the training. The questions were a retrospective evaluation design where respondents were required to answer the same questions for both post and pre testing (Rockwell & Kohn 1989). Section 'D' solicited responses that enabled the researcher to examine results and the impact of the training and how the committee members were applying the knowledge gained in their duties. This was done by inspecting beneficiaries' record-keeping materials, answering a set of questions on a yes or no basis and the extent to which they were applying the knowledge in their duties by selecting from a scale of 1-3 with 1 as poor and 3 as very good (refer to appendix A for details on research instruments).

The data collected was edited and the completed interviews were serially numbered for easy identification. Data was then scored and tabulated. Descriptive statistical analysis was used for analyses of the data. This is the representation of data in pictorial format where detailed examination and comparison of the individual data can be determined at a glance. The main statistical tools that were used to present the data collected included simple percentages and frequency distributions bar graphs and pie charts. Statistical Package for Social Scientists (SPSS), computer software was used to generate the percentages and frequencies of the data collected from the respondents. The pie charts and graphs were generated using Microsoft Excel

6. Results

The first objective of this study was to assess the reactions of the participants at the end of a training programme. Here, participants were given the opportunity to assess the entire learning activity and give their satisfaction with respect to the training objectives, training content, training methods, resource person's competencies and training environment and logistics. Results of these responses are expected to help ACDEP in improving the future training design, development, and the whole WATSAN training package implemented. The training objectives are goals expected to be achieved at the end of a given training programme to meet the needs of participants. These objectives according to the behaviourist are statements that indicate the behaviour that a learner is expected to demonstrate to show that he or she has mastered the knowledge or skills specified in the instruction. Participants' understanding of the training objectives is therefore important in facilitating learning. Two major questions were asked to test the training objectives in the study. These include respondent's perception on the clarity of the objectives and the relevance of the objectives to their duties as WATSAN Committee members. With respect to the clarity of the objectives, 58.8% of the respondents agreed to the statement that the objectives were clear, 13.8%, disagreed and 27.4% of the respondents were neutral to the statement. A graphical presentation is shown in Figure 1.

On the relevance of the training objectives to their assignments and duties in the communities, it was observed that out of the 80 respondents that were interviewed, 56% agreed to the statement, 15% disagreed to the statement and 29% were neutral to the statement. This question was asked with the assumption that the respondents know and understand their duties hence could measure and confirm what knowledge and skills they will require to perform those duties as WATSAN committee members. The overall measure of the training objectives as indicated in Figure. 1 reveals that more than half of the respondents had a clear understanding of the training objectives and thought the training objectives were relevant to their work as WATSAN Committee members and community leaders.

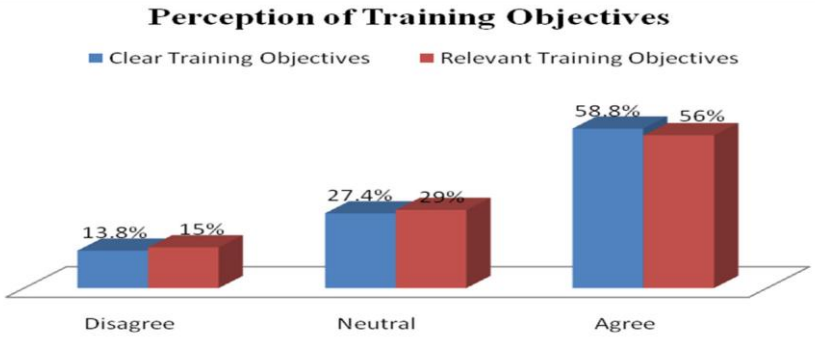

FIGURE 1: Bar graph showing respondents' perception of training objectives

6.1 Beneficiaries' Perception of the Training Content

To assess whether participants understood the training content and topics that were treated, the respondents were asked to indicate whether they agreed, disagreed or were neutral to the statements that the topics treated were clearly defined, too technical and difficult to understand and whether the topics treated gave them some practical information that would be useful in their work. Participants' were also asked to indicate whether the materials distributed were helpful in ensuring their understanding of what the facilitators were presenting. From Figure.2, 52.5% of the respondents agreed that the topics were clearly defined and that they understood the topics treated during the training. Fourteen respondents representing 17.5% disagreed to the statement and 30% were neutral to the statement.

With regard to the knowledge and skills gained during the training, the study revealed that participants learnt from the WATSAN training programme and had a better understanding of their roles and responsibilities, acquired some leadership skills and the importance of team building, had some knowledge in organising meetings, preparing action plans, records keeping and fundraising skills among others. This was evident in their responses to the same questions before and after the training where most of the respondents had very poor knowledge in the topics treated but had good and very good knowledge after the training. For example 47% of the respondents had poor knowledge in their general and specific roles as WATSAN committee members before the training but after the training, respondents with poor knowledge reduce to 17%. Also 52% of respondents had

poor knowledge in leadership skills before the training but this reduced to 15% with 58% indicating a very good knowledge in leadership skills after the training.

On whether WATSAN committee members applied the knowledge gained in the training in their communities, the study revealed that most of the WATSAN committees had some challenges in managing the facilities in their communities and the extent of application of the knowledge and skills gained during the training is minimal. For example, even though 59% of the respondents indicated the community had a bank account for WATSAN facilities, 61% of the respondents were of the opinion that community members do not contribute funds into these accounts or keep records of funds collected. The study revealed that funds are normally mobilised as and when the facilities break down for repairs. As a result, communities will normally wait until such time that they are able to raise the funds for the repair work. During this period, some community members revert to their old water sources.

Sixty percent (60%) of the respondents also indicated that there is an improvement in meeting attendance by community members and 68.7% indicated WATSAN members keep records of meeting minutes. An attempt to inspect these documents however proved futile in most of the communities and where the records were available, they were found to be old records.

Some of the factors that were observed to have affected the application of knowledge gained in the training are that new members have been elected onto the WATSAN committee and did not benefit from the training. The challenge therefore, is that they do not understand the community ownership and management concept of the programme. Also a number of conflict issues were observed to exist in the communities. In some cases, the community regents and some individuals had taken ownership and management of the facilities. Also some WATSAN committees' had issues that needed to be resolved. These affected the teamwork that was required among the committee members.

The study also revealed that communities do not have the capacity to demand for WATSAN facilities. There is a break in communication between the communities and ACDEP, the district assembly and other stakeholders involved in the WATSAN programme. Most of the communities needed additional WATSAN facilities or had issues with the existing facilities but were not taking any initiative to contact these organisations for information or support. Sixty five percent of the respondents confirmed that WATSAN committee members and the community were not in contact with stakeholders in the sector and 74% confirmed that communities have not contacted any of these stakeholders to demand for WATSAN facilities. Monitoring visits by external organisations to some of the communities were also irregular or non-existent.

7. Conclusion

In conclusion, the study has shown that training is very important in community management of rural water and sanitation facilities and participants are satisfied with how ACDEP organised the training. Participants understood the topics discussed and their role in the programme. The resource persons' were knowledgeable of the subjects treated, prepared for the lessons and demonstrated good facilitation skills in their presentations. The venue and logistics arrangements, according to the responses, were also well-organised. Group training is however preferred to individual community training

Also the training helped the participants to learn some leadership and managerial skills that are expected to build their capacity to manage the facilities provided in their communities. On the average, more than half of the participants learnt and gained good and very good knowledge in the topics treated. The degree and the amount of learning that occurred, however, differ from each topic.

WATSAN committee members encountered challenges in managing the facilities and most of the beneficiaries poorly or averagely apply the knowledge gained during the training. The general observation was that most communities are not performing their roles and responsibilities. Meetings are not organised, bank accounts are not operated or funds raised to maintain the facilities. There is a break in communication between the communities, ACDEP and other stakeholders and community members do not take initiatives to contact these stakeholders for assistance and support in managing the facilities. Some communities had also changed some members on the WATSAN committees and there are conflict issues regarding the water and sanitation facilities in some of the communities. Often communities had to resort to their old water sources when the water facilities break down.

The issues raised above defeat the community management concept of water and sanitation facilities and raise question on whether beneficiaries are capable of managing and sustaining the water and sanitation facilities provided in their communities. It also shows that ACDEP and other development organizations must go beyond

organising training and giving skills to community structures but also monitor and support these structures to perform their duties. Despite these observations, some WATSAN committee members were found to be very responsible and performing their roles and responsibilities as expected. The facilities were also found to be working very well in some of the communities.

8. Recommendations

1. ACDEP should maintain the current approach used in organising the WATSAN training as participants are satisfied with the current approach used and also acknowledged that learning occur during the training. The training should however be in groups because it encourages experience sharing among the participants from different communities.
2. There is the need to re- organise orientation and training programmes in the communities that benefited from the WATSAN facilities in the past 5 to 15 years on the community management concept of WATSAN facilities. This will help new members on the committee to understand their roles and responsibilities.
3. Occasional monitoring visits to the old communities will also help identify and address conflict issues that will affect the management of the facilities.
4. There is the need to review the training content to include topics that will help WATSAN members to build their negotiation capacities, assertiveness and influence skills as well as creative problem-solving and decision-making. This is very important for the WATSAN committee to improve their networking with other stakeholders and demand for their rights in relation to development in their communities.

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