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The Arab Federation for Technical Education (AFTE) Experience
in Technician Training of Manpower
in the Water Sector in the Arab States

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AFTE Experience
In
Technician Training of Manpower
In The Water Sector in The Arab States

By
Prof. Dr. G.S.HASSAWY
AFTE/ S.G.

ABSTRACT

The Arab Fédération For Technical Education (AFTE) is a Regional Intergovernmental Arab Organization cares for technical and vocational education in the Arab States .

To achieve its Aims , AFTE conducts training courses to manpower in different fields of technology to improve their efficiency in performing their duties .

AFTE had implemented several training courses in Arab States in water sector (Ground water and drilling and Construction , Operation and Maintenance of water work) . Those courses were designed mainly to develop the efficiency of Arab technicians working at or in charge of water work .

This paper outlined the objectives , planning , excution , and the evaluation of those training courses .

Conclusions and future views for the development of manpower in water sector in Arab States , were listed .

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AFTE Experience
In
Technician Training of Manpower
In The Water Sector in The Arab States

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Prof. Dr. G.S.HASSAWY
AFTE/ S.G.

Introduction

The Arab Federation for Technical Education (AFTE) was founded in 1980 .
AFTE is the only Regional Intergovernmental Arab Organization , cares for
technical and vocational education in the Arab States .

AFTE aims at intensifying the Arab efforts in all fields of technical
education , particularly :

- Strengthening the cooperation and coordination between technical and
vocational education foundations , institutes and centers in the Arab
States .
- Development and coordination of curricula and syllabi and their adap-
tation in accordance with the needs of national development plans ,
giving due consideration to the requirements of each state as well as
the introduction of modern technologies in technical education .
- Supporting technical and vocational education institutions and centers
in the Arab States to enable them to fulfill their basic role in pro-
moting social development and integration .

* This paper was prepared for presentation at the (Expert Group Meeting On
Manpower Training Needs In The Water Sector In The ESCWA Region , Amman ,
Jordan , 5-8 June , 1989) .

To achieve its aims , AFTE follows all possible means ,among which:-

- Conduct training courses for the technical teaching and training staff in technical institutes to improve their efficiency in performing their duties .
- Arrange general and specialized technical workshops , symposia and seminars at Arab States level .

Since its foundation , and during the period 1981-1988 , AFTE concluded more than (80) programmes , most of which were training courses and workshops.

During the period of 1982-1988 , AFTE implemented several activities in the Arab States in the Water sector , as follows :

1. Six training courses in two major fields :-

- Ground water and Drilling , (Programme No. I)
- Construction , Operation and Maintenance of Water Work, (Programme No.II).

The above two types programmes were conducted in : North Yemen , South Yemen and Somalia .

- 2. Cooperated with Regional and International Foundations in arranging two Seminars in the Arab States during 1985 and 1986 .
- 3. Cooperated with UNESCO during 1986-1987 in providing technical advice to Sudan by Designing of Training Course for Technicians in water sector through a mission of an Expert in water field .

AFTE believes that Training Courses in Water Sector are of vital importance to Arab States , thus more informations concerning the six training courses are given below .

Training Courses In water sector Conducted by AFTE:

As mentioned earlier , AFTE conducted six training courses of two types of programmes (Programme No. I and No. II) . They were implemented during the period of 1982-1985 , where the two different types were carried out in each of the Arab States of North Yemen , South Yemen and Somalia .

AFTE carried out those courses with a financial contribution from the Arab Fund For Economic and Social Development , and in cooperation with the Institute of Wod Al Makbool in Sudan .

Objectives of the Training Courses:-

The objectives of the above training courses which were planned and designed by AFTE , were the following :-

1. Development of the efficiency of the technicians working at or in charge of water work in the areas of the above Programmes I and II .
2. Development of the ability of technicians to utilize logically different tools and equipments in the above activities .
3. Training of the participant technicians on the proper methods of maintenance of tools and equipments .
4. Proper exercises and measurements to be followed for the protection of water sources .

Planning of the Training Courses:

For a wise planning of the above courses , AFTE followed certain steps:

1. AFTE personnel paid several visits to North Yemen , South Yemen , Somalia and Sudan and held several meetings with personnel in Water Sector in each State. Field visits were , even more helpful to draw a better and clear picture of the requirements of each training programme in each Arab State .
2. AFTE gave careful consideration to the Scientific principles , training requirements and their interactions to the participants .
3. National development programme in each Arab State was carefully considered in planning each of the Training programme .
4. Background , levels and experience of the participants were well studied and considered before the planning and designing of the programme .
5. Lecturing and Training Staff for each Programme were well selected ; on the basis of long experience and field work .

Implementation of the Programmes

For the execution of each of Programme I and II , and in the light of the above principles , the following steps and preparations were taken :

1. Selection of highly qualified Arab Experts for lecturing and training .
2. Designing the programme and defining the contents of each programme for the period of three weeks .
3. Theoretical hours composed about 30-35 percent of the total programme hours , whereas the practical hours composed about 65-70 percent .
4. Preparation of lectures , manuals and references . These requirements were prepared as required to each programme in each State .
5. Each participant received a complete set of the above reading and training materials at the beginning of each course .
6. Laboratory , field tools and equipments were carefully selected and bought for each programme in each Arab State and shipped in advance to

the site of training . The complete sets of tools and equipments were delivered at the end of the programme as a present to the concerned Water Sector Department , so as to be utilized locally for future training activity .

7. Audio-visual Aids - In addition to the tools and equipments bought to each programme , selected audio-visual aids ware also bought and taken to the site - those included :
- A- Overhead projector (with its requirements) .
 - B- Scientific films and video cassettes .
 - C- Slides projector with scientific slides .
 - D- Teaching laboratory equipments , such as cross sections of machines, models

The Audio-visual aids , were , also delivered to the concerned Water Sector Department for future local use .

Participants

The following Table shows the number of participants in each Programme and in each Arab State ,

Arab State -----	Number of Participants in : -----	
	Programme I -----	Programme II -----
North Yemen	31	30
South Yemen	47	29
Somalia	32	38
	-----	-----
Total	110	97

All Participants = 207

Evaluation of the Training Programmes.

As it is the case with all AFTE programmes, a careful evaluation was carried out before - during - and at the end of each training programme in water fields .

Evaluation of each programme in each Arab State was carried out as follow:

1. Evaluation of the gained knowledge by the participants. this was recognized through a Pre - and Post -Test to all participants .
2. Evaluation of each Programme by the participants themselves : this was accomplished through:-
 - A questionair given to each participant containing questions on the scientific and training mterials given , methods of training and lecturing , suitability of tools and equipments used , the skills that they gained , the contents of the course , and free comments . To fill up the questionair freely , the participant was not required to list his name on the questionair sheet .
 - Open discussion was held at the last day of the programme which was attended by the participants and the lecturing and training staff . This open discussion was also attended by some experts from the concerned Water Sector Department in each Arab State .

Evaluation records obtained from the six training programmes , showed that participants have gained quite good knowledge for their field work . Experts and par ticipants greatly supported the importance of such training courses in Water Fields and stressed the needs for further training courses in Water Fields .

AFTE Conclusions and Future Views

1. Water Sectors technicians in Arab States , need to be well trained and to up-grade their efficiency .
 2. Improve in - service water sector technicians .
 3. Improve the supervisors and teachers of the Water Sector technicians .
 4. Establishment and introduction of water field studies at the level of technical education in Technical Institutes in those Arab States still having deficiency in these fields .
 5. Increasing the efforts in establishment and conducting continuing education system for training programmes in water fields .
 6. Increasing the efforts for more and better cooperation between Arab States in the field of water sector and condensing the efforts for the establishment of better regional networks .
 7. Introduction of water - related subjects in primary and secondary education .
 8. As , AFTE gained good enough experience in the formulation and implementation of manpower training programmes in the water sector (skilled labourers and higher Technicians) , AFTE is ready to coordinate and cooperate with water authorities in Arab States and ESCWA and Regional Organizations to conduct such programmes to improve and up-grade the manpower in water sector in both qualitative and quantitative terms .
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