



Main Steps to Construct Well, Pumping Test Procedure and Field Data Interpretation Training Course

25 - 29 January 2014

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1. INTRODUCTION

In the WASH sector the drilling of water wells, well design, construction , well cleaning and development, well pumping test, and field data interpretation of pumping test are relatively weak in terms of technical professionalism and integrity. In the context of Afghanistan, most water supply projects are dysfunction due to weak consideration geological parameters and weak engineering professionalism. Therefore, main steps to construct well, pumping test procedure and field data interpretation training course was organized by the NORPLA N project to enhancing the capacity building of Kabul and polytechnic universities students, MRRD and MMP(Ministry of Mine and Petroleum) staffs. The training course started on 25 January, 2014 and ended on 29 January, 2014. The course was held in MRRD and 31 participants (Male 21 Female 10) from Kabul and Polytechnic Universities, MRRD (Ru-WatSip and ESD) Afghan and Geological Survey were attended the training course.

Trainers successfully created conducive learning environment within the sessions. The participants were encouraged to share their ideas, knowledge and experiences from the participants. The trainers used several participatory tools and techniques to open up the participants and share their understanding and experience. Used and distributed training materials were found useful and closely relevant to their expectations. Most participants were extremely attentive, cooperative, positive and appreciative of the course. By the end of workshop, participants were able to explain the main step to construction well and able to interpret field geological data correctly. The provided training module was useful to the participants, which drew their interest and attention.

2. DESCRIPTION ABOUT TRAINING COURSE

Table 1. Information about training course

Name of course:	Main Steps of Well completion and Pumping test Training Course.
Number of participants:	30 trainees MRRD, AGS, Government Staff and Kabul University ,Polytechnic University Students
Location for training:	MRRD Ru-watsip Conference Hall
Date of implementation	25 – 29 January, 2014
Course organiser	NORPLAN Deputy team leader
Trainer	M. Hassan Saffi and Ahmad Jawid, Program/Technical Unit, DACAAR and Prof. Eqrar

3. COURSE OBJECTIVES

The main objective of this training was to enhance the technical and managerial capacity of MRRD, AGS, Government staff and Kabul University ,Polytechnic University Students on the well construction, pumping test and geological field data interpretation.

4. TRAINING PARTICIPATNS

Table 2. The focus group/participant of the training course

S/No.	Name	Position	Organization	Province
1	Fatima Korga	Student	Kabul University	
2	Ramazan Akbari	Geophysist	Ru-watsip	
3	Mohammad Hussain	Hydrogeologist	Ru-watsip	
4	Ali Mohammad Aslami	Hydrogeologist	AGS	
5	Mohammad Zia Ghulamy	Student	Kabul University	
6	Eraj Haidari	Student	Kabul University	
7	Rahmuddin	Student	Kabul University	
8	Ezattullah Rahmani	Student	Polytechnic University	
9	Marzia Habibi	Student	Polytechnic University	
10	Drukshsan Asadi	Student	Polytechnic University	
11	Fatima Jafary	Student	Polytechnic Univarsity	
12	Fahima Hasan Zada	Engineer	AGS	
13	Shogofa Saadat	Student	Kabul University	
14	Mansour Mudaser	Geophysist	Ru-watsip	
15	Ewaz Ali Poya	Hydrogeologist	Ru-watsuip	
16	Abdulrab	Irrigation Eng	Ru-watsip	
17	Amin	Water Supply Engineer	Ru-watsip	
18	Nasir Ahmad Shigiwal	Engineer	Ru-watsip	
19	Mukhtar Ahmad	Student	Polytechnic University	
20	Azizullah	Student	Polytechnic University	
21	Naseer Ahmad	Civil Eng	MRRD (ESD)	
22	Ghulam Qader	Irrigation Eng	MRRD (ESD)	
23	Mohammad Hasib	Surveyor	MRRD (ESD)	
24	Mohammad Homayoon	Surveyor	MRRD (ESD)	
25	Ezatullah Hammat	Sanitation Tech Officer	MRRD (ESD)	
26	Shukria	Water Supply Eng	MRRD (ESD)	
27	Mohammad Amin	Student	Kabul University	
28	Karima	Student	R	
29	Mir Ahmad Shah	Water Supply Eng	Ru-watsip	
30	Shafiq	Water Supply Eng	MRRD (ESD)	
31	Laila Mahmoodi	Student	Kabul University	

5. SUPPORT, EQUIPMENT, LOGISTICS AND FACILITIES

5.1 Training Hall

The training took place in MRR in Ru-WatSip Conference Hall. The training room was furnished with chairs, tables, and training equipments and tools.

5.2 Training Timeline

The theoretical part of training course started on 25 January, 2014 and ended on 25 January, 2014. at 9:00 AM and it ended at 15:30 PM with 1 hour break for lunch and prayers and 30 minutes for tea break. Training Equipment and Stationary Laptop computer, projector, projector screen, flip chart, markers, stationary, tables, charts graphs and photos provided by DACAAR. The hard and soft copy of training materials, camera and video were used and provided by DACAAR and NORPLAN.

The training methodology was included power point presentation, charts, graphs, tables, photos, group works, brainstorming, small group works, group discussions and site visit. DACAAR's decade experiences in well construction and pumping tests had been presented and discussed during the training session.

5.3 Transport and Food

The participants attended in the training course without providing any transportation for pick up and drop but NORPLAN compensated the transportation cost by paying \$10 per day per person. (I think it is not necessary to write)

6. COURSE EVALUATION

6.1 Pre and Post Participants evaluation

We had a pre-test of participants to map out the knowledge and understanding level of the participants. After the workshop we did post evaluation of the participants to find out their understanding and level of knowledge increased on the delivered courses. Results of pre evaluation were relatively poor and not satisfactory in terms of engineering profession. However, results of the post test surprisingly good. The participants pre and post results are shown in the table

Table 3. The pre and final evaluation results

No	Name	Position	Pre evaluation Points(from 100)	Final Pre evaluation Points (from 100).
1	Fatima Korga	Student	11	60
2	Ramazan Akbari	Geophysist	1	55
3	Mohammad Hussain	Hydrogeologist	22	53
4	Ali Mohammad Aslami	Hydrogeologist	5	44
5	Mohammad Zia Ghulamy	Student	7	63
6	Eraj Haidari	Student	7	86
7	Rahmuddin	Student	5	73
8	Ezattullah Rahmani	Student	1	75
9	Marzia Habibi	Student	4	52
10	Drukshah Asadi	Student	2	40
11	Fatima Jafary	Student	6	67
12	Fahima Hasan Zada	Engineer	1	30
13	Shogofa Saadat	Student	10	44
14	Mansour Mudaser	Geophysist	10	70
15	Ewaz Ali Poya	Hydrogeologist	22	48
16	Abdulrab	Irrigation Eng	12	34
17	Mohammad Amin	Water Supply Eng	5	72
18	Nasir Ahmad Shigiwal	Engineer	10	44
19	Mukhtar Ahmad	Student	10	84
20	Azizullah	Student	1	31
21	Naseer Ahmad	Civil Eng	6	50
22	Ghulam Qader	Irrigation Eng	12	26
23	Mohammad Hasib	Surveyor	1	16
24	Mohammad Homayoon	Surveyor	2	40
25	Ezatullah Hammat	Sanitation Tech Offic	16	85
26	Shukria	Water Supply Eng	6	35
27	Mohammad Amin	Student	9	73
28	Karima	Student	8	68
29	Mir Ahmad Shah	Water Supply Eng	4	
30	Shafiq	Water Supply Eng	2	
31	Laila Mahmoodi	Student	2	60

6.2 Workshop Evaluation

The training course was evaluated by the participants. The summary of evaluation is as following:

Question 1: Did the training course meet your expectations?

1. Completely, 2. Partially, 3. Not at all.

Response: Completely : 0%, Partially 96.5%, Not at all 3.45%

Question 2: What do you think about the duration of training course?

1, Too Long, 2. Just right, 3. Too short

Response: Too Long 6.9% .Just right 51.72%, Too short 41.38%.

Question 3: How was the training course relevant to your organization or project's need?

1. Very relevant, 2. Somewhat relevant, 3. Not relevant

Response: Very relevant 82.76%, Just right 17.24%, Too short 0%.

Question 4: How do you evaluate the theoretical part of training course? 1. Very excellent, 2. excellent, 3. poor

Response: Very excellent 20.69%, excellent 68.97%, Poor 10.34%.

Question 5: How do you evaluate the practical part of training course?

1. Very excellent, 2. excellent, 3. poor. too poor

Response: Very excellent 20%, excellent 75%, Poor 5%, too poor

Question 6.1: How do you evaluate allocation of time for group discussions?

1. Very Long 2. Long , 3. Sufficient , Short, 5. Very short

Response: 1. Very Long 13.70%, 2. Long 58.62%, 3. Just right 24.14%, 4, Short 3.45% Very short

Question 6.2: How do you evaluate allocation of time for group works?

1. Very Long 2. Long , 3. Sufficient , 4. Short, 5. Very short

Response: 1. Very Long 3.45%, 2. Long 68.97%, 3. Just right 24.14%, 4, Short 3.45 Very short

Question 7: How do you evaluate the methods of training course?

1. Participatory, 2. Not participatory, 3. Completely participatory

Response: 1. Participatory 82.76%, 2. Not participatory 17.24%. Completely participatory 0%

Question 8: How do you evaluate food and training hall of training course?

1. Very good 2. Good 3. Just right 4. Poor

Response: 1. Very good 58.62%, 2. good 31.03% 3. Just right 10.34%, 4.Poor 0%

Question 10: How do you evaluate the behaviour of facilitators during training course?

1. Very good , 2. good, 3. Poor

Response: 1. Very good 27.59%, 2. good 65.52%, 3. Poor 6.90%

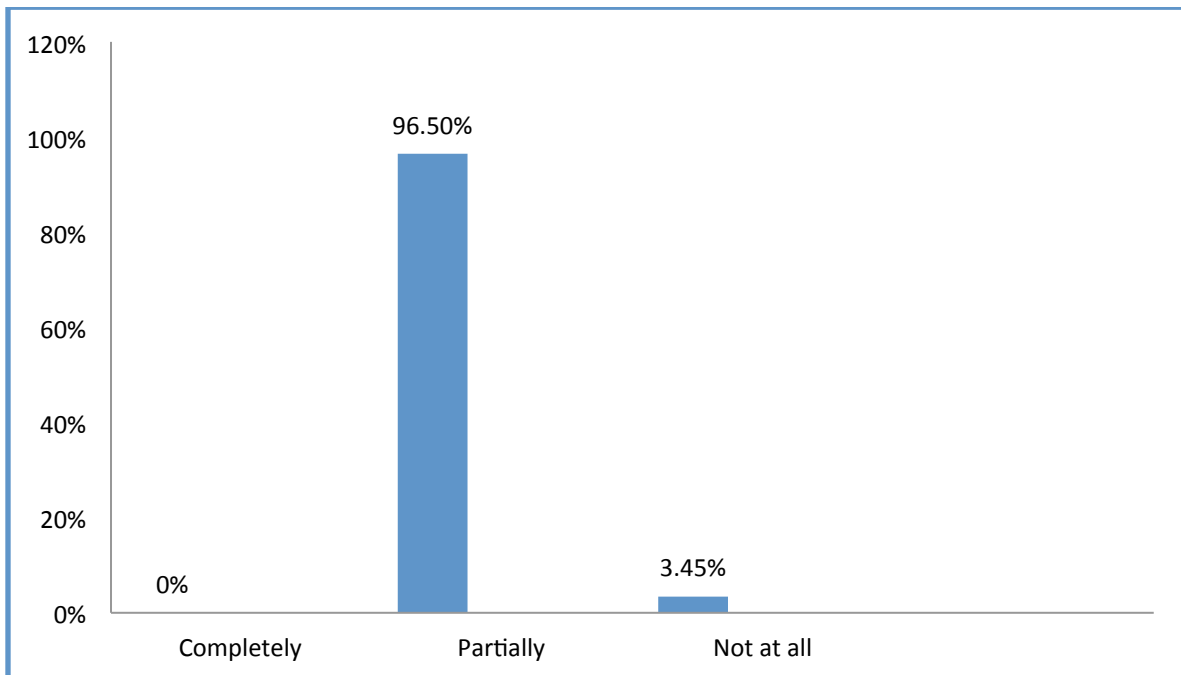
Question 9: What was the organization of training course?

1. Very good , 2. good, 3. Poor

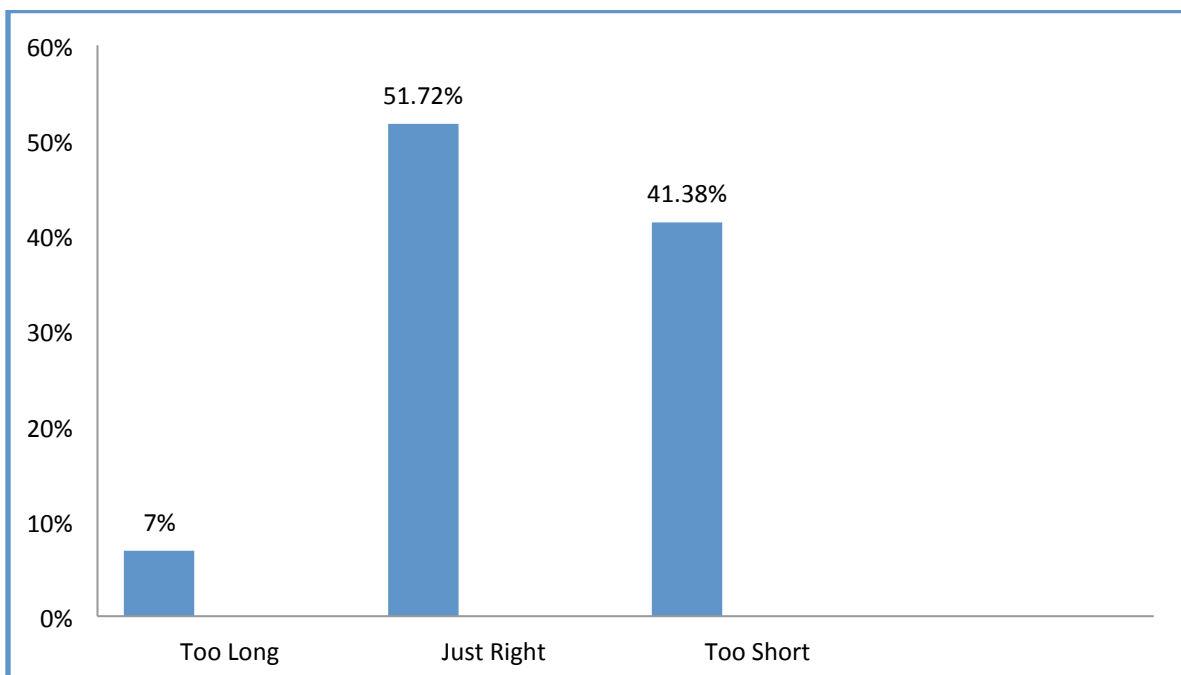
Response: 1. Very good 58.62%, 2. good 41.38%, 3. Poor 0%

The following are a summary of the results of the evaluation distributed to participants at the end of the workshop. There were 16 participants and 16 evaluations were returned.

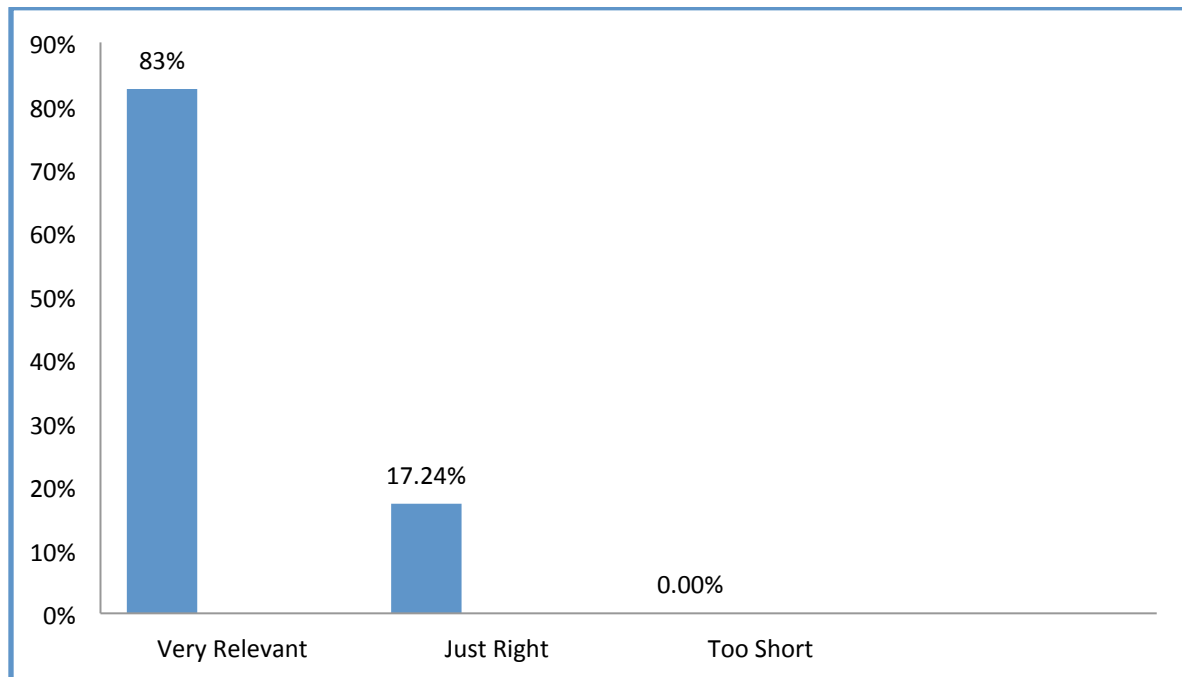
6.2.1 Did the workshop meet your expectations?



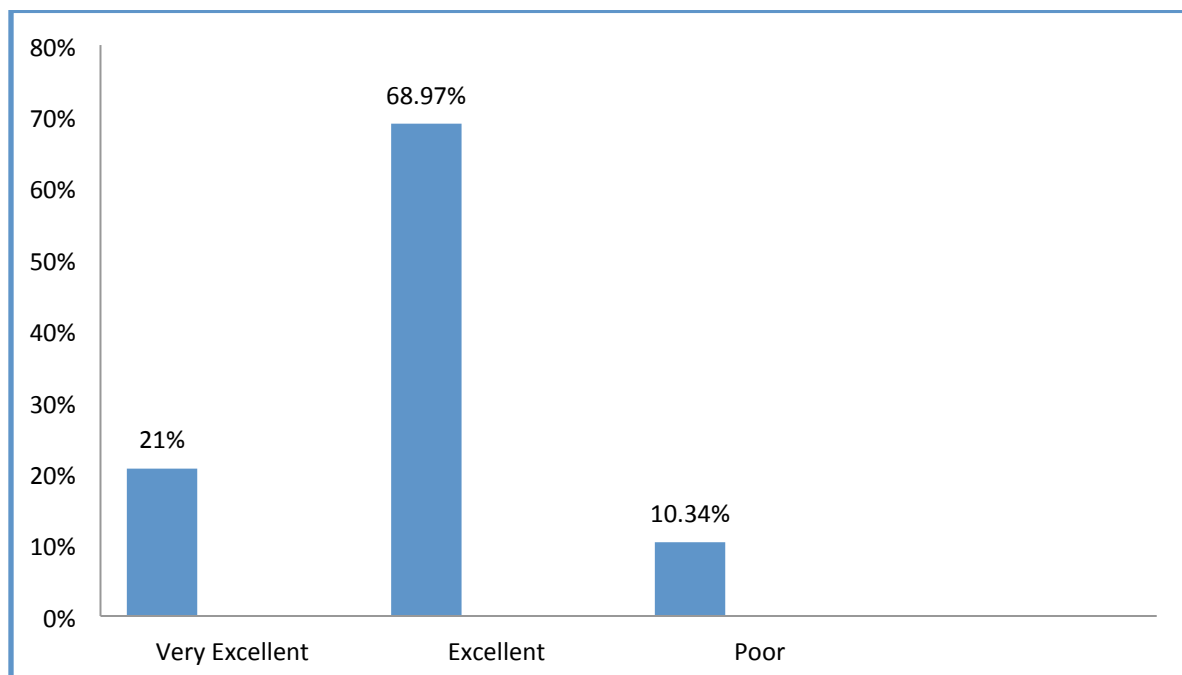
6.2.2 How do you think about the overall length of the workshop, considering the limits on your time and the topics discussed?



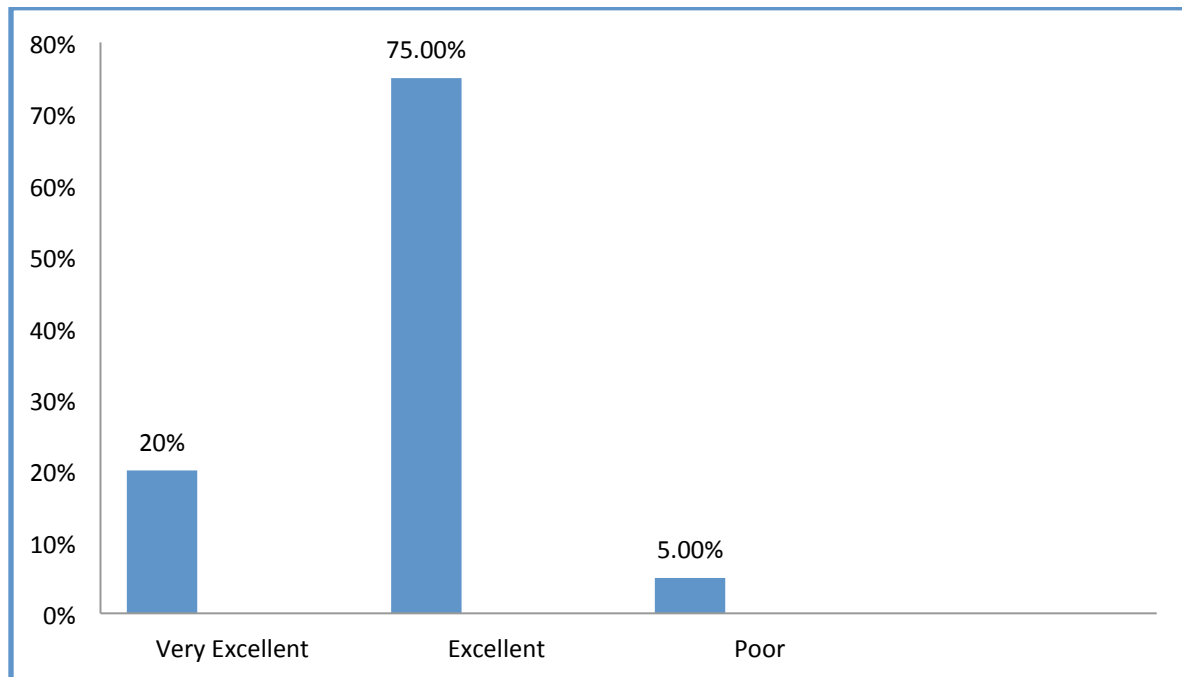
6.2.3 How relevant was the workshop to you and your organization's need?



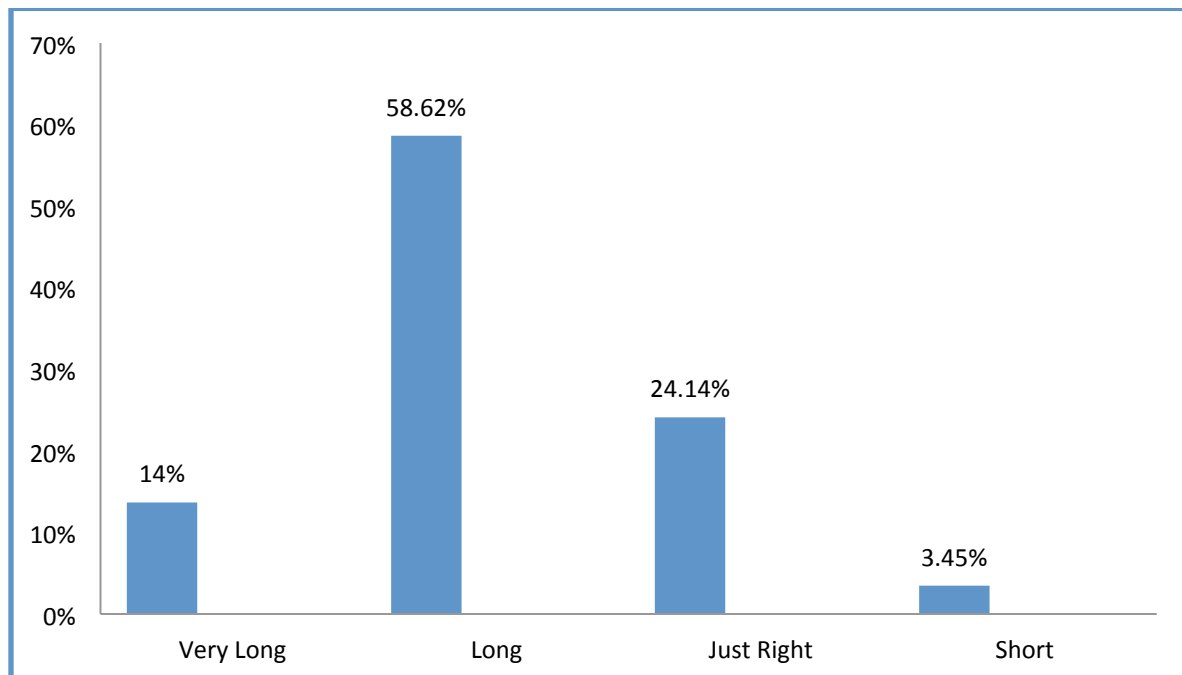
6.2.4 How do you rate the theoretical part of training course?

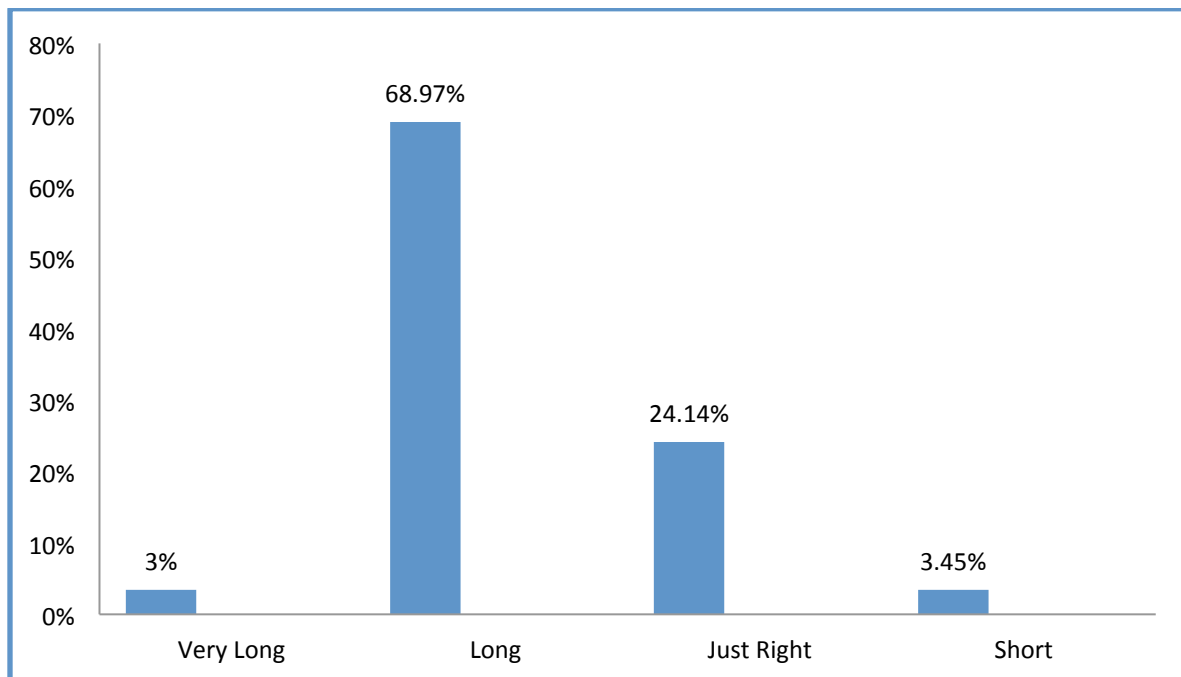


6.2.5 How do you evaluation the practical part of training?

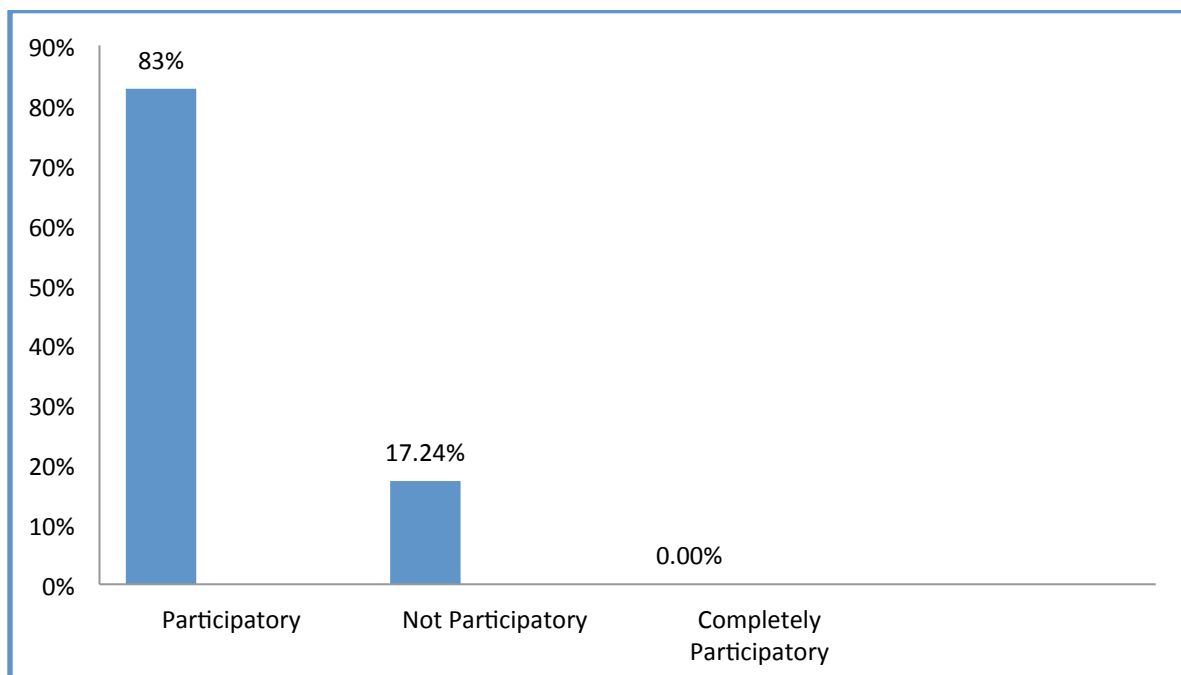


6.2.6 How do you evaluate allocation of time for group discussion?

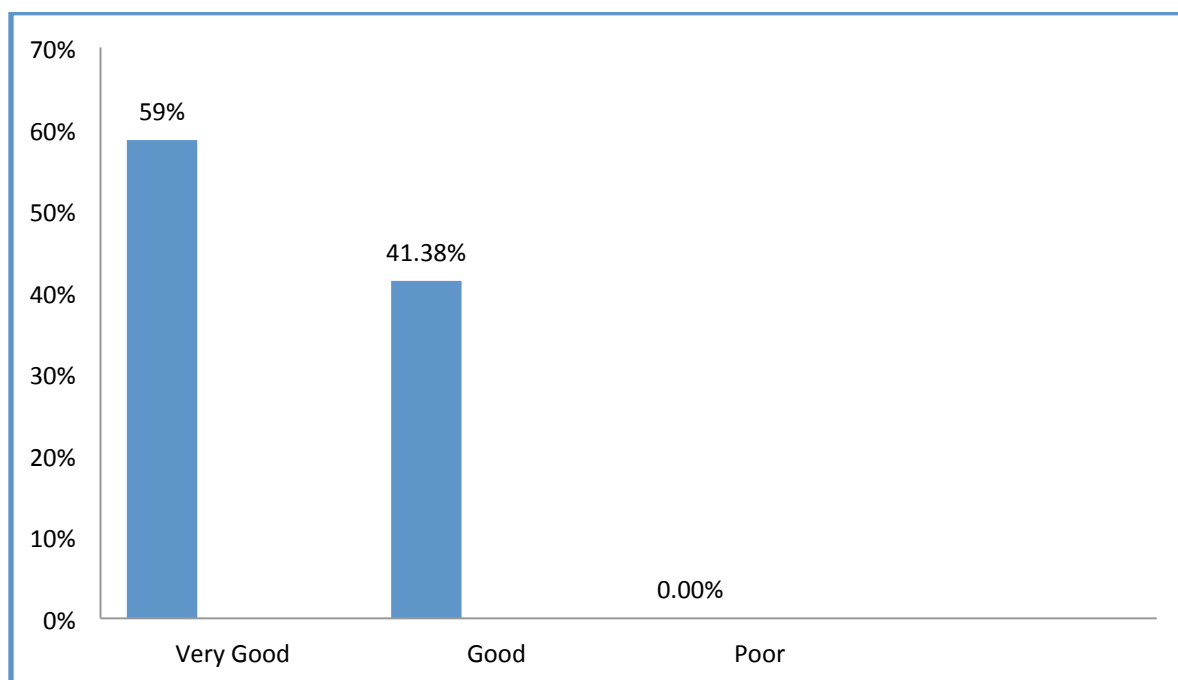




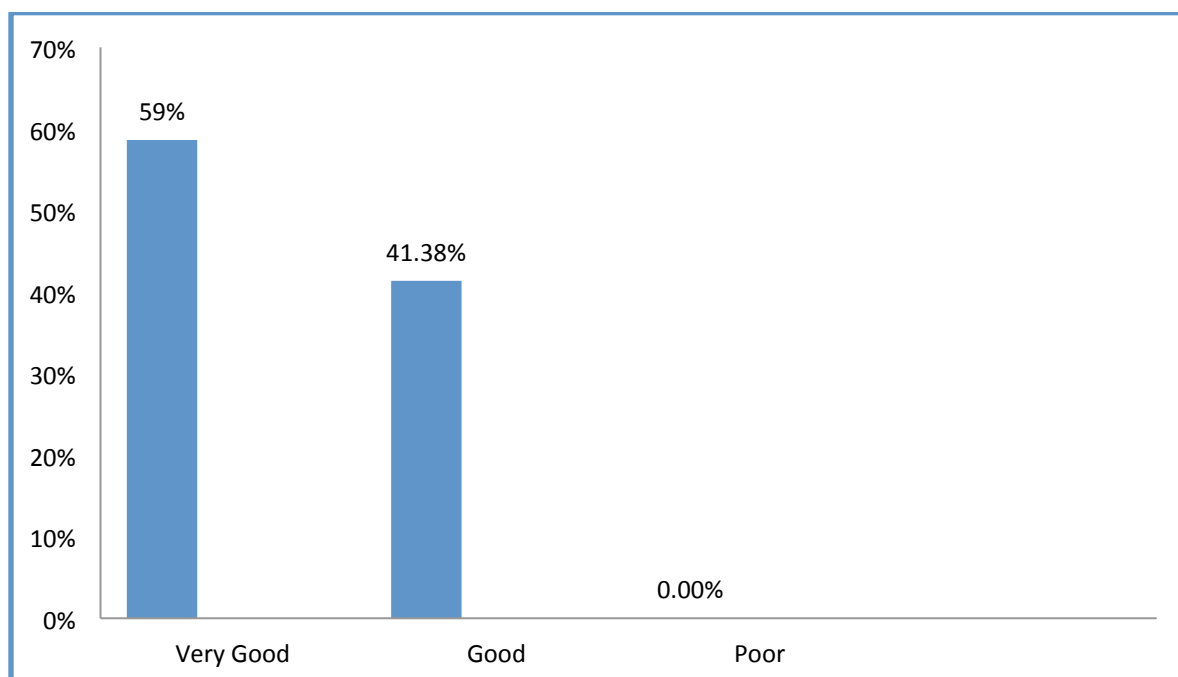
6.2.7 How do you evaluate allocation of time for group works?



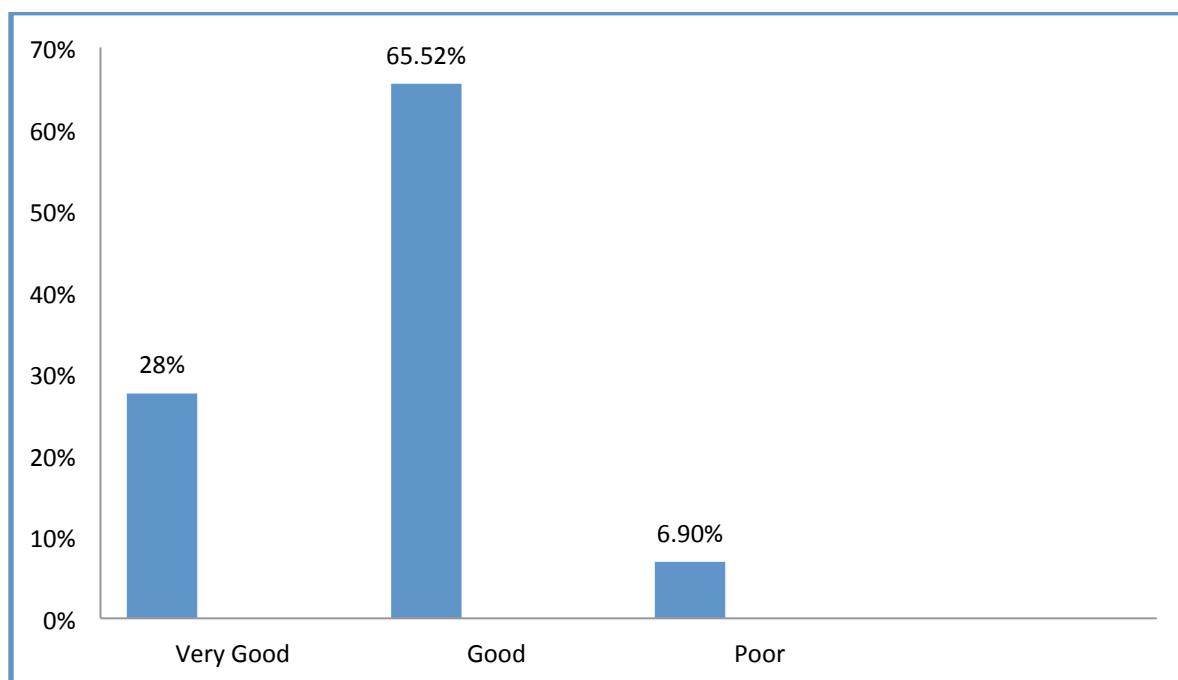
6.2.8 How do you evaluate the method of training delivery?



6.2.9 How do you evaluate food and training hall at the workshop?



6.2.10 How do you evaluate the behaviour of facilitators during training course?



7. RECOMMENDATIONS

- The evaluation of participants indicated a big gap in the WASH sector regarding well construction, development, well pumping test and pumping test data evaluation and reporting. There is needed more improvement to fulfil this gap.
- The training course timetable for this training was very short, therefore, it is suggested to increase the duration of training course.
- The training hall was not good for training course, because there hold other meetings and disturbed our training course.
- Some participants from MRRD were not relevant for this training course, it is suggested to introduce relevant staffs for this kind of training course.
- The practical works (cleaning of well and development and pumping test) were not properly organized according to the training timetable. It is suggested to organize the practical work for well development and pumping test in next training course.