

## Importance of Training Needs Assessment at the Radiation Protection Institute of the Ghana Atomic Energy Commission

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### ABSTRACT

Questionnaires were forwarded to the target population of sixty, nonetheless fifty-two were retrieved which represents 86.6% of the total sample. The Statistical Package for the Social Sciences (SPSS) research package and Microsoft Excel were used to analyze the data. It was discovered from the study that 63.5% of the Radiation Protection Institute's staff had attended some form of training, both on-the-job and off-the-job; however, 36.5% indicated that they have not had the opportunity of attending any training program since employed. Majority also agreed that the wrong people are sometimes selected to attend training programs. It was thus recommended that in order to achieve maximum objective of a training program, before embarking on a training the first step in the training process must be carried out, thus conducting need assessment to know if training and what training would be required to fill a gap. This would go a long way to maximize the benefits of the numerous training program at the Institute. The nomination to a training program must be on the bases of identified need.

**Keywords:** On- the- job and Off- the -job training, Radiation Protection Institute

### 1.1 BACKGROUND OF THE STUDY

*Training is investing in people. Investing in people is investing in the organization.*

Due to the evolving nature of business in recent times, businesses now exist in a more competitive environment where they must compete based on superior human capital capabilities and strategies. Human capital consist of the knowledge, skills and abilities of the people employed in an organization (Armstrong M. 2009). It has become necessary that an organization adopt a strategy that ensures employees' skills are increased to improve performance and increase productivity. In order to achieve a sustained competitive advantage thus, an organization need to have a well talented/skilled, effective and efficient human resource (employees). Interestingly, most organizations are awakening to the importance of training, but only a few do follow the ideal procedure. (Mathias R. and Jackson J. 2004).

Training is one of the elaborated functions of Human Resource Management (HRM). HRM emphasis on training aims to ensure that the organization obtains and retains the skilled, committed and well-motivated workforce it needs. This means taking steps to train, enhance and develop the inherent capabilities of people by providing a continuous training and development opportunity linked to the needs of the business (Becker et al, 1997). Training is the process of increasing the knowledge and skills of the workforce to enable them perform their jobs effectively. It should be systematic by being specifically designed, planned and implemented to meet defined needs. (Armstrong M. 2000).

This objective of training would be achieved by first carrying out a Training Needs Assessment/Analysis (TNA). TNA is the process of identifying training needs in an organization for the purpose of improving employee job performance. It is defined as the systematic study of a problem or innovation, incorporating data and opinions from varied sources, in order to make effective decisions or recommendations about what should happen next. (Allison R. 2002). A training needs assessment would ensure that training programmes are focused and appropriate. It is unquestionably costly especially for the nonprofit making organizations to initiate training programmes. It would thus be fruitless to conduct training just for the sake of it. A training need is identified when there is a shortage of skills at the organizational level, task level and individual level. Organizations would need to conduct in-depth needs analysis to determine what the real training issues are and the appropriate level. Until specific training needs are isolated, it will be business as usual and no value-added changes in performance will occur. (Firdousi F. 2015 assessed).

The importance of TNA cannot be under-emphasized; it puts training needs in context of organizational needs. It is paramount for organizations to understand the importance of training needs analysis. For one, TNA addresses the problem of discerning the actual gaps in the needed skills of the work force in an organized manner. It establishes the objectives of the training to know how effective the training is and the present and future plans of the organization in relationship to their manpower skills requirements. It would be necessary for

better assessment to review current and past training programs to learn about the strengths and weaknesses in order to make the current program more effective. (Bulletin M. 2013).

In the case of RPI with its twenty- one years in existence with both scientific and non-scientific staff, some training program may have been carried out over the years without thorough needs assessment that identifies the problems and performance deficiencies, and even an analysis that allows management to put a cost factor on the training needs. As a result, such well thought activity is mostly thought of as chicken feeds or less significant. Effective training depends on knowing what is required - for the individual, the department and the organization. Training is investing in people and investing in people is investing in the organization. But in all an organization need to certify that the resources invested in training are targeted at areas where training and development is needed and a positive return on the investment would be assured. The study would explore the importance of TNA and give recommendation(s) that would make the organization avoid the challenges that arise from lack of training needs assessment.

### **1.2 Problem Statement**

Despite the establishment that the human resource is an indispensable asset which needs to be continuously improve through training, organizations which embark on training do not always conduct a training needs assessment. Arthur et al. (2003) reported that only a few studies on training, especially regarding TNA have been investigated and available in literature. Management does not recognize that; an organization must first know what the problems in the organization are as a prerequisite to training. This is important so that the most appropriate training will be directed as solution to those problems.

In order to develop an effective training programme, an assessment of the training needs must first be done. Training Needs Assessment (TNA) is an ongoing process of gathering data to determine what training needs exist so that training can be developed to help the organization accomplish its objectives. (Judith Brown, 2002). Training and development must start from a need assessment in an organization. However, little or no effort has been directed towards TNA. One of the main reasons is lack of knowledge regarding needs assessment.

In RPI, there seems to be a mis-match in its training needs assessment. It is on record that several staff members of the Institute attend training programmes at both international and national levels. There appears to be a lapse in assessing what is really required for the individual, the department, the organization and its cost benefit before embarking on a training programme by way of nominating staff for internationally organized programmes. This stands to affect the selection of staff, the mode or type of training given and the impact of the training received by employees on their job performance. By this, the organization stands to misplace its priority and lose the original objective of training. It is against this background that the current study seeks to address the problem of training assessment lapses in the Institution and the question to be addressed is of what importance is training needs assessment to the training of employees of the Institute. Implicitly, can a reason for lack of achievement of organizational training goals be a lack of training needs assessment?

### **1.3 Research Questions**

In pursuing this research, the following research questions were considered:

1. What is the importance or relevance of Training Needs Assessment as a prerequisite to training?
2. What are the levels at which training needs assessment is to be conducted?
3. Which method of training should be adopted once the need for training is identified?
4. Does RPI have a Training Needs Assessment policy?

### **1.4 Research Objective**

The main objective of this research is to highlight the importance of TNA in implementing effective training at the Radiation Protection Institute (RPI).

The General Objectives are to:

1. To examine the relevance of TNA as a prerequisite to training.
2. To examine the various levels of conducting TNA.
3. To identify the common method of training used at RPI.
4. To ascertain if RPI has a Training Needs Assessment policy.

### **1.5 Significance of the Study**

Just as lack of training may put staff in a less position of enhanced performance, training without training needs assessment may further defeat the initiate purpose of training. Managing human resource is the key to an organization success. An organization's training practices have a strong influence on employee competence and achievement of the organization objectives. Organizations cannot achieve its objectives with an under-trained staff.

The Radiation Protection Institute (RPI) is a research institution of the Ghana Atomic Energy Commission affiliated with the International Atomic Energy Agency (IAEA). At the International level, the IAEA organizes several training courses for member states intended to meet the general needs of its members. Thus, scientific staff especially have the opportunity to attend international training programmes which are costly and time consuming in addition to some local programmes. The Training Needs Assessment theory emphasized that an organization is to critically ascertain when and where training in the organization is most needed, what the particular skills/knowledge required on the part of the individual and the organization for an effective training result.

This study seeks to uncover any existing gap in implementing training programmes, to make management see the need for TNA and the essence of getting all (management and staff) involve in the process.

This study may also serve as a guide document for other institutions that seek success through training and used by other research students as a build on study. The ultimate goal is to propose better ways of administering training at RPI through training needs assessment.

### **1.6 Delimitation of the Study**

The conclusions drawn in this study were based on data collected from only one of the five Institutes of the Ghana Atomic Energy Commission, which is the Radiation Protection Institute (RPI). RPI is made up of 82 permanent staff as at the time of the study. With the sample size of 60 staff (due to the absence of staff on leaves, training and other assignments), generalization of this document as representation of the entire Commission may not be ideal. The fact that each Institute has a different line of training leaves room for further studies into the challenges each faced. Also, since training programmes are mainly organized for research scientists, administrative and other staff have limited training options as compare to the scientific staff. But they (the research scientists) have less understanding of what TNA really is.

The study was to be conducted between January 2015 to March 2015 during the fifth (last) module of the academic calendar, which limits the time frame of the study.

## **2.0 RESEARCH METHODOLOGY**

### **2.1 Research Design**

The study adopted the mix methods of design – i.e. the quantitative and qualitative methods for a more balanced study. This approach according to John W. Creswell (2014) is an inquiry involving collection of both quantitative and qualitative data, interpreting the two forms of data and using distinct designs that may involve philosophical assumptions and the theoretical frame work. He emphasized that the core assumption of this form of inquiry is that the combination of quantitative and qualitative approaches provides a more complete understanding of a research problem than the either approach alone.

### **2.2 Target Population**

The Radiation Protection Institute (RPI) has staff strength of Eighty-two (82). Due to the absence of staff on various training programmes and assignments as at the time of the study, Sixty (60) was the target population. This covered employees from four different Centers and the Secretariat (Administration, Accounts & Audit), forming a diverse group of research scientists, technicians and those in administration (supporting staff) which consist of the following categories:

- i. Director and Deputy Director
- ii. Managers and Heads
- iii. Non-Management/Regular staff

### **2.3 Sample Size and Sampling Procedure**

In order to ensure fair representation of the targeted population, a simple random sampling technique was used to gather a sample of 52 comprising of 43 non-management staff out of a target population of 60 in order to give all an equal chance of been selected. However, due to the limited number of top management of nine (9) officials and the absence of a few, a non-probability purposive sampling was used to get majority involved in order to tap their expertise on the subject matter as they are the ones who nominate and/or approves training programmes.

### **2.4 Research Instrument / Data Collection Procedures**

Theoretical data on the subject of TNA was gathered from journal articles, books, the Organization's Strategic Plan 2013-2016 and other relevant materials.

Questionnaire of 25 main questions designed using both opened ended and closed ended questions were Emailed and hand-delivered to 60 randomly selected staff of the RPI. Whiles the closed ended questions provided

room/space for respondents to formulate their own answers, each of the opened ended question, provided at most five options for respondents to choose from with exception to questions where the respondent had two options (Dichotomous), that require a “yes” or “no” answer. Information on the purpose of the study was given and also the assurance of the confidentiality of their responses was assured.

Sixty questionnaires were forwarded to staff nonetheless only Fifty-two was retrieved which represents 86.6% of the total. Data gathered was coded and analyzed using Microsoft Excel and the Statistical Package for the Social Sciences (SPSS).

### 3.0 DATA ANALYSIS AND DISCUSSION

#### 3.1 DATA ANALYSIS

##### Training & Training Needs Assessment

**Table 1: Importance of Training**

Importance of Training		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	52	100.0	100.0	100.0
	No	0	0.0		

Source: Field Data, 2015

As a foundation of the study, the respondents were asked if training and development of employees was important. All the respondents (100%) gave a resounded ‘yes’ in consent to the importance of training and development. This confirmed what McClelland (2002) said that the significance and value of training has long been recognized and is more pronounced than ever given today’s business climate and growth in technology. It also confirmed what was stated in the Business Coach Journal (May 5 2013) that everyone recognizes the importance of training in improving the quality and productivity of a workforce. However, training is often done in a haphazard manner. In that there is no systematic way (policy) of knowing where to allocate limited training budget to the areas that need improvement the most. At this point the researcher sought to know if the Institute had a training policy and budget. Tables 2 and 3 below displayed the result.

**Table 2: Training Policy**

Training Policy		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	23.1	23.1	23.1
	No	22	42.3	42.3	65.4
	Not sure	18	34.6	34.6	100.0
	Total	52	100.0	100.0	

Source: Field Data, 2015

Do you know if RPI has any training policy/system that determines who is to be trained and what training programs are needed, was a question to which 23.1% said yes, 42.3% said no and 34.6% were not sure of the existence of a policy.

Training policy is important to keep employees informed on the values and expectations for how things are done at the organization to ensure transparency and fairness.

**Table 3: Training Budget**

Training Budget		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	38.5	38.5	38.5
	No	6	11.5	11.5	50.0
	Not sure	26	50.0	50.0	100.0
	Total	52	100.0	100.0	

Source: Field Data, 2015

On the question of the existence of training budget for the Institute, 50% of respondents were not sure if the Institute had a training budget; 11% had no knowledge of the existence of a budget and 35.8% said Yes a training budget do exist.

**Table 4: Method of Training**

**Training Method Observed**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Off-the-job training	43	82.7	82.7	82.7
	On-the-job training	9	17.3	17.3	100.0
	Total	52	100.0	100.0	

Source: Field Data, 2015

On the method of training participants were first asked on their observation on the method/type of training usually organized at the Institute. To the two options given - Off-the-Job Training – where employees are taken away from their place of work to be trained and On-the-Job Training – where training is delivered to employees while they perform their regular jobs, 82.7% had observed Off-the-Job training while 17.3% observed On-the-Job Training. This seems to suggest that participants had observed more Off-the-Job training where employees were taken away from their place of work to be trained.

Still exploring the subject on the methods of training, a more specific question was addressed to those who had attended some form of training whether they were taken away from the place of work to be trained (off-the-job training)? This is depicted in Table 5 below.

**Table 5: Off-the-Job Training**

**Off-The-Job**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	65.4	81.0	81.0
	No	8	15.4	19.0	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

Source: Field Data, 2015

Correspondently as illustrated in the previous table (4), the responses in table 5 above also had a majority of 65.4% 'yes' for off-the-job training and 15.4% 'no'.

The identification of training method is important as Stoner and Others (1995) established that once the organization training needs have been identified, the next step is to initiate the appropriate training effort/method. On-the-Job or Off-the-Job training methods can be used to satisfy an organization training needs and accomplish its objectives.

**Table 6: Training Attendance**

**Training Attendance**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	63.5	63.5	63.5
	No	19	36.5	36.5	100.0
	Total	52	100.0	100.0	

Source: Field Data, 2015

Table 6 revealed answers to the question whether participants had attended any training programme since employed. A massive 63.5% had attended some form of training with 36.5% participants who claimed they had not yet attended any training programme.

The 36.5% staff who claimed they had not attended any training seems to rule out On-the-Job training method which may be in form of coaching/orientation as a form of training.

**Table 7: Training Frequency**

Training Frequency		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2	11	21.2	25.6	25.6
	3-4	13	25.0	30.2	55.8
	5+	19	36.5	44.2	100.0
	Total	43	82.7	100.0	
Missing	System	9	17.3		
Total		52	100.0		

Source: Field Data, 2015

To the question of how many times respondents had attended training programme, table 7 showed that 21.2% had attended 1 to 2 training programme. 25.0% had gone 3 to 4 times and 36.5% had attended 5 or more times.

**Table 8: Training Organizer**

Training Organizer		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IAEA	29	55.8	69.0	69.0
	GAEC	4	7.7	9.5	78.6
	RPI	5	9.6	11.9	90.5
	Others	4	7.7	9.5	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

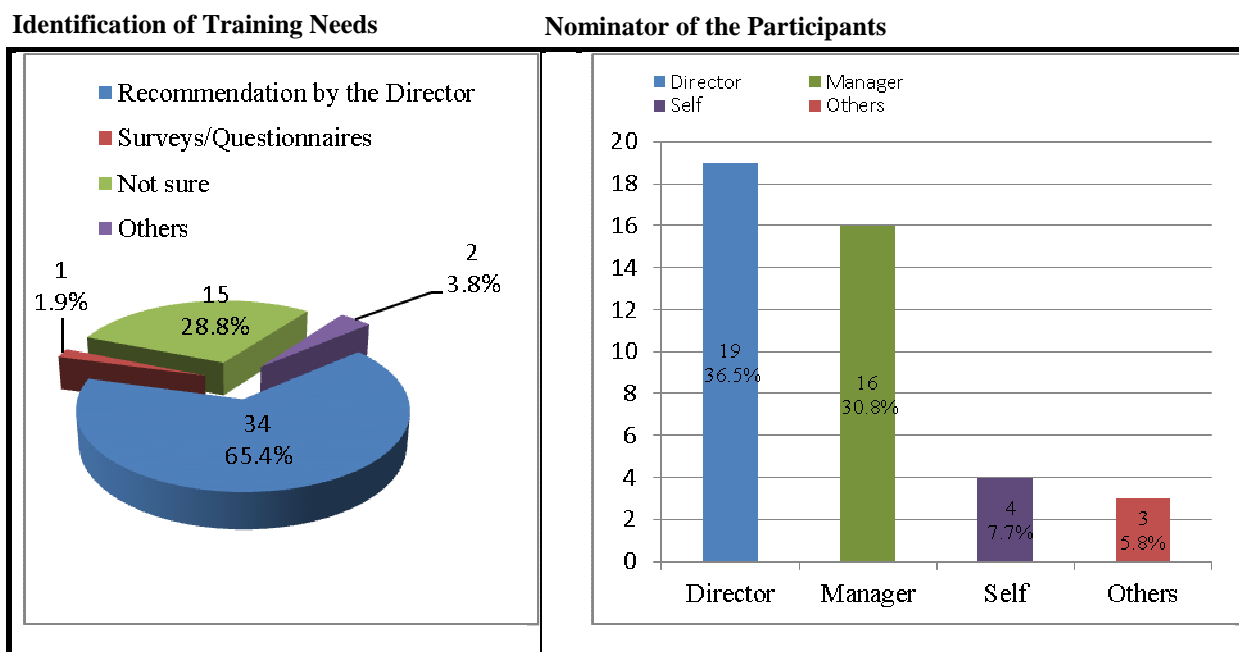
Source: Field Data, 2015

The researcher sought to find out who organized/initiated the most current training programme staff attended. Was it the IAEA, GAEC, RPI or other source? In table 8 an amazing 55.8% was from the IAEA (International Atomic Energy Agency); 7.7% was organized by GAEC (Ghana Atomic Energy Commission); 9.6% was initiated by RPI (Radiation Protection Institute) and 7.7% from other sources.

It can be seen that majority of training courses that participants attended were initiated by the foreign affiliate of the Organization, IAEA.

On the questions of how the need for any particular training is identified and who nominates participants to take part in the programmes, Figure 7 and Figure 8 illustrate the following:

**Figure 7: Identification of Training Needs**    **Figure 8: Nominator of Participants**



**Source: Field Data, 2015**

Figure 7 displays answers to the question on how the need for any particular training is identified at RPI. Given 5 options, 65.4% of respondents said it is based on the Observation/Recommendation by the Director/Management. 1.9% chose Surveys/questionnaires; 28.8% were not sure. Yet, 3.8% thought it is by other means unlisted. Of this 3.8% (2 persons) one said it is as directed by the Director or Manager, making his answer more similar to the first option (i.e. Observation/Recommendation by the Management). The second person said he does not know how it is done (which relates more to the not sure option).

In the adjacent Figure 8, in response to how participants were selected for the programme, recommendation by the Institute’s Director was 36.5%; the Centre Managers covered 30.8%; while 7.7% was where the participation in the programme was as result of personal effort of sourcing for the programme.

Of course self-initiation programme must be in line with the employee’s line of work to be approved. The last option 3.8% stood for any other unlisted option. Of the 3.8% one stated the Human Resource Department (i.e. more of the manager recommendation option) and the others stated self-initiation (this is more of the ‘self’ option).

Both Figures 7 and 8 showed that the Director (top management) played a huge role in the recommendation and nomination of staff for any training programme and showed not much of non-management staff involvement. Other techniques of identifying needs (Surveys/questionnaires, Interviews, Performance Appraisals Tests, Assessment Centers etc were on the low side.

**Table 9: Where were the Trainers From?**

**Where were the Trainers from**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the Organization	7	13.5	16.7	16.7
	Outside the organization	26	50.0	61.9	78.6
	Both	9	17.3	21.4	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

**Source: Field Data, 2015**

On the question of where the trainers of all the training programmes were from, the statistics showed that 13.5% were from within the organization, the majority of 50.0% were from outside the Organization and 17.3% were from both within and outside the Organization.

**Table 10: Venue of Training**

Venue of Training		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	17	32.7	40.5	40.5
	No	25	48.1	59.5	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

**Source: Field Data, 2015**

Was the training within Ghana, was the question.

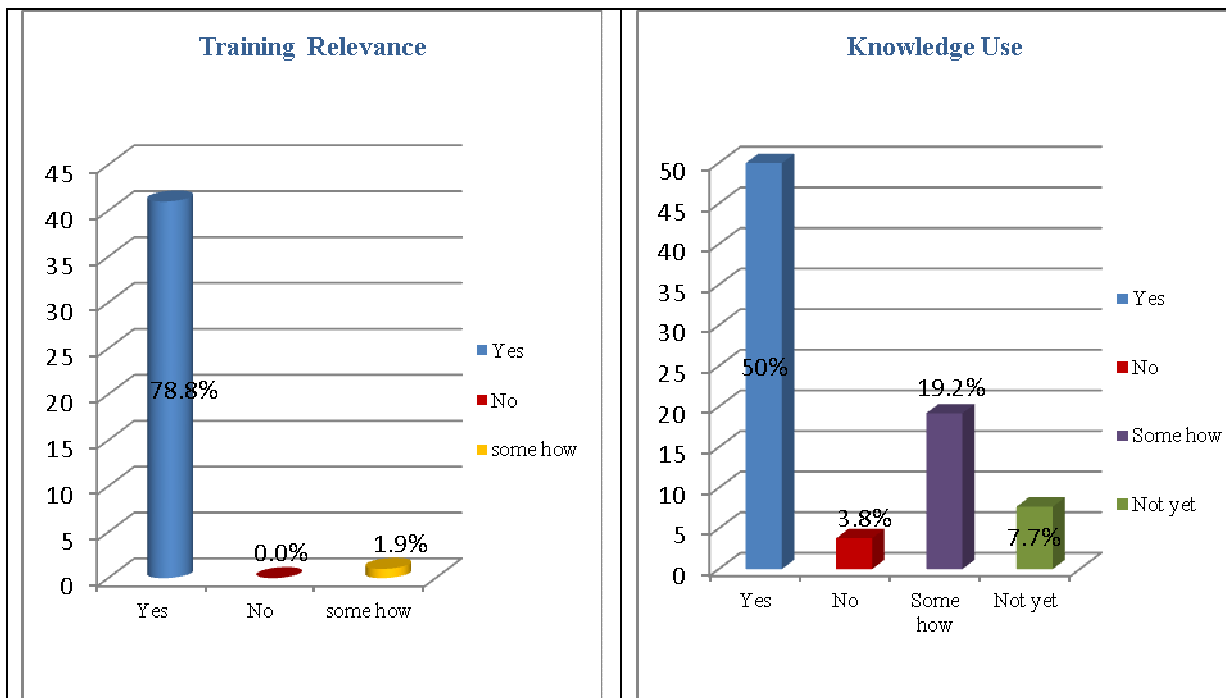
On the venue of the training, table 10 showed that 48.1% of the trainings occurred at a venue outside Ghana as compare to 32.7% that was within Ghana.

It was observed from tables 9 and 10 that trainings outside the country attracts more foreign trainers than local trainers.

In Figure 9 below the question was how the training programme related to participants' jobs. 78.8% claimed it was related, no one said it was not related, while 1.9% said it was somehow related. This is where the training is to satisfy a task level of giving the employee the required skills needed to perform his duties.

**Figure 9: Training Relevance**

**Figure 10: Knowledge Use**



**Source: Field Data, 2015**

In the adjacent Figure 10 above the researcher also sought to find out the degree to which the knowledge acquired was being used in the routine work of participants. On that, 50.0% claimed the knowledge is being used in their routine work. 3.8% said no and 19.2% could not be definite saying the knowledge was being used somehow.



Still another 7.7% said the knowledge gained was not yet being used which expressed some hope of its usage in the future.

**Table 11: Training Quality**  
**Training Quality Issues**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Organization	1	1.9	2.4	2.4
	Content	6	11.5	14.3	16.7
	Timing/Duration	22	42.3	52.4	69.0
	Others	13	25.0	31.0	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

**Source: Field Data, 2015**

In Table 11, participants views were sought on the issue of any lapse in quality of the programme attended i.e. where the programme fell short of their expectations. 1.9% said the organization of the programme; 11.5% complained of the Content of the course; majority of 42.3% expressed dissatisfaction on the Timing/Duration of the programme, while 25.0% chose 'Others' for unlisted option. The 25.0% who chose the option 'others', specify that all went well with the training programme except 3.8% (2 respondents) who complained of language barrier and lack of sponsorship respectively.

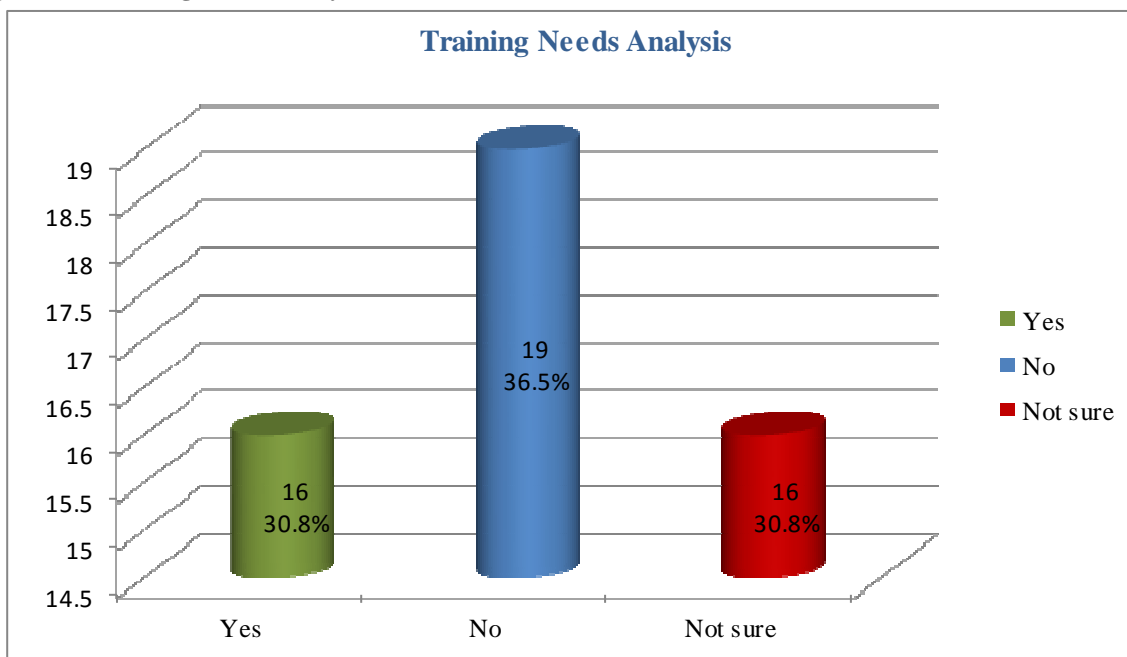
**Table 12: Training Gap**  
**Training Gap**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	19	36.5	45.2	45.2
	No	18	34.6	42.9	88.1
	Not sure	5	9.6	11.9	100.0
	Total	42	80.8	100.0	
Missing	System	10	19.2		
Total		52	100.0		

**Source: Field Data, 2015**

On the question whether the training programme was pursued as a result of any gap that existed between the trainee actual performance and the expected performance, 36.5% said yes; 34.6% said no, while 9.6% were not sure. Gaps determine what results should be achieved before actions are taken. As stated by Watkins gaps are the reason for needs assessments, and they help make justifiable and informed decisions.

**Figure 11: Training Needs Analysis**



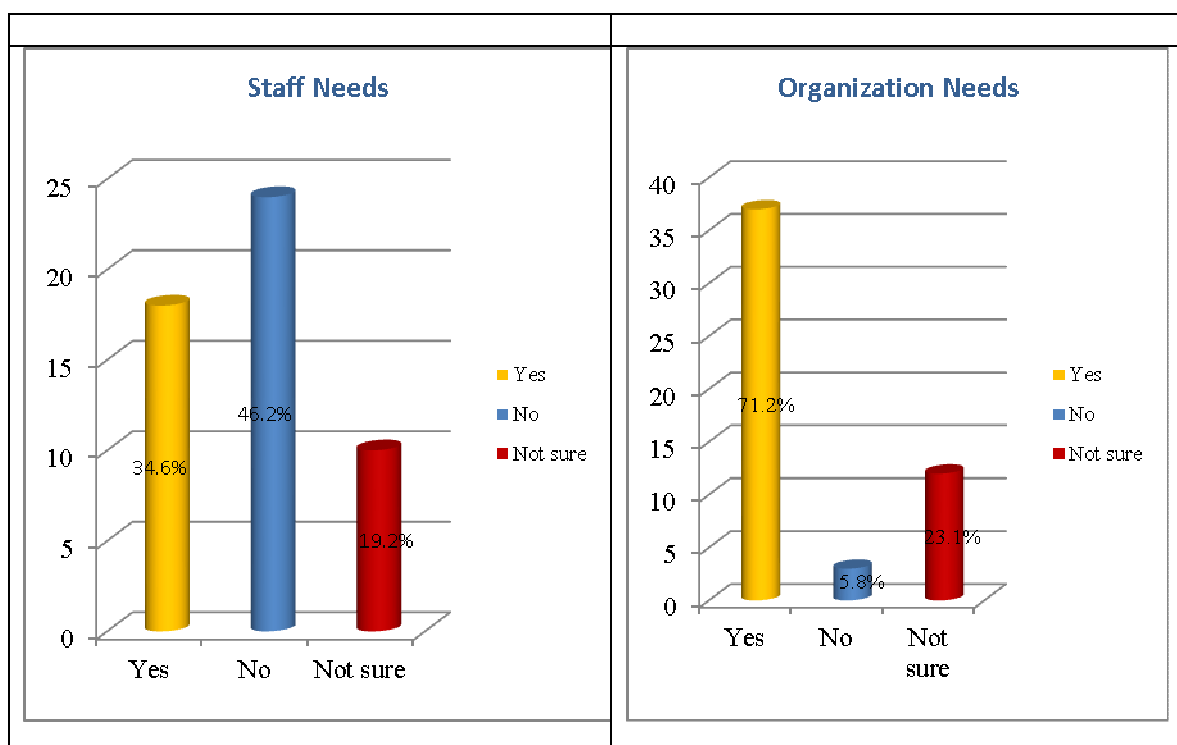
**Source: Field Data, 2015**

Analyzing what the training needs are is a vital prerequisite for any effective training programme. Participants' evaluation on whether training needs are generally well analyzed before the training programmes at RPI, gathered responses of 30.8% 'yes', majority of 36.5% 'no', and 30.8% 'not sure', with 1.9% missing in Table.

In Figures 12 and 13 below, the researcher tried to ascertain the levels at which training needs assessment is conducted. Whether the training programmes most staff attended were organized to help individual staff meet performance standard due to his/her deficiency or to meet the skills the organization needs to fulfill its objective. The staff and organization levels are displayed below:

**Figure 12: Staff Needs**

**Figure 13: Organization Needs**



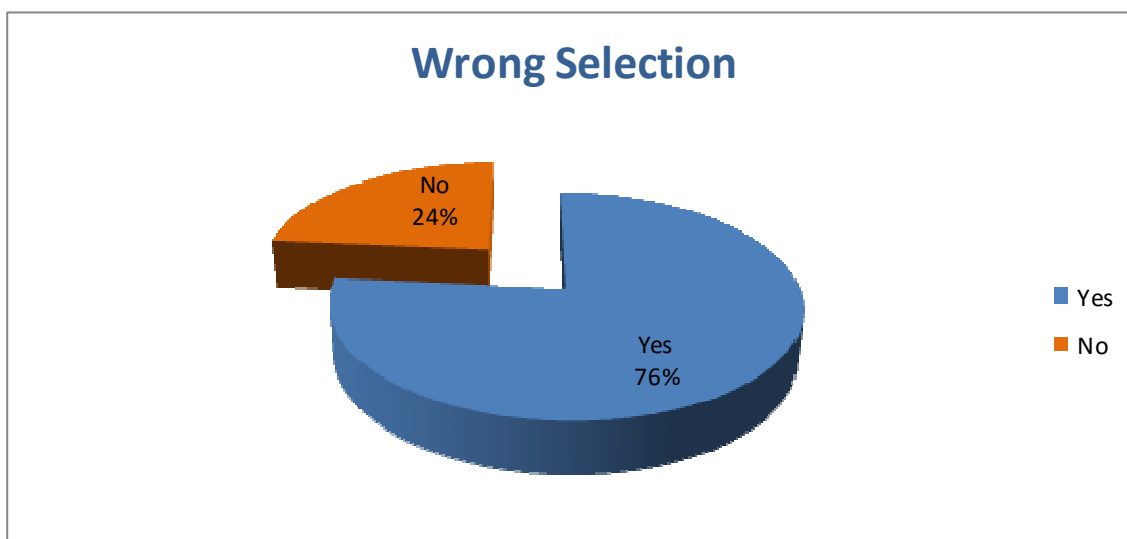
**Source: Field Data, 2015**

In Figure 12, 34.6% respondents were of the view that the training programmes were organized to help individual staff meet performance standard due to his/her deficiency, 46.2% expressed a negative view ‘no’, but 19.2% were not sure what really happens.

Comparably, in Figure 13, majority of 71.2% said the programmes were intended to meet the organization objective, 5.8% said ‘no’ that was not the case and 23.1% still were not sure of what is done.

There are generally three levels at which training needs assessment is to be conducted – staff, task and organization levels. The task level was addressed in figure 9. Organizational analysis examines where training is needed in the organization and under what conditions the training will be conducted; while the staff level identifies who should be trained and what training is needed by each individual. Without this the wrong selection may be made. This prompted the researcher’s investigation in the next Figure 14.

**Figure 14: Wrong Selection**



**Source: Field Data, 2015**

Respondents were asked - Do you think that the wrong persons and/or the wrong training programmes are sometimes chosen? To this, two options were given – Yes and No answers. Amazingly, majority of the participants (98.1%) responded in the positive. Comparably an insignificant 1.9% thought otherwise. This shows that there is the need for proper Training Needs Assessment which would help to determine the right person and training programme to benefit the employees and the organization as a whole. This is the first step in the training process.

**Table 13: Training Needs Analysis – A Prerequisite to Training**

**TNA - Prerequisite to Training**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	52	100.0	100.0	100.0
No	0	0.0		

As seen in the above table 13, 100% of the participants were convinced of the need to identify who needs training and kind of training needed before embarking on a training programme.

Few participants made optional comments on the importance of Training Needs Assessment which centred/emphasized that TNA is important to avoid wrong selection of persons and programmes.

### 3.2 DISCUSSIONS

Is Training Needs Assessments (TNA) really important? Training is the means by which knowledge and skills of a workforce is increased to enable them perform their jobs effectively (Armstrong M. 2000). It is the ideal option when a gap has been noticed in the standard of performance, thus the need to conduct TNA.

From participants who were mostly holders of Master Degree, it wasn't surprising that all the respondents (100%) consented that training and development of employees is important. They all uplifted the significance of training in enrichment and enhancement of the output of a workforce.

It was however discovered from the study that despite the majority of 63.5% of the Institute's participants that had attended some form of training, (both on-the-job and off-the-job training), 36.5% indicated that they had never attended any training program since employed. This could be due not only to the absence of proper needs assessment but also a limitation of understanding on the various methods of training i.e. what training is in comparison with on-the-job and off-the-job training. The claim of no training seems to rule-out the existence of on-the-job training like coaching which is a more intensive method of training that involves a close working relationship between an experienced employee and an inexperienced employee/trainee according to Stoner et al. Dessler in agreement said coaching is the training of employee by his or her immediate supervisor and is by far the most effective most management development technique. The respondents seem to rather be saying that they had not gone on an off-the-job training which would probably occur outside the country.

Responses on respondents' observation and personal experience on the method of training revealed that a laudable number of training method at the Institute is off-the-job training.

One of the key findings that emphasized the main objective of the study (importance of TNA) was when 76% of respondents were of the view that the wrong people are sometimes selected to attend training programmes. Could this be as a result of inadequate Training Needs Assessment (TNA)? TNA is a critical part of the training system in that it provides data to determine who is to be trained, what training programmes are needed. Mathias R. and Jackson J. (2006) remarked that only few organizations do follow the ideal process of training. Identification of the need of training is the first step of the training process. This stage assesses performance against what ought to be and what is (i.e. the difference between the standard and actual performance). Below standard performance would emphasize the need for training of employees. That is identification of a gap – where training is most needed and what training is needed.

On the issue of wrong type of training it was observed that most of the training programmes were not organized by the organization/Institute. Instead more than half of the programmes were by the IAEA with the trainers also from outside the organization.

So although it may be on record that several staff members of the Institute had attended training programmes at both international and national levels, there seems to be a substantial lapse in assessing what training is really required for the individual, the department or the organization and its cost benefit before embarking on a training programme. This always affects the selection of staff, the mode or type of training given and the impact of the training received by employees on their job performance.

The researcher discovered that at the Institute 65.4% of the need for any particular training was identified by Observation/Recommendation by the Director/Management. Other techniques of identifying needs (Surveys/questionnaires, Interviews, Performance Appraisals Tests, Assessment Centers etc were on the low side. Given the advantages and disadvantages of each method/technique that can affect both the kind and quality of the information obtained. An interview could reflect the interviewer's biases, while a questionnaire can have sampling biases if only a few participants return the survey.

The point of McClelland is reiterated in Brown's caution to use more than one method to help validate the data as you can get different types of information from the different methods and also to sample people with varying experience levels in order to have a valid sample and effective training.

On the existence of a training Policy and a Budget it was observed that either a policy did not exist or members did not have any clue of its existence. Brown J. (2000) stated that a policy is needed to make certain that the training directly affects what happens in a department. It helps management to make decisions that are consistent, uniform and predictable. It also supports consistent treatment of staff, fairness and transparency. (hr.council.ca). In order to adequately address the training needs in an organization stakeholders need to formulate appropriate training policies. International Journal of Academic Research in Business and Social Sciences (2015).

## **4.0 SUMMARY, CONCLUSION AND RECOMMENDATION**

### **4.1 Summary of Findings**

The findings of the study revealed that:

- All respondents did agree that training and development of staff is very important.
- Majority of respondents had attended some form of training (on-the-job and off-the-job).

*On the most current training attended by participants -*

- Staff were of the perception that the most usual/common method of training observed and participated in was the off-the-job training.
- Majority said needs were identified by observation of the Director.
- Also, the nomination to participate in any training programme was by the Director.

- Most of the training programmes were organized/initiated by the International Atomic Energy Agency (IAEA), an affiliate of the organization.
- The trainers of the most recent programmes attended were from outside the organization.
- The venue of most training was outside Ghana.
- Majority claimed the course was related to their jobs.
- The knowledge acquired from the training was being used in their routine work.
- The responses on whether the trainee's nomination was as a result of gap in actual performance and expected performance, was almost a balance score of yes and no.
- On the level at which training needs are conducted, an appreciable number said it was more to fulfill organization objective than staff needs.
- Majority of respondents thought that more need to be done in analyzing training needs before a training programme is embarked on.
- The results further revealed that wrong selection of persons and training programmes were sometimes chosen.

#### *On the general/demographics of respondents*

- Radiation Protection Institute staff are males than females.
- Majority are holders of Master Degree.
- There are more research scientists than other staff categories (Technicians & Secretariat).
- Majority had working experience of 1 - 5 years and were mainly non-management staff.

#### **Conclusion**

It can be concluded that the observed wrong selection of persons and training programmes do result from not critically ascertaining when and where training in the organization is most needed and what the particular skills/knowledge would be required on the part of the individual, the task and the organization for an effective training result. Training cannot be effective if the performance problem is not first identified and analyzed.

The majority of staff had attended some form of training (on-the-job and off-the-job). Nevertheless, a few claimed they have not had the opportunity of attending any training programme, which the researcher thought was a lack of their appreciation of on-the-job training method which may be in the form of mere direction from their heads/supervisors.

Identification of training need and nomination of participants are mainly done by the Director. There is no formal training policy to guide managers in dealing with HR matters such as training and selection of participants for training programmes.

Finally, Training Needs Assessment is important in that it gives direction for today's changing workplace of new technologies where changes in skills and abilities are needed. It enables organizations to channel resources into areas where they will contribute the most to employee development, enhancing morale and organizational performance. This would prevent organizations from the risk of over-training, under-training or not achieving the benefit of training at all.

#### **4.2 Recommendation**

The most salient recommendation deduced from the study is to initiate a system of conducting need assessment to know if training and what training would be required to fill a gap in order to receive a maximum benefit from the numerous training programmes at the Institute.

##### **Others recommendations are:**

- Nomination to a training programme must be on the bases of identified need.
- In order to serve as a motivational factor, all staff should be given equal opportunities to be trained both at the international and national levels (off-the-job and on-the-job).
- Management should come up with a policy on training and make staff aware of the existence of the training policy in order for staff to appreciate the procedure. Also, knowledge of the training budget would enhance the assessment for a cost effective programmes.
- Avoid the assumption that all went well during a training course (especially international ones). Always do an after training evaluation to better the quality of the training and reduce the challenges staff faced such as the timing/duration of programme that staff complained more of.

- Management could use the 360-degree feedback system (where performance is assessed by self, superior, subordinate and peer) as a development tool to get a better understanding of the strengths and weaknesses of staff in order to enhance their performance through the appropriate type and method of training.

## REFERENCE

1. Armstrong M., (2009). Handbook of Human Resource Management Practice. (11<sup>th</sup> ed), pp.1-6, 25, 47, 65, 676-677
2. Armstrong, M. (2006). Human Resource Management Practice, (10<sup>th</sup> ed) pp. 535, 575, 577-578, 610
3. Allison R. (1987). Training Needs Assessment. Englewood Cliffs, New Jersey: Educational Technology Publications, Inc. pp. 3, 36-41
4. Anlacan R. (Online) Retrieved March 2015. Importance of Training Needs Assessment <http://www.businesscoachphil.com/understanding-the-importance-of-training-needs-analysis>
5. Anderson, J.E. (2000). Training needs assessment, evaluation, success, and organizational strategy and effectiveness: An exploration of the relationships. (Doctoral dissertation, Utah State University. Logan, UT).
6. Badu-Nyarko S.M., (2011). Basic Research Methods in Social Research, pp 112-162
7. Brown J., (2002). Training needs assessment: A must for developing an effective training programme, Public Personnel Management; Vol.31, No. 4; pp 569-578
8. Burton, J. & Merrill, P. (1991). Needs assessment: Goals, need and priorities. In L. J. Briggs, K.L. Gustafson, and M.H. Tillman (Eds.), Instructional design: Principles and applications (2nd ed.). Englewood Cliffs, NJ: Educational Technology. (On line) Retrieved May 2015.
9. Creswell J.W. (2014). Research Design 4<sup>th</sup> ed, pp 11-16
10. Cole G.A. Strategic Management, (2<sup>nd</sup> ed), pp 54-55
11. Gary Dessler, (2005). Human Resource Management International Edition, (10<sup>th</sup> ed), Training and Development pp.75, 268-274, 295
12. Grant C, Scott T, Mctear M (1997). A Technology Based Approach to Training Needs Analysis. Innov. Educ. Technol Int., 34(3): 188 -1
13. Importance of Training Needs Assessment (Online) Retrieved April 2015 (<http://www.brunel.ac.uk/data/assets/file/0008/180197>)
14. International Journal of Business and Social Science Vol. 2 No. 17 Significance of Determining Assessment Needs (online) Retrieved April 2015 [www.ijbssnet.com](http://www.ijbssnet.com)
15. International Journal of Academic Research in Business and Social Sciences; September 2014 Vol. 4, No. 9. Effect of Training Needs Assessment on Employee Commitment in Public Universities. (online) Retrieved April 2015 (<http://hrmars.com/hrmars>)
16. Kaufman, Roger, Alicia M. Rojas, Hannah Mayer (1993). Needs Assessment: A User's Guide. Englewood Cliffs, New Jersey: Educational Technology Publications, Inc. p. 4. (Online) Retrieved May 2015
17. Louis R. Gomez-Mejia, David B. Balkin, Robert L. Cardy 2007 (5<sup>th</sup> ed), , pp 207, 209-210, 240
18. MacDuffie J.P and Kochan T.A (Human Resource Management Practice
19. Mathis R. L. and Jackson J. H. (2004). Human Resource Management, (10<sup>th</sup> ed), pp. 216-224
20. McClelland S. (1992). A Systems Approach to needs Assessment. Training and Development Journal, v46, n8,p51(3)
21. McGhee W, Thayer P (1961). Training in Business and Industry. New York, Wiley 1961
22. Morrison Mike, Levels of Needs Analysis (Online) Retrieved May 2015 from <https://rapidbi.com/identifying-levels-of-training-needs-analysisstna/#.VWW2J1Kzk8s>
23. Needs Analysis (Online). Retrieved 8 April 2015 from <http://www.hr-guide.com/data/G510.htm>
24. Pearce II J.A. et al, Strategic Management Formulation, Implementation and Control, (8<sup>th</sup> ed) pp. 54-55
25. Stoner J.A. et al, (1995). Management, (6<sup>th</sup> ed), pp. 217-218, 377, 390-393
26. Swist J. (2014). Conducting a Training Needs Assessment, Minnesota State University Mankato, <http://www.business.mnsu.edu/mfox/class>
27. Ulrich D. and Lake D. (1990). Human Resource Management, Spring Article 1997 Vol. 36, pp. 39-40
28. Van Eerde, W., Tang, K. and Talbot, G. (2008). The mediating role of training utility in the relationship between training needs assessment and organizational effectiveness, The International Journal of Human Resource Management, Vol. 19, No. 1, 63 – 73
29. Walter, Moshe M (2000). A Comparative Perspective on Executive Development: Trends in Eleven European Countries. Pub.. Adm.,78(1): 135-153.
30. Strategic Plan for 2013-2016, Radiation Protection Institute, pp. 1-3.
31. How to conduct a training needs analysis (online) Retrieved 26 May 2015 (<http://www.dirjournal.com/guides/how-to-conduct-a-training-needs-analysis/>)
32. Wiley onlinelibrary Performance Improvement Volume 36, Issue 3, Article first published online: 17 March 2015.

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33. Watkins, R., Meiers W., M. and Visser, Y. (2012). A Guide to Assessing Needs: Tools for collecting information, making decisions, and achieving development results. Washington, DC: World Bank, pp.5-7. (Online) Retrieved May 2015  
<https://openknowledge.worldbank.org/bitstream/handle/10986/2231/663920PUB0EPI00essing09780821388686.pdf?sequence=1>.