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Notes

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 not specific enough, no findings of interest, cannot tell if the teachers have learned anything from the training
 English,
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لدى الدكتور محمد عثمان
من قباله
الدكتور محمد عثمان

COMPREHENSIVE REPORT

IN-SERVICE TRAINING OPTION FOR YEMEN

JANUARY 2000

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Arfah A Aziz

INTRODUCTION

1. This assignment is twofold:

(1) To review current status of in-service training in Yemen, taking into consideration the in-service training and pre-service training programs; and

(2) To recommend a feasible and cost-effective in-service teacher training approach for Yemen.

2. The review of the current status of in-service training in Yemen was duly done through reading available documents, discussions with policy makers and high officials in the Ministry of Education, as well as through field visits to a total of 8 regional and sub-regional In-service Training Institutes (ITIs) in the provinces of Aden, Lahj, Dhamar, and Al-Hodaidah, and discussions with deans and other members of the faculties. The perspective of pre-service training program was obtained through visits to two faculties of education, i.e. Faculty of Education, University of Sana'a, and Faculty of Education, University of Aden, and discussions with the dean and other members of staff. Data was also collected from the School of Education in Taiz. The UNICEF project in the governorate of Hodaidah gave another model of in-service training for teachers with a strong component of continuous support for the teachers and head teachers.

3. The case of technology was considered very seriously at all discussions, the issue being how low or high level of technology that could be accepted and supported by the current system in the central Ministry of Education as well as in the fields. The basis of the discussion was that whatever the level of technology that is installed into a system, the need for operating, maintenance, technical assistance and skills in using these various items of technology into the system of education is of prime importance. Initially, there were serious thinking to establish a video-conferencing system to assist in the training of the large number of underqualified teachers. However, further discussions and analysis showed that while there is space to establish video-conferencing facilities, the available infrastructure needs to be further developed before it can operate, support and maintain a videoconferencing system.

4. The role of the teachers in the classrooms and as a determinant of successful implementation of programs cannot be overemphasized. In a country like Yemen, where there are efforts to improve quality of education through the implementation of a new curriculum program, the teacher is an agent of change, and the teacher trainer is the catalyst for change. Thus, the implementation of an effective in-service training program will ensure that serving teachers will be able to implement any new program efficiently and effectively.

A BRIEF REVIEW OF THE EDUCATIONAL SCENE

5. The last decade has witnessed several important milestones in the field of development of education in Yemen. The definition of Basic Education was extended to 9 years, and was to be implemented, however the smooth implementation was constrained by a limitation of funds. The number of school enrolment increased, and this was followed by the increase in the number of teachers serving in the system. The number of foreign teachers had decreased. The Ministry of Education is strategizing to have qualified teachers teaching in the schools. A qualified teacher is defined as a person who has a secondary school certificate, with a two-year diploma in education and followed by further training in a faculty of education to get a bachelors degree.

6. The biggest problem in the educational system is the huge number of serving teacher who are categorized as underqualified. A breakdown of the teacher population by qualification is in Table 1. (Based on data provided by the Directorate for Training and Qualification, Curriculum and Supervision Sector.)

Table 1. National Teacher Population, by Qualification

Cetificates and Degrees	Number	Percentage
1. Less than secondary school	2 719	2.0%
2. Secondary School and equivalent	73 814	56.4%
3. Higher Diploma, 2 years	24 788	19.0%
4. Bachelor's degree or more, with education	25 616	19.1%
5. Bachelor's degree, without education	3 831	3.0%
Total	130 768	100.0%

7. Out of a total of 130 768 teachers now serving in the schools, those with less than secondary school certificate (2 719) and those with secondary school and equivalent (73

814) to a total of 76 533 are considered underqualified and need to be given necessary courses to qualify and certify them. The second priority is the group of teachers with a higher diploma of two years (24 788), who will be given the opportunity to enter the faculty of education to get a bachelors degree. A similar treatment is also planned for the group totaling 76 533, in that when they have acquired the two-year diploma, they would also be encouraged to get a bachelors degree through a similar route. Thus, the total number of serving teacher requiring attention to bring them to the quality and level desired by the Ministry of Education is 101 321 (76 533 + 24 788).

8. With regard to administration of the school, out of a total of 11 947 government schools, 9276 schools are with head teachers, while 7682 are with assistant headteachers. The head teacher as the leader in a school play a major role to facilitate the implementation of any programs in the school. The need to train head teachers to be able to handle changes in the schools and the community is also necessary, and should be included in the overall plans for in-service teacher training program.

9. Another aspect of the teacher population that requires equal attention is the disparity in the number of male as opposed to female teachers. Out of a total of 130 768 teachers in the schools, 105 759 (80.9%) are male and 25 009 (19.1%) are female teachers. This impedes the efforts of the government to increase girls participation in education, as this is dependent firstly on the provision of schools within the vicinity of where the girls live and secondly on the availability of female teachers teaching them. The strategy to be proposed for teacher training, whether pre-service or in-service must include specific steps to increase the number of women teachers particularly the women teachers who would be willing to teach in remote areas.

10. As one strategy to raise the quality of education in the schools, the Ministry of Education has developed a new curriculum for the Basic Education level, and this program is to be implemented in the schools. The curriculum package is expected to be completed in early 2000, for distribution to the teachers and schools. There will be an orientation program to prepare teachers to implement this new curriculum in the schools.

11. There are two specific projects that could feed into the in-service training option for Yemen. ^①Firstly, a pilot project to install a solar system in 7 schools in remote areas, funded by Unesco, with a total budget of USD15 000, and 10 schools will be provided with a TV, VCR, radio and a cassette player, at an average cost of USD 1500 per school. The present concept includes the use of these schools as a sub-centre to bring together teachers from nearby schools for specific training sessions. ^②Secondly, a UNICEF project in Hodaidah, with specific focus on women teachers and girls education. The teachers in the project get some initial training, they are visited by the local supervisor twice monthly, and meet once a month to discuss and exchange their experience, while at the same getting training and hands-on experiences in the development of instructional materials. Both projects could feed into strategies to ensure the effectiveness in the implementation the new curriculum.

12. There are some development of supplementary materials and aids to assist the classroom teachers, in the form of videos that are broadcasted over the national TV channel from 7.00 to 7.30 in the evening, 2 or 3 times a week. There are plans to establish a more regular educational TV broadcast of educational programs. The broadcast time can be obtained from the national TV, what is necessary is to plan for the content and utilization of the TV broadcasts. The educational TV channel can be supplemented by radio broadcasts, that is particularly useful in areas where TV reception is not very clear.

13. During the last two decades, donor agencies, particularly the World Bank had built many educational facilities, including schools and training institutions throughout the country. During the field visits, it was observed that several training facilities are in a varying degree of use and disrepair. In some instance, only the basic structures had remained, with no equipment and furniture. There are building built to be hostels, but with no furniture.

14. Throughout the four-week stay in Yemen, and various discussions and interactions with different groups of officials at the central, provincial and district levels, it was clear that there are pockets of very dedicated and qualified educationists, teachers and teacher trainers alike, who have gone out of their way in terms of time and in some cases, funds, to perform their teaching functions, and have achieved success under conditions of great financial and personal constraints. A realistic planning and implementation strategy, with careful and close monitoring of the in-service training program and classroom teachers who had participated in these training would ensure the improvement of education in the schools.

A. TEACHER TRAINING IN YEMEN

15. Training programs for teachers fall into two categories: (1) Pre-service training for those who aspire to be teachers, and (2) In-service training for teachers who are serving in the schools.. Until 1998, the Ministry of Education conducted both in-service and pre-service teacher training programs for the basic education level through training institutions known as Higher Training Centres. The faculties of education conducted pre-service teacher training programs for those in the universities who plan to be teachers. In 1999, a decree was released to the effect that all pre-service teacher programs will be the responsibility of the Faculties of Education, and that the Ministry of Education will be responsible for all in-service teacher training programs. In the same decree, all Higher Education Institutes were renamed In-service Training Institutes (ITI), to a total of 22 throughout the country. These ITIs are to be coordinated by the Central In-service Training Institute based in the capital, Sana'a.

16. Teacher Deployment and Appointment is in the Sector for General Education. Teacher training is located in the Sector for Curriculum and Supervision; there are five units in this sector: Training and Qualification, Curriculum and Instruction, Supervision

and Guidance, Examinations, and Audio-Visual Centre. The Sana'a In-service Training Institute in Sana'a is the sixth unit of this sector, located in another area. The Distance Education Centre (DEC) is part of Sana'a ITI, and mention of Sana'a ITI includes DEC.

17. The planning for teacher training is the responsibility of the Directorate for Training and Qualification, and the implementation of teacher training programs is the responsibility of the Sana'a In-service Training Institute. In 1999, there was a restructuring of the sector for Curriculum and Supervision. A decree with regard to the delineation of functions of the six units and the Central ITI in this sector is expected to be released in the next few months.

18. At the present time, the units are in the process of beginning to work together closely. Four directorates: Curriculum and Instruction, Evaluation and Testing, Training and Qualification, and Inspection and Guidance are located in one building for easy communication and administration. The AVA unit has facilities to produce video and audio programs. The audio programs produced are for the use of schools in subjects History, Islamic Studies, Arabic and English. This unit produces video on examination subjects of Science, Mathematics and English. There is some broadcast of video materials through the national TV channel. Generally, there were about 20 enquiries a year on the materials broadcasted. With regard to production of video materials, a TV production studio is being established in the Distance Education Centre at the Sana'a ITI, to produce video materials as support to the modules prepared for Distance Education Training programs. In terms of capacity building, training has been conducted for 30 script writers and 2 producers.

IN-SERVICE TRAINING PROGRAMS

19. Between 1990-1997, in-service training was conducted centrally in Sana'a. Beginning 1998, the responsibility for in-service training as well as with the allocation of funds was decentralised to the governorate. Funds for in-service training programs is administered by the local education office, as well as selection of students to enter these training institutes. The regional ITIs (previously known as Higher Education Centres) conducted in-service as well pres-service to qualify and certify the teachers. Short and Micro-field courses were conducted by a training unit based at the local education office. This will be further streamlined, when all regional ITIs will be coordinated by the Sana'a ITI.

20. The current in-service program for Yemen can be divided into three categories:

(1) Certification and Qualification Program

These are courses designed to give teachers who are teaching in the school the opportunity to get training that will give them the qualification as trained teachers. The incentive is that after completing the course successfully, the teacher will get

an increase in their salary. The selection of candidates is done by the local education office in cooperation with the local, regional ITIs. From this academic year 1999/2000, the pre-service courses are shifted to the responsibilities of faculties of education.

This program consists of the Distance Education and Face-to-face Programs, both programs use the same syllabus and materials. The modules used for the programs were developed by the Sana'a ITI. Additional materials were produced in the form of 40 video titles and 16 audio titles. More supplementary materials will be produced particularly with the establishment of a TV production studio in the Distance Education Centre in Sana'a.

- (I) The Distance Education Course is designed for teachers who teach in remote areas. It consists of 7 terms of 27 months duration. Teachers continue to teach in the classrooms, but spend two months each for three summers to attend a course in a central location, a regional ITI. During the winter and spring terms, these trainees are given specific reading assignments, and have the option to meet their respective tutors every month, to discuss arising issues and problems. The trainees take an examination at the end of each winter and spring terms, and must perform satisfactorily to be able to continue in the program.

This program began in 1993, and the total number of trainees who participated in the program is as follows:

Table 2. Number of Trainees in Distance Education Program (From the Distance Education Center, Sana'a)

Year of intake	Number of Male Trainees	Number of Female Trainees	Total
1993	1 034	380	1 414
1994	2 187	104	2 291
1995	2 837	662	3 499
1996	No intake		
1997	2 365	1 110	3 475
1998	No breakdown by male/female		3 845

Total 8 423* 2 256* 14 524

* Does not include intake for 1998.

(ii) Face-to-face Course, consisting of four terms training for a duration of 24 months. Trainees register for the program at a centre closely located to their schools. These trainees continue teaching, and at the same time attend lectures at the local In-service Training Institute. Each trainee takes between 6-10 subjects per term, to a total of 72 credit hours. Examinations are conducted at the end of January and May.

(2) Short Term Program

These programs run for between 1-4 weeks duration, and are considered as basic courses to give training on how to become a teacher in a subject. as refresher courses for retraining and upgrading, and to inform the teachers on changes in the field of education.

(3) Micro-Field Program

This program is training on specific educational topics arising out of the need of teachers, and are run for one day a week, for the period of the academic year. According to the planning, the trainees would accumulate a total of 128 hours (4 times a month x 4 hours at each meeting x 8 months = 128 hours). Initially, the program is specifically designed for headteachers and supervisors as a strategy to increase their efficiency on the job.

21. The field visits to some regional ITIs indicated that while there is capacity to take up to 650 students, the number enrolled is below the capacity. The enrolments in four sample regional ITIs were 500, 620 and 60, and 244. The enrolment of female trainees is far below the number for male trainees. The detail of enrollment is as follows:

Table 3. Student Enrollment in Four Regional ITIs

Regional ITI	No. of trainers	Kinds of Courses	No. students	male students	Female students	Total	Grand Total
1.Dhamar	25	Face/face	350				
		Level 1			30		
		Level 2			20		500
		Specialist			100		
2.Dhalek	?	Face/face	280	40		320	
		Distance Ed	100		20	120	

		In-serv.	140	40	180	620
3. Lahj	15	Face/face				
		Year 1	?	?	10	162
		Year 2	53	24	87	
		Dist Ed 1	5	15	65	
4. Aden	18	Cl.tchrs	13	22	35	60
		Sub tchrs	9	16	25	

22. Table 3 given an indication of the number of students, by gender. The number of members of the faculty and the students vary between the regional ITIs. During the field visits, the terms and definitions used in the regional ITIs vary from one to the other. This can be taken to be an indication of the need for coordination and closer cooperation between the regional ITIs, that is expected to develop during this academic year with the clarification the Sana'a ITI will, from then on, be the focal point for planning and coordination of all regional ITIs.

23. Taking the number of teacher trainers and space available in all the regional ITIs, on the average of 450 per ITI, the total capacity for training in the 22 ITIs is as follows:

- (1) Certification and Qualification
 - (a) Distance Education Program 7 000 trainees
 - (b) Face to Face Program 10 000 trainees
- (2) Short courses 9 900 trainees
- (3) Micro-field Programs 4 400 trainees

24. One feature of the in-service training program is that the intake for such programs as Distance Education and Face-to-face In-service is determined by the availability of funds. There is no intake for Distance Education Program for the year 1996, because no funds was allocated for the program that year. For this academic year, there is very few intake for the Face-to-face program.

25. On the question of evaluation of the on-going in-service training programs, it was informed that there is quite a resistance to any evaluation of these programs at various levels. Informal discussions indicated that there are issues that need to be looked into with regard to the implementation of the programs. In the case of the Distance Education Program, there is a built-in continuous support for teacher trainees, there is a provision for them to have a monthly meeting to discuss problems and share their experiences. It seemed that the attendance of these meetings are not regular, as many trainees are constrained by finance. Face-to-face program has a repetition rate of about 25%. It was explained that this high rate of failure is due to the heavy load that these trainees carry they continue teaching in the schools while also attending the course work. This involves waste of time and opportunity.

26. Until 1998, the short term and micro field programs are conducted by the local education departments, and the ITIs (Higher Education Institutes) conduct pre-service 2-year teacher training programs as well as the programs for certification and qualification of teachers who are teaching in the schools. With the change in policy, the short term and micro field programs are now to be conducted by the ITIs, and all pre-service training programs are now the responsibility of Faculties of Education. The academic year of 1999/2000 is viewed as a period of transition when the changes are being implemented. Several ITIs still have students from the pre-service training programs from the previous year, and will see this cohort through their final year of study. At the same time, short term in-service training programs that were conducted by the local education department will be transferred to the ITIs.

27. During the field visit, several issues arising from the new policy were discussed. Among the items requiring immediate attention are the following: process for financial allocation that up to then was channelled through the local education department, the process for ITIs to acquire facilities needs clarification, especially with the new line of authority to the Central ITI. The process of selection of teachers to attend the training programs had been done by the local department of education. This selection process also needs to be clarified. Another matter that requires a more rigorous approach is the selection of officials to be members of the faculties of all ITIs.

PRE-SERVICE TRAINING PROGRAMS

28. There are altogether 23 Faculties of Education spreaded throughout the country. However, due to the limited time, only two faculties were visited, i.e. Faculty of Education of the University of Sana'a and Faculty of Education of the University of Aden, data was also collected from the Faculty of Education in Taiz. The number of students and graduates for two faculties of education indicate the direction of student intake in terms of number and subjects of specialization. Please refer to Annex 3.

29. The selection of students into the various subject areas in the faculty is done by the university. There seems to be overtraining in some subject areas, such as social studies. In this case, the faculty seems to take the stand that "the market forces will prevail", and some graduates would get teaching appointments and some may not. As an effort to increase the number of women teachers, female students are taken into subject areas even when there is an oversupply of teachers, such as Biology. However in many instances the women graduates are not willing to accept an appointment in a remote area, and so the increased number of women teachers graduating from the faculties of education does not necessarily mean an increase in the number of women teachers available to teach in the rural areas.

30. Students in the Faculty of Education, taking Faculty of Education in Sana'a as an example, take a total of 142 academic hours, with 50% in their academic major, 35% in education, and 15% in elective subjects, including culture English and Arabic. There are

11 major areas of specialization, including English, Arabic, Physics, Chemistry, Geography, Quranic Studies, and Islamic Studies. With regard to members of the teaching faculty, about 70% has had training in foreign institutions..

31. With regard to the curriculum, the Faculty of Education in Sana'a took some initiatives to start new programs more relevant to the current needs of the country, such as kindergarten education and the environment. However, these initiatives faced problems to get approval and funding. There seems to be no clear-cut policy of the number of teachers required, or the areas of subject specialization. It appeared that a closer relationship and communication between faculties of education and relevant units in the Ministry of Education, as well as at the highest policy level need to be established. There is a strong case for coordination between the Ministry of Education and all Faculties of Education with regard to the projections for teacher requirement and their subject specialization so that the training done by the faculties of education would be more relevant to the needs of the schools and the educational system.

32. The Faculty of Education in Aden revised its curriculum in 1998. It is a form of a unified curriculum, and it is hoped that it could be implemented in other faculties of education as a means to facilitate transfer of students across different Faculties of Education. This faculty of education concentrates on science subjects. The University of Aden requires that all students take a course on computers, and so there is need for an additional computer lab. The enrolment of this Faculty of Education is 6000, with 4000 being female students. The women teachers who graduated from Aden are prepared to teach in rural areas if basic facilities such as accommodation is provided.

CURRENT SITUATION IN ITIs AND FACULTIES OF EDUCATION

33. From the visits to the 8 regional ITIs and 2 faculties of education, it was observed that the facilities for training in all the institutions can be further improved. All the ITIs visited have adequate space, including classrooms for 40-60 students, a multi-purpose hall for 150-200 students. But the furniture such as chairs and tables need repair, or to be replaced as the tables and chairs in use in some ITIs visited were built for primary school children.

34. In terms of equipment, ITIs in particular lacks basic equipment for the process of teaching and administration. There are no copying machines, overhead projectors, computers, TV and radios. There is a TV available in ITI Lahj, but the trainers are not able to incorporate its use into their teaching due to time constraints. In terms of communication, the telephone lines are good, but there is no fax machine or internet connection.

35. With regard to science labs, both faculties of education visited do not have access to any science labs due to renovation and construction works. The same situation prevails in ITI, where there are no science labs at all, and when there is a science lab (ITI Taiz),

there is no chemicals to allow use of the facility. Some ITIs allocated space for a library, but the selection of books is limited to the texts for the Distance Education Program, and outdated books. There are buildings built as hostels, but with no furniture. In another case, a complex for training built to serve some five governorates were not rehabilitated for use.

36. The provision of facilities for ITIs in particular, needs to review the facilities that originally were built for them that however were taken over by either the local faculty of education or the local education department. There was a case where the local education department acquired several rooms in an ITI, but the officials seldom come to use them. This deprived the particular ITI from using the space as a library or study space for both students and trainers. In another case, the whole facility was taken over by another educational institution, and the regional ITI had to find alternative building that used to be a technical-vocational school, that was far below the standard for a teacher training institution.

37. With regard to the financial implications of the in-service programs. The funds for the regional ITIs are sent to the local education offices, and the regional ITIs make claims on money spent. In terms of allocation, the ITIs categorized as large is allocated Riyal 2 mns a year, and the ITIs categorized as small get Riyal 1 mn. The Dean of Lahj ITI said that the amount Riyal 2 mns allocated to his ITI is not sufficient even for the basic programs and purchase of materials, with no provision at all for maintenance or purchase of equipment, an allocation of Riyal 4 mn would be more reasonable. Als the amount of funds allocated to the ITIs could be quite unpredictable. In 1996, no funds were allocated for the Distance Education Program, as a result there was no intake at all for that year.

38. The costing of in-service course as done by UNICEF for its project in Hodaidah includes regular supervisory visits to schools, travel funds to a monthly meeting for all teachers, 1 bi-monthly newsletter, materials fo development of instructional materials comes to a total of USD 1.6 millions over a period of three years. The unit cost of for the course per teacher is USD142.00. This high cost for the 2-week course is due to the big allocation for travel to Sana'a, that is the responsibility of the project. ?

39. Efforts were made to compare the unit cost per course with other countries in the region, but there was inadequate time to get the information, more so since the time was the period of Ramadhan when most countries in the Middle East take a failr long period of holidays. Data on in-service programs were obtained from a document on the European Union countries, but the figures obtained were in the form of percentages allocated to in-service training (a range of 0.12% to 1.5%) out of the amount allocated to education.

40. The cost to run a 5-day orientation program for the New Basic Education Curriculum, as estimated by the Educational Development Centre that is given the contract to run the course, put it to a total cost of USD12 540 for a group of 40

participants, gives the unit cost as USD313.50 per teacher. Taking the figures obtained to run in-service courses in Belize, including per diem and allowance for teachers, local technical assistance and fees for the assistance comes to a total of USD 7600 for a group of 40 participants, thus giving a unit cost of USD190.00 per participant, excluding travel for participants and technical assistance.

41. The cost for running a 5-day course for Malaysia includes daily subsistence, travel to a regional teacher training college, honorarium and stationery and materials comes to USD2200 for 20 participants, to a unit cost of USD110.00 per participant. This lower unit cost is due to the fact that hostel accommodation is available in the teacher training college, and the honorarium to the trainers is fixed at an hourly rate of USD25.00.

42. While a comparison between the unit costs obtained above cannot be really done because of the differences in the items included in the costing, several conclusions can be drawn from the data collected. First, the cost of conducting can be reduced if there is minimal travel by the participants. Secondly, the cost of accommodation can be absorbed if the course is conducted on the facilities of the teacher training institutions that has hostel accommodation facilities. Thirdly, the high cost of technical assistance can be much reduced if the course is conducted by local experts attached to the schools or the training institutions.

43. For supervision and support for the classroom teachers, this is the domain of the Inspectorate and Guidance Unit in the Curriculum and Inspection Sector, Ministry of Education. While regular visits are planned for the year, again budgetary constraints limit the number of visits as well as the locality of schools, as the limited funds allow visits only to nearby schools. Thus unit gets an allocation of Riyal 5 millions a year, and allocates Riyal 20 000 a month to the large governorate, and Riyal 15 000 a month to the smaller governorate. There are 11 vehicles available for the use and these are usually done during group inspection of schools, however the use of these vehicles is also limited by the small monthly allocation. As a result, supervision of classroom teachers is done at a minimal, limited by the funds.

44. In an informal assessment of the eight regional and sub-regional ITIs visited, the leadership plays a big role to ensure effective utilization of space and facilities, even to the ability to acquire such equipment as computers and copying machines for use of the staff. There is the need to train the leaders in ITIs so that they will be able to do their job more effectively. This matter is in consideration of the Ministry of Education. According to the current planning, the position of the deans of the ITIs has been made equal to the deans of faculties of education in terms of status and salary. By May 2000, the appointment of all deans of ITIs will be reviewed and suitably qualified educators will be appointed to the position. With the present group of teacher trainers serving in the regional ITIs, an estimated 600 require upgrading in terms of their qualification and skills. However, there are plans in the Ministry of Education to improve the quality of the teacher trainers through a finer selection process of intake as well as short term training programs.

THE NEW BASIC EDUCATION CURRICULUM (NBEC)

45. Yemen is in the process of implementing a new Basic Education Curriculum, as one of the strategies to raise the quality of education in the schools. To date, the syllabus, textbooks and teacher's guides for Grades 1 through 6 for five subjects: Arabic, Islamic Studies, Science, Mathematics and Social Studies will be ready to be implemented for the academic year 2000/2001. The contract to train 17160 teachers through the cascading approach is awarded to the Educational Development Center (EDC). There is now the intent to implement the curriculum in all six grades simultaneously. For this purpose, the an additional 23 420 teachers need orientation to the new curriculum, to a total of 40 000 teachers.

RV / 46. Although this curriculum is named a new program, in fact the content is the same as the curriculum in use, however the changes are with regard to the teaching strategies. It is for this reason that it seems to be possible to implement the program in all six grades simultaneously. Even then, the cascading approach selected for the preparation of these teachers need to be supplemented by a more effective delivery system, and a continuous support for the teachers. This should also include the head teachers, as they play a big role to facilitate the implementation of the curriculum.

47. Personal experiences in implementing a new curriculum at the primary school level of education point to specific areas for attention. Some of the issues that need to be considered are as follows:

- The training cannot be a one-off activity, it should be supported by regular supervision and opportunities to discuss arising issues and problems with their peers and local "expert".
- The preparation of teachers need to include the head teachers, who determine the direction of the implementation of any program in the school, and who has the last say on the finances and use of facilities available on the premises.
- However much teacher-pupil materials are provided for the convenience of the classroom teachers, many teachers would want to produce some instructional materials themselves, that they will use in the teaching-learning process, that they would like to share with their colleagues.
- Even though teachers can be given knowledge and skills to implement the new program, it is very difficult to change their attitudes to accept the changes. On the surface, teachers may appear to accept the changes, but the acceptance may be temporary and needs to be constantly emphasized, so that they will be sustainability to these changes.

Some Basis To Formulate an In-Service Teacher Training Option for Yemen

48. The above discussions brings forth the following factors that should feed into the development of an In-Service Teacher Training Option for Yemen:

(1) Training Programs

Although the training program used for the Distance Education and Face-to-face Training programs was started in 1993, the content and structure are still applicable and should continue to be used. However, considering that it has been in use for the last seven years, it is pertinent to review the content, to take into account any new development in the field of education, in the country as well as at the international level. Although there are training programs categorized as short courses and Micro-field courses, it would be useful to have an overall plan for these programs, with the involvement of personnel from the local levels.

(2) Maximising the Number of Intake into Training Programs

The maximum capacity of the ITIs should be taken into account and ensure that there is maximum intake for the programs, particularly for the certification and qualification programs. Based on the space available at the regional ITIs, taking an average of 7000 space for the Distance Education Program and 10 000 for the Face to Face Training programs, the following schedule could be followed:

	Distance Education Program	Face-to-face Training Program	Number of Graduates	Accumulated Total
Year 1	3 500	5 000		
Year 2	3 500	5 000		
Year 3	3 500	5 000	8 500	8 500
Year 4	3 500	5 000	8 500	17 000
Year 5	3 500	5 000	8 500	25 500
Year 6	3 500	5 000	8 500	34 000
Year 7	3 500	5 000	8 500	42 500
Year 8	3 500	5 000	8 500	51 000
Year 9	3 500	5 000	8 500	59 500
Year 10	3 500	5 000	8 500	68 000
Year 11	3 500	5 000	8 500	76 500
Year 12	3 500	5 000	8 500	85 000

Based on this estimation of trainee intake, the number of underqualified teachers in the system will be minimized in a period of 11 years. The advantage of this schedule is that the training program is already available, and it is a question of implementing the training programs as planned. However, in order to ensure that there would be maximum use of the capacity available at the ITIs for training, there has to be the allocation of adequate funding to allow for the training to proceed.

(3) Preparation to Implement the New Basic Education Curriculum

The preparation of teachers for implementation of the New Basic Education Curriculum (NBEC) would be part of the short course programs that is conducted by the ITIs. The plan is to implement the program in Grades 1 through 6 simultaneously beginning the academic year 2000/2001. The merits and demerits of implementing the new curriculum in all six grades simultaneously were discussed, but in this case the political consideration outweigh the educational rationale. At best, steps could be formulated and taken so that the rapid implementation would have the support it would need to ensure some measure of effectiveness in the classroom.

This regular support and discussion groups can be provided by the headteacher, peers, and also the local supervisors in the system. The role of supervisors in a strong, continual support for the teachers need to be defined and strengthened. Needing immediate attention are efforts to ensure the quality of supervisors, provisions of local training courses and reference materials, as well as the need for regular financial allocation to the group responsible for visits and supervision of teachers. This continuous support group and training sessions should be institutionalized with the establishment of sub-centers located in schools, as per the model of the Solar System Project. The availability of training programs at the local level will, in some way, encourage more participation from the women teachers.

(4) The Cascading Approach to In-service Training

Another aspect for consideration is with regard to the cascading model of training that has been adopted to orientate classroom teachers to the new curriculum. In the case of Yemen, training will be done in three levels. Level 1 is training a small pool of trainers. At Level 2, these trainers train a bigger pool of local trainers. At Level 3, these local trainers train the teachers who teach in the classrooms. The different levels of training generally emphasizes different things. When training the trainers, normally attention is given to the subject matter. However, teachers who are trained at Level 3 requires more than the content and subject-specific teaching strategies, the classroom teacher has to integrate and coordinate between these various subjects, so that the delivery of the content to the students can be made more suitable for their age level and experiences. Thus the guidelines for teachers to integrate between these subject should also be given as part of the training program. Also, the cascading approach tend to dilute the content as it moves from level to level. The added use of technology in the forms of videos and audios will minimize this dilution. It is proposed that the strategies Tutored Video Instruction (TVI) will be incorporated into the training program. Audio-tapes on specific topics can also be included as techniques to facilitate understanding of concepts in the new curriculum.

The training given to the teachers need to take into account that these trained teachers will need to train other teachers in the school. In consideration of the fact that there are two kinds of teachers at this level: Grades 1-4 are class teachers, and Grades 5-6 are subject area teachers. The selection of teachers to attend the orientation program need to have both groups represented. Also, there will be representatives of head teachers attending these programs.

(5) Supply of Equipment

The delivery system assists to ensure the effectiveness of the program. There are basic equipment that would be necessary to facilitate the running of a training program. These include a copying machine, computers and printers, overhead projectors, radios, and TV and video cassette recorders. These equipment would be supplied to the ITIs and the sub-centers that would be established to assist in the implementation of the NBEC. The provision of computers is necessary to facilitate the training in terms of word processing and data processing. Another aspect is the need to orientate the teachers into the modern world of telecommunications, and the connection to the internet would be a good way to initiate them into it. At the present time the cost of internet connections is high, however some strategies could be done to reduce the cost. In this early stage, possibly putting in some internet connections in a few selected ITIs could allow the Ministry of Education to study the direction of how to incorporate modern telecommunications into the educational system. In addition, there could be the connection to the satellite services particularly in the central ITI so that the officials will be able to update themselves with materials and information available on the satellite channels, and share these materials with their colleagues in the regional ITIs.

A discussion with the Ministry of Education proposes that the following equipment be provided to all regional ITIs. Depending on the budget available, the supply may be staggered in stages. Also there would be the need to evaluate the utilization of these equipment so that the supply of additional equipment to another ITIs can be made on the basis of the usefulness of these equipment and use of them in the course of training and administration of the training, thereby making it more cost-effective. The list of equipment that would be supplied is as follows:

- (I) Overhead projector
- (ii) Copying machine
- (iii) Fax machine
- (iv) Computers and printer
- (v) Radio and audio-cassette player
- (vi) TV and video cassette recorder

Attention need to be given to the furniture in these ITIs. The available furniture including chairs and tables and cupboards are in a state of disrepair. Some table and chairs have been built for school children and are not suitable for teacher trainees. In the light of the more important role of ITIs in the in-service training program of teachers in the country, it may be oppportune to take this opportunity to redesign the furniture to allow for flexibility of usage and utility as part of the training programs.

(6) Development of an Overall Plan for In-service Training

Long-range plans for teacher training, encompassing pre-service and pre-service, including projection for teacher requirement, area of specialization, strategies to encourage the enrolment of women teachers, financial implications, and incorporation of suitable technology to improve the effectiveness of the training program need to be developed, and serve as a guide for implementation. This can be done with inputs from various levels of the Ministry of Education, including teacher trainers, headteachers, and high officials. One major components of the planning would be the coordination between the Ministry of Education and Faculties of Education with regard to the enrolment of teachers who have obtained their diploma in education in faculties of education to get their bachelor's degree. There would be the need to plan for facilities and places to accomodate those who may want to join the university.

(7) Capacity Building For ITIs

The role of the deans and the members of the faculty to plan and implement the training programs cannot be underestimated. They are the determinants of the success or failure of the programs. With the expected appointment of new deans and new lecturers, there would be the need to give some training to them so that they will be able to perform their tasks more efficiently. The capacity building need also to be given to other officials who are involved in the planning and implementation of the training programs, including the planners and implementers of the various in-service training programs conducted by the central and regional ITIs.

(8) Allocation of Financial Support

The implementation of all aspects of a program requires the adequate allocation of time, personnel and funds. At the present time, this regular allocation does not seem to be adequate for such components as maintenance, travel, and purchase of necessary equipment. Also, the financial constraints has limited the number of trainee intake at the ITIs, so that they train less than their capacity. Steps to assist in diagnosing the current status and possible strategies to alleviate the situation of limited fundings needs immediate attention, at the internal level. However, in a

situation of limited funding, strategies to conduct activities with the involvement of the local community need to be strategized accordingly.

(9) Development of a Pool of Local Experts

A preliminary review of the kinds of training programs now conducted in the ITIs are mainly to bring the teachers to an accepted level of competency. With the implementation of the new curriculum, there would be the need to provide continuing support for the teachers. A cost effective method would be to provide this service at the local and district, using local expertise. This will reduce the need and the cost for travel.

The development of a pool of local experts can be done through the process of in-service training that is deep and wide enough. Training programs on special areas of a year would over a period of time develop a critical mass who would be able to assist the implementation of not only the curriculum, but other strategies to improve the quality of education. This will also give the opportunity for selected teachers to specialize in areas important to the schools and the locality.

B. AN IN-SERVICE TEACHER TRAINING OPTION FOR YEMEN

49. The in-service training area in Yemen is in a period of transition. The Ministry of Education, is now responsible for all in-service training to be conducted in education in the country. The Sana'a ITI in Yemen is now responsible to coordinate and conduct in-service training programs through its 22 regional ITIs. The short courses and micro-field courses that were previously conducted by the local education office will now be subsumed under the responsibilities of this unit. This is a good time to develop an overall plan for in-service training for education, that will be applicable for the next decade.

50. Developments in the country also support the need for a master plan. There are strategies for quality improvement of education in the classrooms. The implementation of the New Basic Education Curriculum is a major activity that will have long term effects on the graduates of the school system for the next few decades. As Yemen prepares to develop its educational system, it has to be sensitive to the development on the international scene with regard to advances in technology and communications.

51. A big proportion of time and finances will be given to the efforts to qualify and certify the large number of underqualified teachers. At the same time, steps need to be taken to develop a pool of local experts in various areas of education - pedagogy, administration, development of instructional materials, evaluation and assessment. This can be done through the implementation of long term in-service training programs that will give the depth and breadth to a selected group of teachers who show interest, motivation and potential. The existence of local expertise will allow for training of teachers at the local level. This will ensure relevance of the training, while at the same time cut the cost of travel.

52. The incorporation of appropriate technology into the training programs and administration of the ITIs would also contribute to increased efficiency and cost effectiveness of the courses, while saving time and creating opportunities. The supply of basic equipment as overhead projectors and copying machines will facilitate the teaching. There is always the need for typing and rather than supply typewriters, it would be more efficient to supply a suitable number of computer workstations with capabilities for word processing, data analysis, spreadsheets, and in some cases for multimedia. There would be the need for fast and effective communication among the regional ITIs and the Central ITI, and so the supply of fax machines with the prospect of e-mail and internet connections can be built into the planning for the ITIs. Teacher trainees as the catalysts for change in the educational system should be in the forefront to be familiar with and use the technology that can be made available, and that will be soon be available in the schools,

53. The quest for quality would require on-going evaluation and assessment of current programs with the view for continual improvement. This will be built into the plans. At the same time, there will be the provision for continuous support to the local teachers through their peers and colleagues.

54. The courses offered will include a few one-year courses for serving teachers to study in specific areas of relevance to the needs of the classroom teachers. The areas include remedial and enrichment programs, development of instructional materials, evaluation and assessment, collaborative learning, computer-based learning, etc. Over a period of five years, there would be an adequate supply of expertise among the locally based teachers.

55. While the existing training program for certification and qualification of teachers is still valid and useful, steps need to be taken to ensure efficient and effective implementation of the programs. The distance education program has a weak link whereby trainees who are supposed to attend the monthly meeting are not able to come because of financial constraints. Audiotapes and videotapes could be made of the meetings, and the trainee could obtain a copy, so that he/she will be able to follow the discussion and keep up with the monthly meeting.

56. The trainees following the face-to-face training program also has a problem of work load. Possibly, the duration of the course can be made more flexible, so that trainees who are able to cope with the load of 6-10 subjects continue to do, and trainees who find it a problem, can reduce the work load to a manageable amount of courses. So that a trainee can choose to complete the course in 6 terms rather than the stated four terms.

57. Appropriate technology would be incorporated into the training programs and the administration of the regional ITIs. An audit of equipment, furniture and facilities of all

regional ITIs will need to be done immediately, so that further planning can be done to equip these ITIs accordingly. Apart from basic equipment of copying machines, fax machines and overhead projectors, there will be made available computer work stations at the initial stage, and when appropriate, there will be local area network, wide area network and connections to the Internet. Where appropriate, a supply of TV and VCR would be made available. However, since the utilization of these equipment depend on the availability of relevant videos and broadcasts, the supply of TV and VCR will be considered a pilot project, and will be supplied to a small number of ITIs to see whether it would cost effectiveness. Radios and audio cassette players will be supplied to assist in the training.

58. In support of the implementation of the NBEC, there will be provision for continuous support for the classroom teachers and head teachers, at the local level. The model developed by UNICEF in the project in Hodaidah can a model for consideration. In this situation, there is the development of a supervision system, regular meetings of teachers with a facilitator, and provision for the teachers to develop instructional materials for use in the teaching-learning process. The project on the Solar system will be extended, so that there will be 301 sub-centres located in schools, to cover all 301 districts in the country. This sub-center will be supplied with basic equipment of copying machine, fax machine, overhead projector, radio and audio cassette player. With regard to a TV and VCR, this will depend on the utilization of these equipment in the selected ITIs. If the utilization is high, then there would be the rationale for these sub-centers to be supplied with the equipment.

59. With the establishment of the sub-centers, monthly meetings for teachers and head teachers can be organized at the local level, thus minimizing the cost for travel. Some allocation of funds may be necessary for the facilitator.

60. All the above components would require that there is close cooperation and coordination between relevant institutions: the Central ITI, Directorate for Training and Certification, Inspectorate and Guidance, Audio-Visual Unit, the Curriculum Unit, and the Evaluation Unit. Close coordination need also to be established with the Faculties of Education, as some of the members of the faculties would be invited to participate in the process of planning and implementation of the training programs. This close coordination is also necessary to plan for the intake of the teachers who have obtained their diploma into the faculties of education to get their bachelors degree.

The Goals of In-Service Training Program

61. The In-service Training Programs is to give opportunities for serving teachers to upgrade their knowledge and skills in specific areas of education as part of the teachers' professional development, leading to the process for life-long education. The professional development will be continuous and relevant to the needs of the schools and the teachers. Within a reasonable period of time, there will be a pool of local experts who will be able to lead in-service training programs at the school and local level.

Objectives of the In-Service Training Program

62. The in-service training program will be on a five year cycle. The specific objectives of the program for the first five years are as follows:

- (1) Train underqualified teachers to obtain their diploma in education through the Distance Education Program and Face-to-face Program, at maximum capacity in the regional ITIs, so the intake will be 3500 for the Distance Education Program and 5000 for the Face-to-face Program, yeraly.
- (2) For immediate attention, the short course will focus on the orientaion of teachers to implement the New Basic Education Curriculum. Grades 1-6. The target group for orientation will be the classroom teachers, head teachers, and officials at the local and central levels.
- (3) Develop support materials in the form of videos, audios and written materials for distribution and use at the training centers.
- (4) The personnel conducting the training programs will be given short-term staff development programs, locally.
- (5) Develop a pool of local experts through the short training programs. The variety of programs will include the Micro-Field training program, 1-4 weeks program, and possibly three-months program, and a one-year program.
- (6) The infrastructure of the regional ITIs will be brought up to a reasonable level and to be operational, to include computer work stations, lecture halls, library/resource center, science labs, basic facilities for communictaions among the training centers and the central agencies, through telephones, fax machines, and later through the Internet and e-mail.
- (7) The planning for the above programs will be done in a way that will involve officials at the central and local level, including the head teachers, classroom teachers and Inspectors. The administration and coordination of the Central ITI and regional ITIs, and the proposed sub centers needs to be streamlined, and clear guidelines distributed and followed by everyone in the area.

Five-Year Plans for Above Objectives

63. Following is a proposed activities tor a Five-Year Plan to implement the in-service teacher training option for Yemen:

(1) Train underqualified teachers to obtain diploma in education.

Year 1 Plan intake for both Distance Education and Face-to-face Programs to full capacity at all Regional ITIs; evaluate both programs and identify areas of weaknesses, strategize to overcome areas of weaknesses; ensure adequate funding available.

Year 2 Maximum intake for both programs.

Year 3 Maximum intake for both programs.

Year 4 Maximum intake for both programs.

Year 5 Maximum intake for both programs.

Suggested Schedule for Intake of Trainees for In-service Program

Year	Number of Intake		Number Graduated		Accumulated	
	Dist. Ed.	Face/face	Dist. Ed	Face/face	Intake	Graduate
Year 1	3500	5000	-	-	8500	-
Year 2	3500	5000	-	-	17000	-
Year 3	3500	5000	3500	5000	17000	8500
Year 4	3500	5000	3500	5000	25500	17000
Year 5	3500	5000	3500	5000	34000	25500

(2) Preparation of Teachers to Implement NBEC

Year 1 Plan and schedule orientation program to follow orientation of 17160 teachers to be conducted by EDC; make additional copies of teachers' guidebooks for distribution; include teachers and headteachers.

Year 2 Plan and schedule orientation of teachers at local level; provide local support and training for classroom teachers.

Year 3 Plan and schedule orientation of teachers at local level; provide local support and training for classroom teachers.

Year 4 Plan and schedule orientation of teachers at local level; provide local support and training for classroom teachers.

Year 5 Provide local support and training for classroom teachers.

Schedule of Training and Supervision

Year	Trainers	Teachers	Head Teachers	Total
Year 1 (2000) EDC				17 600

Additional

23 400

Year 2)

)

Year 3)

)

Year 4) to be discussed at planning workshops

)

Year 5)

)

Total)

(3) Develop support materials in the form of videos, audios and written materials.

Year 1 Plan for development of supplementary materials: written, videos and audios, in terms of areas, concepts, format, number, utilization, schedule, requirements, financial implications, etc.

Year 2 Development of videos and audios Plan for broadcast for Educational TV and Educational Radio, in terms of format, content, strategies, utilization of broadcast materials, and financial implications.

Year 3 Continue production of materials. Acquire funding for ETV and ERadio.

Year 4 Continue production of materials. Begin broadcast, pilot stage.

Year 5 Evaluate broadcast, plan for supply of TV and VCR to some schools.

Schedule of production of materials

Year	Video Materials	Audio Materials
Available	40 titles	16 titles
Year 1)		
)		
Year 2)		
)		
Year 3) to be discussed at	planning workshops	
)		
Year 4)		
)		
Year 5)		
)		
Total)		

(4) Develop a Pool of Local Experts

Year 1 Plan for qualification and areas of expertise required to implement NBEC and other programs in the schools, in terms of kinds of training programs, staff development program, financial implications, curriculum, schedule of number of intakes.

Year 2 Implement some training programs as pilot project.

Year 3 Expand training programs to other regional ITIs.

Year 4 Mid-term review of training programs.

Year 5 Adjust programs based on the evaluation.

(5) Capacity Building for Personnel Responsible for the Training Programs

Year 1 Identify target group for staff development program, and develop a plan for staff development, financial implications. Target groups: administrators of Distance Education Program, Face-to-face program, regional ITIs, etc.

Year 2 Implement Staff Development Program.

Year 3 Implement Staff Development Program.

Year 4 Implement Staff Development Program.

Year 5 Implement Staff Development Program.

(6) Develop of Infrastructure in Regional ITIs

Year 1 Prepare an inventory of facilities, equipment and furniture in all regional ITIs, in terms of quantity, quality, space, etc.

Plan for upgrading the infrastructure in terms of equipment, furniture and facilities.

Begin supply of basic equipment, like overhead projectors, fax machines, copying machines, computers (stand alone), radio and audio cassette, and TV and VCRs for use of training for NBEC.

Identify 301 sub-centers, in terms of school and location, to represent all 301 districts in the country, and supply overhead projector, fax machine, copying machine, computers (stand alone), radio and audio cassettes.

Year 2 Evaluate the utilization of TV and VCRs in NBEC, and assess whether cost-effective to supply to all sub-centers.

Evaluate utilization of equipment.

Supply computer labs. and install local area network (LAN) in selected regional ITIs.

Year 3 Evaluate LAN in pilot ITIs, and based on findings, supply LAN to other ITIs.

Year 4 Install Wide Area Network (WAN) and Internet in selected ITIs.

Year 5 Evaluate WAN, and install Internet and WAN in all ITIs.

(7) Planning and Coordination of Sana'a ITI, Regional ITIs and Sub-centers

- Year 1 Prepare guidelines for operationalizing the Central and Regional ITIs, and the sub-centers, through discussions and writing sessions, with particular emphasis on line of authority, financial allocation and disbursement, staff appointment, etc.
- Year 2 Implementation of guidelines, monitor closely through visits and meetings.
- Year 3 Review the guidelines, and adjust accordingly.
- Year 4 Monitor coordination and supervision.
- Year 5 Review guidelines.

64. While there is the proposal that the provision of equipment be done in two phases, giving attention to the first group of 18 ITIs, to be followed by the other ITIs, this paper puts together the financial implications. In the case that there is adequate funding, then the supply for all the ITIs can be done simultaneously. The recurrent cost for the in-service program at the national level is calculated on the average of Riyal4 millions a year per each ITIs, to a total cost of Riyal 88 millions for 22 regional ITIs. The cost for development and equipment is as in Annex 4, that contains the estimated cost for supply of equipment, training for NBEC, staff development and workshops for planning the components of the in-service teacher training option. The total estimated cost for the seven sets of activities is USD 4 199 560.

IN CONCLUSION

65. The total estimated cost to conduct the seven sets of activities is USD 4 199 560. This estimate is presented to the Ministry of Education for its consideration.

66. While programs for in-service training of teachers can be formulated and implemented successfully, attention needs also to be given to the working conditions and salary of these teachers. Other problems such as overcrowded classrooms, and sub-standard facilities in the schools also need to be considered and appropriate action taken.

67. There are sparks of dedication and high quality in the system, and close monitoring of relevant activities will allow for these pockets of excellence to grow and be of influence in the process of upgrading and improving the quality of teachers in the system, while at the same improving the quality of teaching-learning in the classrooms.

Annex 1

Schedule of Meetings and Field Visits for the Period 4 - 31 December 1999

Week 1 4-8 December 1999. Coordination and Orientation

Saturday, 4 December 1999

4.25 a.m. Arrival in Sana'a.
Check-in - Taj Sheba Hotel.

- 9.30 a.m. Meeting 1. Project Implementation Unit, Basic Education Project, Ministry of Education.
Eng. Ayoob T Salem, Dr Mohamed Al-Mekhlafy, Eng. Mohamed Ali, Dr Abdullah Othman Abbas.
- Sunday, 5 December 1999
- 10.00 a.m. Basic Education Project PIU. Administrative matters.
- 10.30 a.m. Meeting 2. The World Bank Country Office.
Mr Arun Joushi, Mr Ali Husni, Dr Mohamed Al-Mekhlafy, Dr Abdullah Othman Abbas.
- Monday, 6 December 1999
- 8.30 a.m. Field Visit 1. Khawla Girls Secondary School, Sana'a.
- 11.30 a.m. Field Visit 2. Ibn Majid Boys Secondary School.
- Tuesday, 7 December 1999
- 10.00 a.m. Field Visit 3. Faculty of Education, University of Sana'a.
Dr Taha (Dean), Dr Mahyoub, Dr Abdullah.
- 12.15 p.m. Meeting 3. Ins-service Training Institute, Sana'a.
Mr Ahmad Salaam, Mr Khalid Abdullah, Mr Sayed Othman, Dr Mohamed Al-Mekhlafy.
- Wednesday, 8 December 1999
- 10.30 a.m. Basic Education Project PIU. Administrative matters.
- 1.00 p.m. Meeting 4. The Minister of Education.
H.E. Dr Yahya Mohamed Al-Shuaibi
Dr Mohamed Al-Mekhlafy
- Week 2 11-15 December 1999 Discussion with High Officials, Ministry of Education, Yemen.
- Saturday, 11 December 1999
- 10.00 a.m. Meeting 5. The World Bank Country Office.
Mr Arun Joushi, Mr Ali Husni, Dr Abdulrahman S Al-Dubaie, Mr Abdulhamid Alajami, Dr Mina B Ghattas, Dr Mohamed Al-Mekhlafy.
- 11.30 a.m. Discussion. Educational Development Centre.
Dr Abdulrahman S Al-Dubaie, Dr Mina B Ghattas
- Sunday, 12 December 1999
- 10.00 a.m. Meeting 6. Unesco National Commission.
Ms Selma Fakhry Fourcassia, Ms Khadiga Radman Mohamed, Eng Ayoob T Salem, Dr Mohamed Al-Mekhlafy, Dr Mina B Ghattas.
- 11.30 a.m. Meeting 7. Deputy Minister, Curriculum and Supervision Sector.
Dr Mageed A Ghanem, Dr Abdulrahman S Al-Dubaie, Dr Mina B Ghattas.
- 12.30 a.m. Meeting 8. In-service Training Institute.
Mr Ahmad Salaam, Mr Amin Al-Hakemi, Dr Abdulalh Othman, Dr A Mahyoub, Dr Abdulrahman S Al-Dubaie, Dr Mina B Ghattas.

Monday, 13 December 1999

- 11.00 a.m. Meeting 9. Deputy Minister, Curriculum and Supervision Sector.
Dr Mageed A Ghanem, Mr Ahmad Salaam, Mr Amin Al-Hakemi,
Mr Saleh Mohamed Afif, Dr Mina B Ghattas.

Tuesday, 14 December 1999

- 11.00 a.m. Meeting 10. Directorate for Training and Qualification.
Mr Saleh Mohamed Afif, Dr Abdulrahman S Al-Dubaie,
Dr Mina B Ghattas.
- 12.30 p.m. Meeting 11. Directorate for Curriculum and Instruction.
Dr Mohamed Mohsin Al-Waded, Dr Mina B Ghattas.
- 1.45 p.m. Meeting 12. Audio-Visual Aid Centre.
Mr Mohamed Ali Al-Saidi, Dr Abdulrahman S Al-Dubaie,
Dr Mina B Ghattas.
- 6.30 p.m. Meeting 13. Audio-conferencing with the World Bank,
Washington D.C.
Ms Regina Bendakot, Ms Takako Yuki, Ms Genevieve Menan,
Dr Moohamed Al-Mekhlafy, Dr Abdullah, Dr Mina B Ghattas.

Wednesday, 15 December 1999

- 10.00 a.m. Meeting 14. UNICEF Country Office
Ms Afreen Huq, Dr Balqis, Dr Abdulrahman S A-Dubaie,
Dr Mohamed Al-Mekhlafy, Dr Mina B Ghattas.
- 12.15 p.m. Meeting 15. Directorate for Inspection and Guidance.
Mr Mahmoud Said Mujhid, Dr Mina B Ghattas.

Thursday, 16 December 1999.

- 10.30 a.m. Discussion on matters arising from meetings and discussions.
Dr Mina B Ghattas.
- 11.30 a.m. Meeting 16. Further discussion on training programs.
Mr Saleh Mohamed Afif, Dr Mina B Ghattas.
- 1.00 p.m. Meeting 17. Further discussion on supervision and guidance.
Dr Mahmoud Said Mujhid, Mr Saleh Mohamed Afif,
Dr Mina B Ghattas.

Friday, 17 December 1999.

- 11.30 a.m. Discussion on matters arising from the meetings.
Dr Mina B Ghattas.
- 2.00 p.m. Meeting 18. Discussion with high officials, Curriculum and
Supervision Sector.
Mr Saleh Mohamed Afif, Dr Mahmoud Said Mujhid, Mr Ahmad \
Salaam, Mr Amin Al-Hakemi, Dr Mohamed Al-Mekhlafy,
Dr Mina B Ghattas.

Week 3 18-22 December 1999 Field Visits to the Provinces

Saturday, 18 December 1999

- 11.00 a.m. Meeting 19. Minister of Education.
H.E.Dr Yahya Al-Shuaibi, Mr Amin Al-Hakemi,
Dr Mohamed Al-Mekhlafy, Dr Mina B Ghattas.

- 2.40 p.m. Field Visit 4. In-service Training Institute, Dhamar.
Mr Mohamed Nasir, Dr Abdulrahman S Al-Dubaie,
Mr Amin Al-Hakemi, Dr Mina B Ghattas.
- 7.00 p.m. Field Visit 5. In-service Training Institute, Dhalek.
Mr Abdul Wahid, Dr Abdulrahman S Al-Dubaie, Mr Amin
Al-Hakemi, Dr Mina B Ghattas.
- Sunday, 19 December 1999
- 10.30 a.m. Field Visit 6. In-service Training Institute, Lahj.
Mr Abdullah Hussin Mohamed, Ms Iman Ahmad Mohamed,
Dr Abdulrahman S Al-Dubaie, Mr Amin-Al-Hakemi,
Dr Mina B Ghattas.
- Monday, 20 December 1999
- 10.00 a.m. Field Visit 7. Faculty of Eductaion, University of Aden.
Dr Ahmad Al-Bakri, Dr Abdulrahman S Al-Dubaie,
Mr Amin Al-Hakemi, Dr Mina B Ghattas.
- 12.30 p.m. Field Visit 8. In-service Training Institute, Aden.
Mr Faisal Said Hashim, Mr M Ghanem, Dr Abdulrahman
S Al-Dubaie, Mr Amin Al-Hakemi, Dr Mina B Ghattas.
- Tuesday, 21 December 1999
- 11.45 a.m. Field Visit 9. In-service Training Centre, Taiz.
Mr Mohamed Faïd Al-Shamin, Mr Ahmad Abdul Mageed,
Dr Abdulrahman S Al-Dubaie, Mr Amin Al-Hakemi,
Dr Mohamed Al-Mekhlafy, Dr Mina B Ghattas.
- Wednesday, 22 December 1999
- 10.00 a.m. Field Visit 10. In-service Training Institute, Al-Hodaidah.
Mr Abu Bakar Obeid, Mr Taufik Yusof, Mr Ali Abdullah
Qubeshi, Mr Mohamed Ahmad Salway, Mr Marwan Abdullah,
Mr Ali Ahmad Durain, Dr Abdulrahman S-Dubaie,
Mr Amin Al-Hakemi, Dr Mina B Ghattas.
- 11.30 a.m. Field Visit 11. UNICEF Project Schools.
- Thursday, 23 December 1999
- 11.00 a.m. Field Visit 12. Teachers Meeting, UNICEF Project.
- 12.00 p.m. Field Visit 13. In-serice Training Sub-Regional Centre, Al-Zaidiah.
Mr Mohamed Al-Mawad, Mr Amin Al-Hakemi,
The Governor's Representative.
- Friday, 24 December 1999.
Drafting the Final Report.
- Week 4. 25 - 29 December 1999. Preparing the Final Report.
- Saturday, 25 December 1999.
- 10.30 a.m. Basic Education Project PIU.
In-service Training Institute, Sana'a
- Sunday, 26 December 1999.
- Monday, 27 December 1999
- Tuesday, 28 December 1999
- 11.00 a.m. Deputy Minister for Curriculum and Supervision Sector,

Dr Mageed Ghanem.

Wednesday, 29 December 1999

Thursday, 30 December 1999

Friday, 31 December 1999

Week 5 1-2 January 2000

Saturday, 1 January 2000

a.m. The Minister of Education.

Sunday, 2 January 2000

18.30 Departure to Kuala Lumpur.

Annex 2

Proposed Use of Videos and Audios and Broadcasts in In-service Teacher Training Programs

1. The training of teachers use a combination of methods, including group activities and discussions, Workshops, with production of materials, and hands-on experiences, and individual reading. As an additional measure to increase the effectiveness of training, it is proposed that the use of TV and videos and Radios and tape-recorders be incorporated into the delivery approach.

2. Following are some suggestions on how to incorporate these items into the training process:

(a) Live telecast

Selected topics are aired live on TV or Radio, and audience can participate through phone- in questions. The program can be taped, and distributed for further discussions.

Possible topics could include the New Basic Education Curriculum, new decrees, innovative approaches to teaching and training, etc. The presenters: could include the Minister of Education, Policy makers, High Officials and Master teachers.

Advantages: Current
Interactions on time
Availability of policy-makers and experts
Use of satellite will ensure quality and wide coverage

(b) Tutored Video Instruction (TVI)

Selected topics on teaching and learning, and other items of importance and interest to teachers and educators presented by acknowledged experts and master teachers, and recording of live presentations can be put on videos. These video materials will be used in a workshop and discussion, facilitated by a trainer who has been trained to use the materials centrally.

Possible topics: teaching points, e.g. questioning strategies
teaching difficult topics, e.g. in science and mathematics

Advantages: Availability of quality materials
Facilitated by a trained trainer
Uniformity of materials across regions
Available in areas where TV reception is weak

(c) Use of radios and audio-tapes

Selected topics on audio-tapes, presented by acknowledged experts and master teachers, and recording of live presentations can be put onto audio tapes. These audio-taped materials will be used in workshops and discussions, to be facilitated by a trainer who has been trained centrally.

Possible topics: materials on videos/live presentations
Teaching points

Advantages: Availability of quality materials
 Facilitated by a trained trainer
 Can be conducted using batteries or winding-radio - not
 restricted by supply of electricity

3. Facilities Required to Enable Use of TV and Radios:

The implementation of the above proposed activities would require the following infrastructure and support:

- (a) TV studio for production
- (b) Audio studio for production
- (c) Satellite time for live telecast
- (d) Supply of TV and video cassette players to locations of training
- (e) Supply of radio and audio tape players to locations of training.
- (f) Training of producers for TV and radio programs
- (g) Budget for production
- (h) Budget for training
- (l) Training of tutors and facilitators

4, Regular air time on TV can be made available through the national TV channel. A feasibility study to establish an Educational TV Channel and an Educational Radio can be done as soon as possible. It would be appropriate to plan for the content and utilization of the broadcasts so that the broadcasts could serve not only the formal school system, but also as informal education materials to the community at large.

Annex 3. Student Enrolment in Faculty of Education, Univesrity of Sana'a and Schools of Education, Taiz.

Table 1. Number of Graduates from Two Faculties of Education

Year of Graduation	FoE Sana'a			FoE Taiz		
	M	F	T	M	F	T
1993/94	1154	243	1397	869	251	1120
1994/95	997	278	1275	not available		

1995/96	1365	262	1627	901	157	1058
1996/97	1582	439	2020	580	236	816
1998/99	not available			1278	502	1780
Total (available information)	5098	1222	6320	3628	1146	4774

Table 2. Students in Faculty of Education, University of Sana'a, all branches.

Subjects	Male Students	Female Students	Total
Quranic Studies	1824	214	2038
Islamic Studies	2599	783	3382
Arabic Language	3426	542	3968
English Language	1734	479	2213
History	3129	708	3837
Geography	2648	501	3149
Philosophy	190	57	247
Biology	162	190	352
Chemistry	637	195	832
Physics	325	54	379
Mathematics	762	214	976
Psychology (Guidance)	441	16	457
Total	17 877	3 953	21 830

Annex 4

Financial Implications for In-Service Option for Yemen 2000

- (1) Train underqualified Teachers to obtain diploma in education.
 - (a) Five-day Workshop for 20 participants to plan for evaluation of Distance Education and Face-to-face Programs. (In USD)

Venue: a regional ITI

- (I) Travel and per diem for 20 participants for 5 days
 $20 \times \text{USD}20 \times 5 = 2\,000.00$
- (ii) Travel and per diem for 2 facilitators
 $2 \times \text{USD}20 \times 5 = 200.00$
- (iii) Stationery and other materials
USD440.00
- (iv) Secretarial assistance
 $2 \times \text{USD}10 \times 5 = 100.00$

Total: USD 2740.00

(2) Preparation of Teachers to Implement NBEC

The course will be conducted in a group of 40 participants, per unit. The number of the units is $23\,000/40 = 575$ units.

Length of training: 5 days.

Number of contact hours per day: 4 hours.

Basic for calculation:

- (I) Travel and per diem for trainers: USD 20 per day.
- (ii) Travel for participants: USD 6 per day
- (iii) Stationery and materials for development of instructional materials at USD 4 per participant.
- (iv) Utilities including electricity and water at USD 4 per day
- (v) Secretarial and administrative assistance at USD 6 per day
- (vi) Package of Teachers' Guides and other materials, estimated at USD 10 per package.

(a) Five-day workshop for 20 participants to plan for orientation program for 23 000 teachers and head teachers.

Venue: Sana'a ITI

Cost: USD 2740

(b) Cost of 5-day orientation course, for 23000 teachers and head teachers, to be conducted at regional ITIs, to be implemented using the pool of trainers trained for the EDC training.

- (I) Travel and per diem for 1150 trainers (2 per unit)
 $\text{USD}20 \times 5 \times 1150 = \text{USD } 115\,000$
- (ii) Travel for 23 000 participants
 $\text{USD } 6 \times 23\,000 \times 5 \text{ days} = \text{USD } 828\,000$

- (iii) Stationery and other materials
USD 6 x 23 000 = USD 138 000
- (iv) Utilities USD 4 x 5 x 575 = USD 11 500
- (v) Secretarial and administrative assistance
USD 6 x 5 x 575 = USD 17 250
- (vi) Package of materials, including teachers' guides
USD 10 x 23 000 = 230 000

Total: USD 1 339 750

- (c) Continuous supervision and support for classroom teachers and head teachers, at 4 times per academic year, and meetings for teachers at 4 times each academic year. Cost of travel for teacher is minimal, as meetings will be convened at the local level.

- (I) Visits to teachers, at USD 7 per teacher x 23 000 teachers and 4 times
= USD 644 000
- (ii) Travel for facilitators of meetings at USD 20 per meeting x 4 times x 301
= USD 24 080
- (iii) Stationery and materials for development of instructional materials, at
USD 3 per teacher per meeting = USD 276 000

Total: USD 964 080

Total for three components : USD 2 306 570

- (3) Develop support materials in the form of video, audio and written materials
 - (a) Five-day workshop for 20 participants to plan for production of support materials for NBEC.
Venue: a regional ITI.

Cost: USD 2740

- (b) The materials for Tutored Video Instruction will be prepared by EDC. This estimate covers the cost for production of audio materials, at the cost of USD250 each, for 20 titles = USD 5 000
Cost to reproduce 500 copies at USD1.50 each = USD750.

Total: USD 8 490

- (4) Develop a pool of local experts
 - (a) Five-day workshop for 20 participants to plan for short and long in-service courses.
Venue: a regional ITI.

Cost: USD 2 740

(5) Capacity building for staff in Sana'a ITI and Regional ITIs

(a) Five-day workshop for 30 participants to plan for staff development program.
Venue: a regional ITI.

(i) Travel and per diem for 20 participants for 5 days

$USD20 \times 5 \times 30 = USD 3 000$

(ii) Travel and per diem for 2 facilitators

$USD20 \times 5 \times 2 = USD 200$

(iii) Stationery and other materials, USD 440

(iv) Secretarial assistance: USD100

Total: USD 3 740

(b) Five-day training for 20 officials responsible for planning and implementing
Distance Education Program
Venue: a regional ITI.

Cost: USD 2 740

(c) Five-day training for 20 officials responsible to evaluate on-going in-service
training programs.
Venue: a regional ITI.

Cost USD2 740

(d) Local training for 2 groups of 30 officials per group responsible for administration
and implementation of in-service training programs = USD 7 480

Total: USD 16 700

(6) Develop infrastructure in Regional ITI and subcenters

(a) Supply for 22 Regional ITIs

(i) 5 sets of 2TVs and 1 VCR for implementation of TVI in training for
NBEC, cost of 29" at USD2700 each, VCR at USD300 each

$USD 2700 \times 2 + 300 \times 22 = USD 66 000$

(ii) 5 Radio-audio cassette player at USD 300 per center

$USD 300 \times 5 \times 22 = USD 33 000$

(iii) Overhead project at USD 720 . 5 x 22 = USD 47 520

(iv) 10 personal computers per ITI (2 for administration, 3 for trainers, and 5

- for use of trainees) at USD 1700 , for 22 ITIs = USD 374 000
- (v) A combination fax/printer at USD 1500 x 22 = USD 33 000
- (vi) 2 laserjet printer at USD 2000 per ITI x 22 = USD 88 000

Total: USD 582 120

(b) Supply for 301 sub centers

- (I) 301 Radio-audio cassettes at USD 300 = USD 90 300
- (ii) Overhead project at USD 720 x 301 = USD 216 720
- (iii) 1 personal computer with fax/printer
USD 1700 + USD 1500 = USD 963 200

Total: USD 1 270 220

Total for both components = USD 1 852 340

(7) Planning and coordination of Sana'a ITI, Regional ITIs and Sub-centres

Two workshops to develop and write guidelines for planning and coordination of Sana'a ITI, 22 Regional ITIs and 301 sub-centers, 30 participants at each workshop.

Cost: USD 3 740 x 2 = USD 7 480

The total estimated cost for the seven sets of activities is as follows:

- (1) Train underqualified teachers to obtain diploma in education
Planning for evaluation = USD 2 740
- (2) Preparation of Teachers to implement NBEC
= USD 2 306 570
- (3) Development of audio materials to support orientation of
= USD 8 490
- (4) Develop a Pool of Experts = USD 2 740
- (5) Capacity building for staff in Sana'a ITI and Regional ITIs
= USD 16 700
- (6) Develop infrastructure in Regional ITIs and Sub-centres
= USD 1 852 340
- (7) Planning and coordination of Sana'a ITI, Regional ITIs and Sub-centres
= USD 9 980

Total: USD 4 199 560